Cedar Springs Wastewater Treatment Plant – Groundwater Monitoring

Kent County, Michigan

Michigan Department of Environment, Great Lakes, and Energy

DRAFT

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1. Introduction

This technical memorandum summarizes the findings of site investigations conducted in and around the Russell Ridge subdivision (the "Site"), adjacent to the current Cedar Springs Wastewater Treatment Plant (CS-WWTP) effluent discharge field. The purpose of this investigation was to evaluate the extent of Per- and Polyfluoroalkyl Substances (PFAS) contamination at the Site as observed in residential well drinking water sample results. This data was evaluated to refine the conceptual site model and identify potential pathways from suspected source areas where previous sampling completed by The City of Cedar Springs and their consultants has shown elevated PFAS concentrations in groundwater, with some concentrations exceeding the generic drinking water criteria included in Part 201 of the Natural Resources and Environmental Protection Act, Public Act 451 of 1994, as amended (Part 201).

The field investigation activities conducted by AECOM Technical Services, Inc. (AECOM) were designed in collaboration with the Michigan Department of Environment, Great Lakes, and Energy (EGLE) to collect data to aid in evaluating the risk to human health and the environment. A review of existing PFAS data was used to guide the development of the scope of this investigation. Field investigation activities near the CS-WWTP were completed between March 2023 and March 2024 and included Vertical Aquifer Profile (VAP) sampling, advancement of soil borings, monitoring well installation, groundwater table elevation measurements, and low-flow groundwater sampling.

2. Background

The investigation conducted by AECOM on behalf of EGLE was performed in accordance with applicable EGLE PFAS sampling guidance documents. The United States Environmental Protection Agency (USEPA) has classified certain PFAS as hazardous substances, and EGLE regulates certain PFAS under Part 201. PFAS are complex human-made fluorinated organic chemicals with a recent summary by the Organization for Economic Co-operation and Development (OECD) identifying over 4,730 PFAS-related chemical abstract numbers (CAS) numbers (OECD 2018); however, over 9,000 PFAS have been identified by the Centers for Disease Control (CDC). Due to their unique chemical properties, PFAS has been used in many industries and consumer products since the late 1950s. The Interstate Technology Regulatory Council (ITRC) has identified four primary sources of PFAS: fire training/fire response sites, industrial sites, landfills, and wastewater treatment plants/biosolids.

To date, there have been two (2) potential sources identified where CS-WWTP has discharged water:

1. The current WWTP discharge fields, and
2. The former treatment lagoons located approximately 1.3 miles north-northwest of the southern extent of the current WWTP discharge fields.

The City of Cedar Springs operated a 45-acre wastewater lagoon system between 1965 and 1999 located at 730 West Street NE. The lagoons were closed in place and covered with clean soil. After the lagoons were closed, the CS-WWTP began discharging effluent to a drain field located at 4482 and 4550 Indian Lakes Road NE which is managed under a groundwater discharge permit issued by EGLE.

Upon request from EGLE, the City of Cedar Springs began sampling groundwater from monitoring wells surrounding their historic wastewater treatment lagoons and current WWTP discharge fields

for PFAS in January 2020. Results from groundwater sampling identified the presence of perfluorooctanoic acid (PFOA) and other PFAS compounds in the groundwater at both locations. Only concentrations of PFOA exceeded EGLE Part 201 DWC of 8 nanograms per liter (ng/L) or parts per trillion (ppt) in drinking water samples.

Multiple phases of residential drinking water sampling have been completed by AECOM since 2017 under EGLE funded investigations. As of August 12, 2023, 228 residential wells associated with this study area have been sampled for PFAS, 85 of which exceeded Part 201 Drinking Water Criteria (DWC) for PFOA. A site overview is presented in **Figure 1**, which depicts a heatmap of the residential sampling results as well as historical and current WWTP discharge locations.

3. Investigation Activities and Methods

During this phase of investigation, activities included VAP sampling, soil logging, nested monitoring well installation, groundwater elevation measurements, and low-flow groundwater sampling from newly installed monitoring wells.

3.1 Vertical Aquifer Profile Sampling

Based on residential drinking water sampling and available residential well logs, three locations (EGLE-VAP-01 through EGLE-VAP-03) within and around the Russell Ridge subdivision were selected for VAP sampling to provide information to assist with selecting monitoring well installation depths across the study area. Upon reaching the water table at each VAP location, groundwater samples were collected at approximately ten (10) foot intervals through a groundwater sampling assembly composed of a stainless-steel screen attached to the bottom of the 4-inch drill pipe. A 6-inch override casing was pulled back to expose the screen to the aquifer, allowing natural collapse around the screen. A PFAS-free submersible pump was deployed into the sampling assembly and a volume of groundwater roughly equivalent to the volume of drill water used while advancing the drilling assembly through the sample interval was purged from the borehole prior to sampling. When purging was complete, the flow was reduced and groundwater samples were collected after water quality parameters stabilized for three consecutive readings. Stabilization parameters were as follows: depth to water drawdown <0.33 feet, pH +/-0.1, Specific Conductivity +/- 3%, Turbidity +/- 10% or <5 NTU, DO +/- 10% or <0.5 mg/L, Temperature +/- 5 °C, and ORP +/- 10mV. If water quality parameters did not stabilize after one hour, the interval was sampled, and this deviation was documented on the sampling form. VAP samples were collected from an approximate maximum depth of 150 feet below ground surface (bgs), or until clay was observed at a thickness of greater than five (5) feet. Soils recovered from the boreholes were logged by an AECOM geologist following the unified soil classification system (USCS).

EGLE-VAP-01 and EGLE-VAP-03 were drilled to 150 feet bgs. EGLE-VAP-02 was terminated at 100 feet bgs after encountering approximately10 feet of clay. The presence of clay at EGLE-VAP-02 was corroborated by information on residential drinking water well logs for wells water installed on adjacent and nearby residential wells, which indicated the clay may be greater than 40 feet thick. The most prevalent soil type observed in the VAP borings was poorly graded sand with lenses of lean clay or silty sand. Depths to water were observed at 24.5, 9.0, and 22.5 feet bgs at EGLE-VAP-01, EGLE-VAP-02, and EGLE-VAP-03 respectively. Soil boring logs are included in **Appendix A**.

3.2 Monitoring Well Installation and Development

Based on the VAP results, residential drinking water sampling, and available residential well depths, multi-level, nested monitoring wells were installed in four locations around the Russell

Ridge subdivision and in the three VAP locations. Screen depths were selected by evaluating information including observed water table elevations, VAP sample results, proximal drinking water well depths and associated PFAS sampling results, and the observed presence of zones of higher relative transmissivity soils within the aquifer. Borings were advanced with a track-mounted Geoprobe rotary sonic drill rig using a 4-inch drilling assembly, with 6-inch and 8-inch override casing advanced to the deepest screen and shallow screen intervals, respectively, at each location. Monitoring wells were constructed of two-inch diameter, schedule 40 polyvinyl chloride (PVC) monitoring well casing with a 5-foot, 10-slot screens. The monitoring wells were lowered through the override casing to the desired depths. Sand pack was used to fill the annular space around the wells from the base of the monitoring well screen to a depth approximately two feet above the screen followed by bentonite pellets and bentonite chips to approximately two feet below the depth of the next well interval, where the process was repeated while removing the 6-inch and 8-inch tooling from the borehole. The depth to bottom of each well was checked by the driller throughout the monitoring well construction activities to confirm construction details and check for bridging of sand pack and bentonite. Monitoring well construction and lithological logs are provided in **Appendix B**.

Monitoring wells were developed to remove fine-grained sediments and to restore the natural hydraulic properties of the aquifer at each monitoring well location. The monitoring wells were developed by pumping and surging using a submersible pump. The pump intake was periodically raised and lowered to develop the entire length of the submerged screen. A monitoring well was considered adequately developed when approximately five well volumes of water were removed, and the appearance of water pumped from the monitoring well was relatively clear. Purged groundwater was stored in a mobile fractionation tank that was temporarily staged at the active Cedar Springs WWTP discharge field area pending off-site disposal at a licensed facility.

3.3 Monitoring Well Survey

On August 23, 2023, Nederveld, Inc. recorded horizonal coordinates and measured top of casing and ground surface elevations for the 21 newly installed monitoring wells. Horizontal coordinates were measured to an accuracy of +/-0.10-foot relative to the State Plane NAD 83 coordinate system, Michigan South 2113. Vertical elevations were measured to an accuracy of +/-0.01-foot relative to NAVD88 datum. Professionally surveyed coordinates and elevations are provided in **Table 1**, and a site plan showing the nested monitoring well locations is provided in **Figure 3**.

3.4 Groundwater Sampling

Between August 24 and 31, 2023, a total of 21 groundwater samples were collected from the newly installed nested monitoring wells using EGLE-approved, low-flow sampling techniques and in accordance with EGLE's groundwater PFAS sampling guidance document. During low-flow sampling, water quality parameters (i.e., pH, temperature, specific conductance, ORP, turbidity and DO) were monitored and recorded approximately every five minutes during purging. Groundwater samples were collected after water quality parameters stabilized for three consecutive readings. Stabilization parameters were as follows: depth to water drawdown <0.33 feet, pH +/-0.1, Specific Conductivity +/- 3%, Turbidity +/- 10% or <5 NTU, DO +/- 10% or <0.5 mg/L, Temperature +/- 5 °C, and ORP +/- 10mV. If water quality parameters did not stabilize after one hour, the well was sampled, and this deviation was documented on the monitoring well purge log. A summary of groundwater parameters at the time of sample collection is provided in **Table 2**. Field duplicate samples were collected from EGLE-MW-04B and EGLE-MW-05A, an equipment blank sample was collected from the submersible pump used to collect samples from wells where groundwater was greater than 25-feet bgs, and a trip blank provided by the laboratory that traveled with the groundwater samples was analyzed. All samples were collected in laboratory provided containers, labeled, and placed in an ice-chilled cooler. Groundwater

samples were submitted to the EGLE Environmental Laboratory in Lansing, Michigan with chain-of-custody documentation for analysis of the EGLE recommended list of 34 PFAS compounds using U.S. EPA method 8327.

4. Results

A total of 34 groundwater samples were collected from 3 VAP boring locations and a total of 21 groundwater samples were collected from 7 sets of nested monitoring wells, in addition to quality assurance and quality control (QAQC) samples. VAP and monitoring well groundwater sampling results are presented in **Tables 3** and **4,** respectively, and the results for PFAS compounds with Part 201 DWC are shown in **Figure 2** and **Figure 3**. No PFAS were detected in the equipment blanks or trip blanks.

4.1 VAP Sample Results

Groundwater results from the VAP samples were compared to EGLE Part 201 Generic Cleanup Criteria for PFAS in Residential Drinking Water (DWC) and the results are presented on **Table 3** and **Figure 2**. PFAS concentrations were detected in groundwater samples collected from each VAP location. Total PFAS detected at EGLE-VAP-01 ranged from non-detect (i.e., below laboratory reporting limits) concentrations to 219 ng/L at 42.5-47.5 feet bgs. PFOA concentrations exceeded the Part 201 DWC in four intervals (42.5-47.5, 54.7-59.7, 93.2-98.2, and 102.5-107.5 ft bgs) and exceeded the DWC criterion for PFNA in one interval (42.5-47.5 feet bgs). At EGLE-VAP-02, total PFAS ranged from non-detect concentrations to 52 ng/L at 15.2-20.2 feet bgs. The highest concentration of PFOA was 6.9 ng/L at 85.3-90.3 ft bgs, which is below the Part 201 DWC. At EGLE-VAP-03, total PFAS concentrations ranged from non-detect to 56 ng/L at 26.1-31.1 feet bgs. PFOA concentrations exceeded the Part 201 DWC in two intervals (26.1-31.1 and 113.8-118.8 feet bgs). The laboratory analytical report is attached in **Appendix C.**

4.2 Monitoring Well Sample Results

There were 21 samples collected during the July 2023 sampling event. PFAS was detected in 14 of the 21 monitoring wells. Total PFAS in the groundwater samples collected from the network of nested monitoring wells ranged from non-detect concentrations at EGLE-MW-01C, EGLE-MW-04A, B and C, EGLE-MW-06C, and EGLE-MW-7B and C, to 41.5 ng/L at EGLE-MW-02C. The highest concentration of PFOS was observed in EGLE-MW-01A and a concentration of 13 ng/L. PFOA detections were observed in groundwater collected from eight monitoring wells with concentrations ranging from 2.0 ng/L in EGLE-MW-02B to 7.1 ng/L in EGLE-MW-01B and EGLE-MW-06B.

The results for the groundwater samples collected from the nested monitoring wells installed during this investigation did not exceed any of the Part 201 DWC for PFAS compounds as shown on **Table 4** and depicted in **Figure 3**. The laboratory analytical report is attached in **Appendix D**.

4.3 Groundwater Flow

A total of 64 Site monitoring wells were gauged on March 21, 2024, in a joint effort between AECOM and consultants working on behalf of the City of Cedar Springs. A 200-foot-long water level meter indicator probe was used to collect depth to water measurements to the nearest 0.01-foot. Groundwater elevation contour maps were developed from groundwater depth measurements corresponding to the shallow (**Figure 4**) and deep (**Figure 5**) monitoring wells based on relative well screen elevations. Wells included in the shallow groundwater flow contours are set between approximately 830 to 799 feet above mean seal level (amsl). Wells included in

the deep groundwater flow contours are set between approximately 760 to 692 feet amsl. Groundwater depth measurements and elevations are presented in **Table 1.**

The movement of groundwater in the shallow and deep portions of the aquifer is predominantly to the south-southwest; however, in the shallow portion of the aquifer north of 16 Mile Road, there appears to be flow to the west-southwest that may be hydraulically influenced by Cedar Creek and Little Cedar Creek, which both flow to the southwest.

At the current discharge fields, the groundwater generally appears to flow south-southwest towards the Russell Ridge Subdivision.

4.4 Geologic Cross Sections

Three cross-sections were developed utilizing the boring logs produced during this phase of investigation, historical well logs from consultants working on behalf of the City of Cedar Springs, and residential well logs obtained from the State of Michigan Wellogic System. **Figure 6** depicts a cross-section transect map showing the locations and orientations of cross-sections A-A' (**Figure 7**), B-B' (**Figure 8**), and C-C' (**Figure 9**) in relation to the PFAS plume data.

The soils observed throughout the area of investigation primarily consist of poorly graded sands with interbedded layers of silty sands grading into lean clays, characteristic of glacial outwash depositional environments. In the geological interpretation presented in the north-south cross section A-A', the observed facies appear to be dipping to the south, however, there are spatial data gaps between the monitoring wells used to generate this visualization. West-east cross-sections B-B' and C-C' depict five- to ten-foot thick, potentially continuous, clay layers that subdivide the groundwater into two to three distinct zones from which residential drinking water is drawn. The zone of the aquifer with the highest number of drinking water wells with PFAS contamination above the Part 201 DWC extends from approximately 750 to 700 feet amsl; however, there are exceedances of PFOA above the 750 feet amsl elevation as well.

5. Discussion and Summary

PFOA was detected at concentrations above the Part 201 DWC during VAP sampling at EGLE-VAP-01 and EGLE-VAP-03 at concentrations ranging from 8.5 to 15 ng/L which are consistent with PFOA exceedances observed in proximal drinking water wells which ranged from 9 to 22 ng/L. Groundwater collected from the newly installed nested monitoring wells did not exceed Part 201 DWC for PFAS compounds; however, additional rounds of sampling should be considered to evaluate potential temporal fluctuations at those locations.

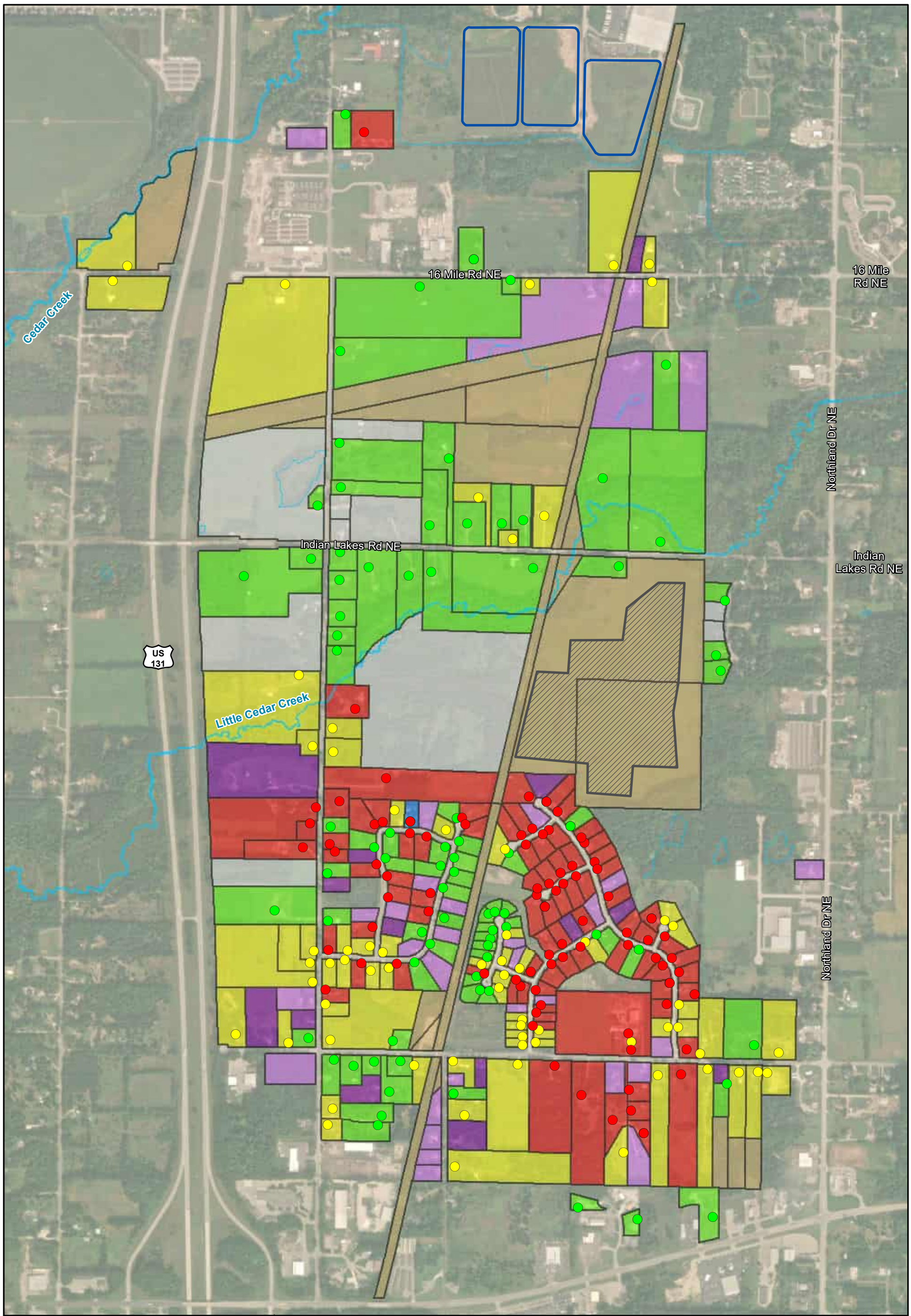
The groundwater elevation data indicates that shallow groundwater beneath the former treatment lagoons flows west-southwest and suggests that shallow groundwater flow may be influenced by surface water flow in Cedar Creek and Little Cedar Creek. Groundwater flow south of 16 Mile Road generally flows to the south-southwest.

Due to the potential influence of Cedar Creek and Little Cedar Creek on the direction of shallow groundwater flow in the northern portion of the site, it is unlikely that PFAS contamination in shallow groundwater related to the former treatment lagoons is the source of impacts observed in the residential drinking water aquifer beneath the Russell Ridge Subdivision. The installation of additional, nested monitoring wells within this area would be useful to prepare a localized groundwater flownet to further evaluate and visualize the groundwater flow at different depths within the aquifer as well as calculate the vertical flow direction within this portion of the site.

In addition to the south-southwesterly groundwater flow direction, the presence and continuity or discontinuity of the clay layers observed in the northern portion of the Site likely influence the

transport of PFAS through the aquifer. The lithologic interpretation presented in **Figure 7** (Cross Section A-A') suggests that both shallow and deep wells associated with the 22-MW-01 location may be beneath continuous clay layers that dip to the south beneath the nested monitoring wells installed during the activities discussed in this report. Additionally, if the clay observed beneath EGLE-MW-04 terminates to the south, it would present a potential pathway for contaminated groundwater beneath the former treatment lagoons to reach deeper portions of the aquifer beneath the Russell Ridge Subdivision. Additional deep monitoring wells (e.g., below 700 feet amsl) along the transect between 22-MW-01 and 22-MW-02, between 22-MW-02 and EGLE-MW-04, and between EGLE-MW-04 and EGLE-MW-01 would aid in further evaluating the hydraulic and lithological interpretation between the former treatment lagoons and the current discharge area.

Figures



EGLE

AECOM

Prepared: 8/24/2023

Map Location

Legend

Residential Well Samples

- Non-Detect for Part 201 PFAS Compounds
- Detection below Part 201 PFAS Criteria, but no Exceedance
- One or more Part 201 PFAS Criteria Exceeded
- Discharge Area
- Former Wastewater Treatment Lagoon

Parcel Status

- Sampled - Non-Detect
- Sampled - Detection
- Sampled - Exceeds
- Whole House Filter
- No Response to Sampling Request
- Resident Declined Sampling
- Not Sampled
- Vacant

N

0 500 1,000 Feet

FIGURE 1
RUSSEL RIDGE SUBDIVISION
PFAS STUDY OVERVIEW

DRAFT

CEDAR SPRINGS WWTP
INVESTIGATION
KENT COUNTY, MI

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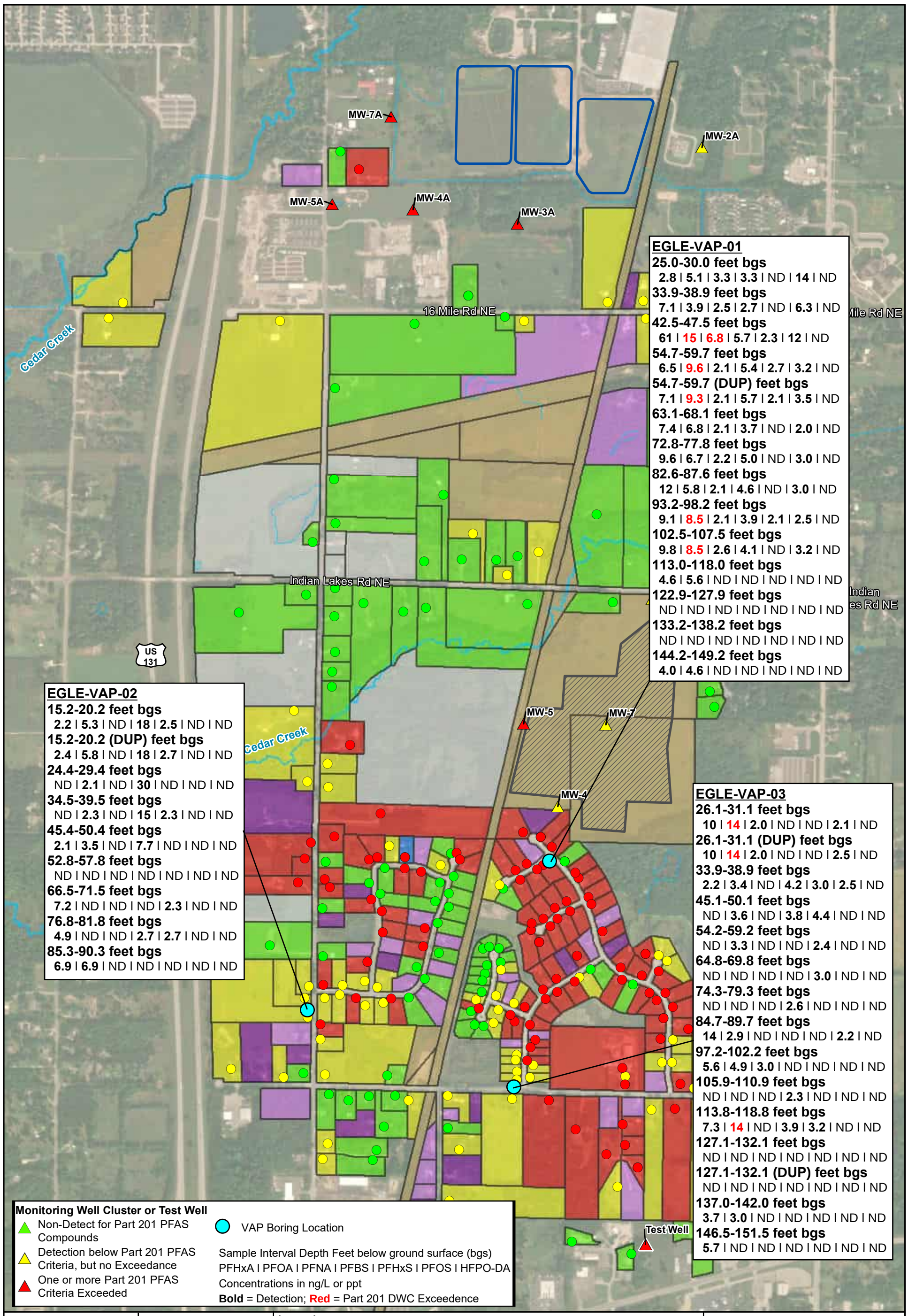

EGLE

AECOM

Prepared: 8/24/2023

Map Location

Legend

Residential Well Samples
- Non-Detect for Part 201 PFAS Compounds
- Detection below Part 201 PFAS Criteria, but no Exceedance
- One or more Part 201 PFAS Criteria Exceeded
- Discharge Area
- Former Wastewater Treatment Lagoon

Parcel Status
- Sampled - Non-Detect
- Sampled - Detection
- Sampled - Exceeds
- Whole House Filter
- No Response to Sampling Request
- Resident Declined Sampling
- Not Sampled
- Vacant

N

0 500 1,000 Feet

FIGURE 2
VERTICAL AQUIFER PROFILE
GROUNDWATER PFAS ANALYTICAL RESULTS

DRAFT

CEDAR SPRINGS WWTP INVESTIGATION
KENT COUNTY, MI

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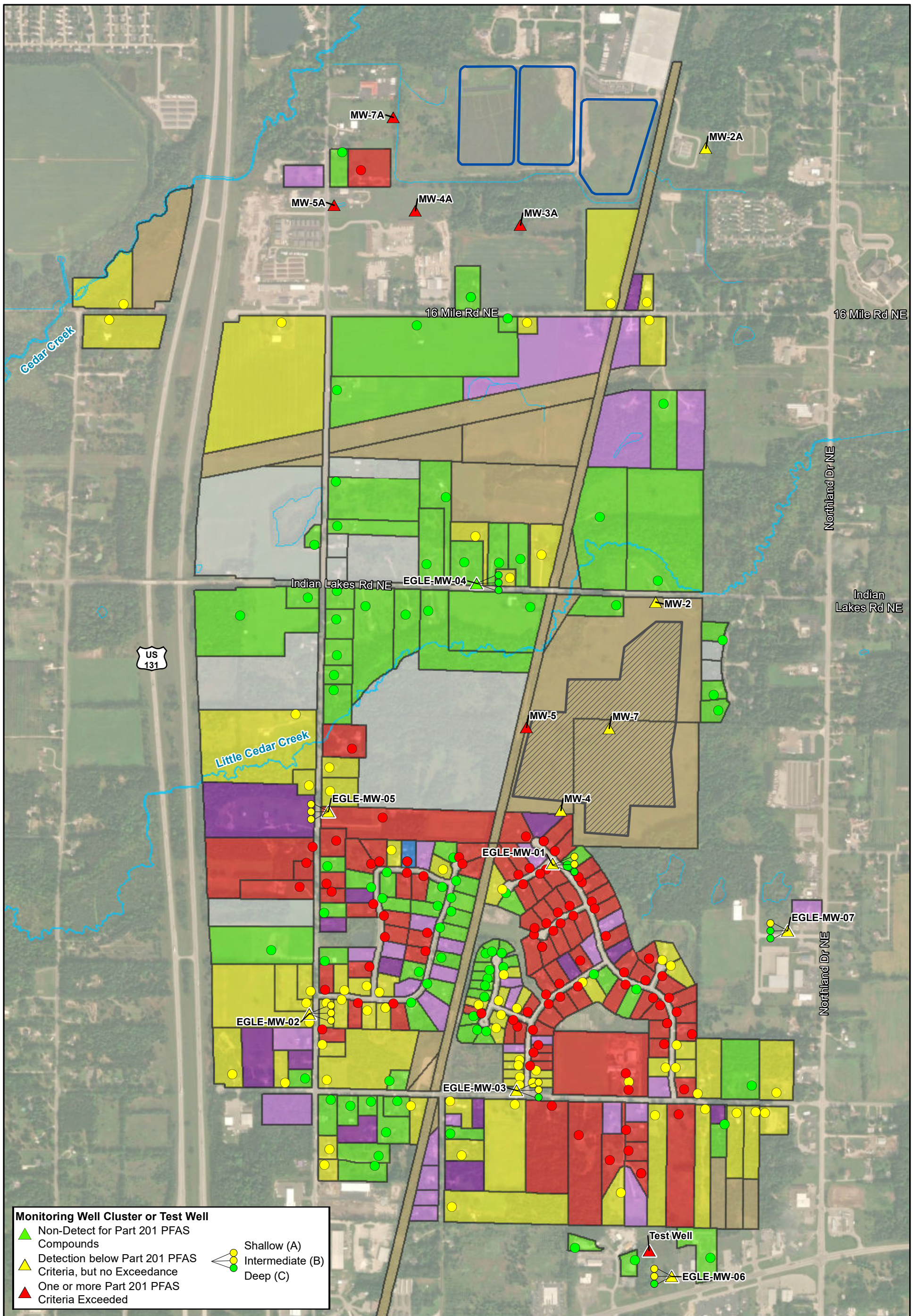

EGLE

AECOM

Prepared: 8/24/2023

Map Location

Legend

Residential Well Samples

- Non-Detect for Part 201 PFAS Compounds
- Detection below Part 201 PFAS Criteria, but no Exceedance
- One or more Part 201 PFAS Criteria Exceeded
- Discharge Area
- Former Wastewater Treatment Lagoon

Parcel Status

- Sampled - Non-Detect
- Sampled - Detection
- Sampled - Exceeds
- Whole House Filter
- No Response to Sampling Request
- Resident Declined Sampling
- Not Sampled
- Vacant

N

0 500 1,000 Feet

FIGURE 3
RESIDENTIAL AND MONITORING WELL PFAS HEATMAP

DRAFT

CEDAR SPRINGS WWTP INVESTIGATION
KENT COUNTY, MI

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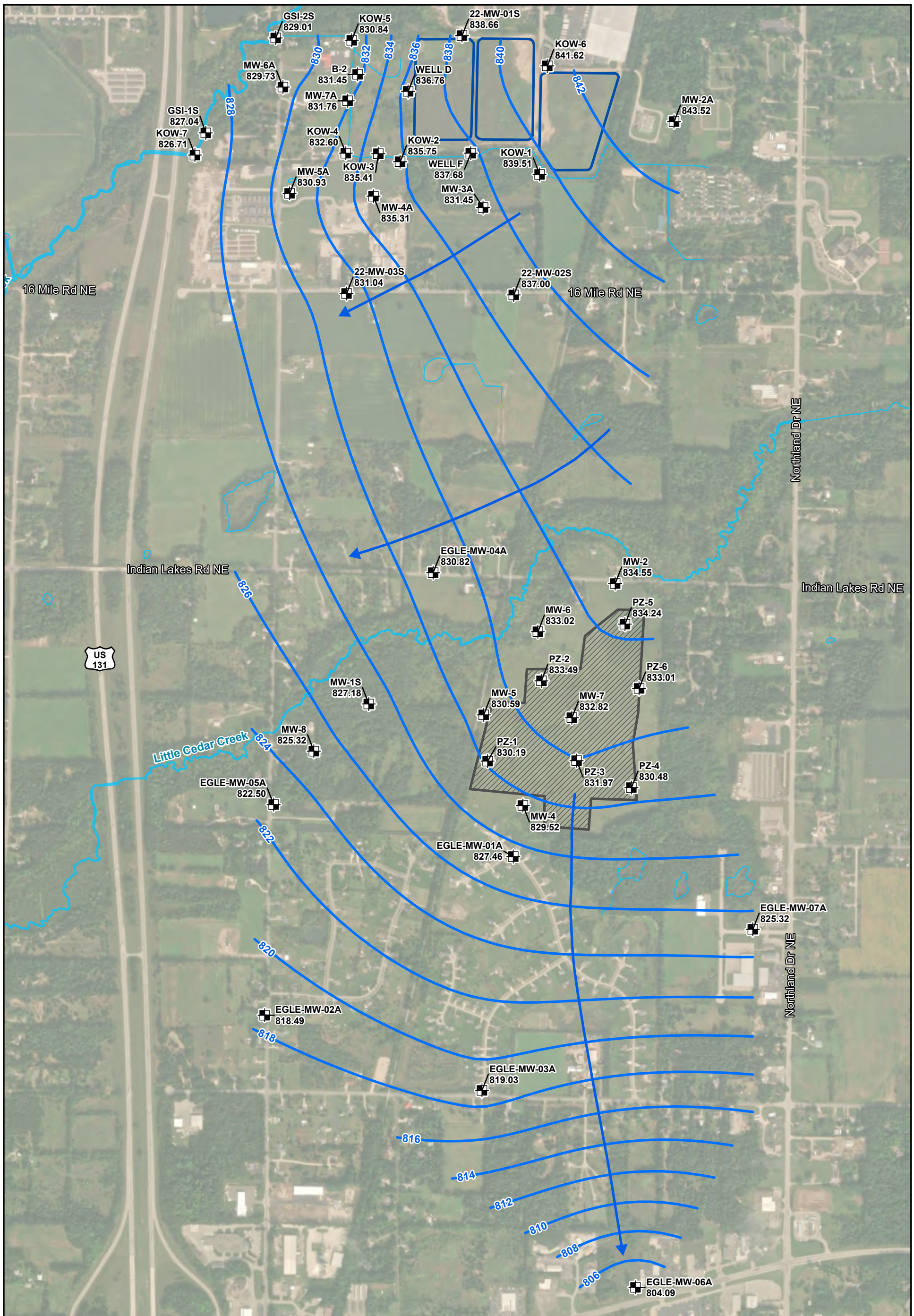

EGLE

AECOM

Prepared: 6/13/2024

Map Location

Legend

- Monitoring Well
- Groundwater Contour (2 ft interval)
- Groundwater Flow Direction
- Discharge Area
- Former Wastewater Treatment Lagoon

N

0 500 1,000 Feet

FIGURE 4
SHALLOW GROUNDWATER CONTOUR MAP - MARCH 2024

CEDAR SPRINGS WWTP INVESTIGATION
KENT COUNTY, MI

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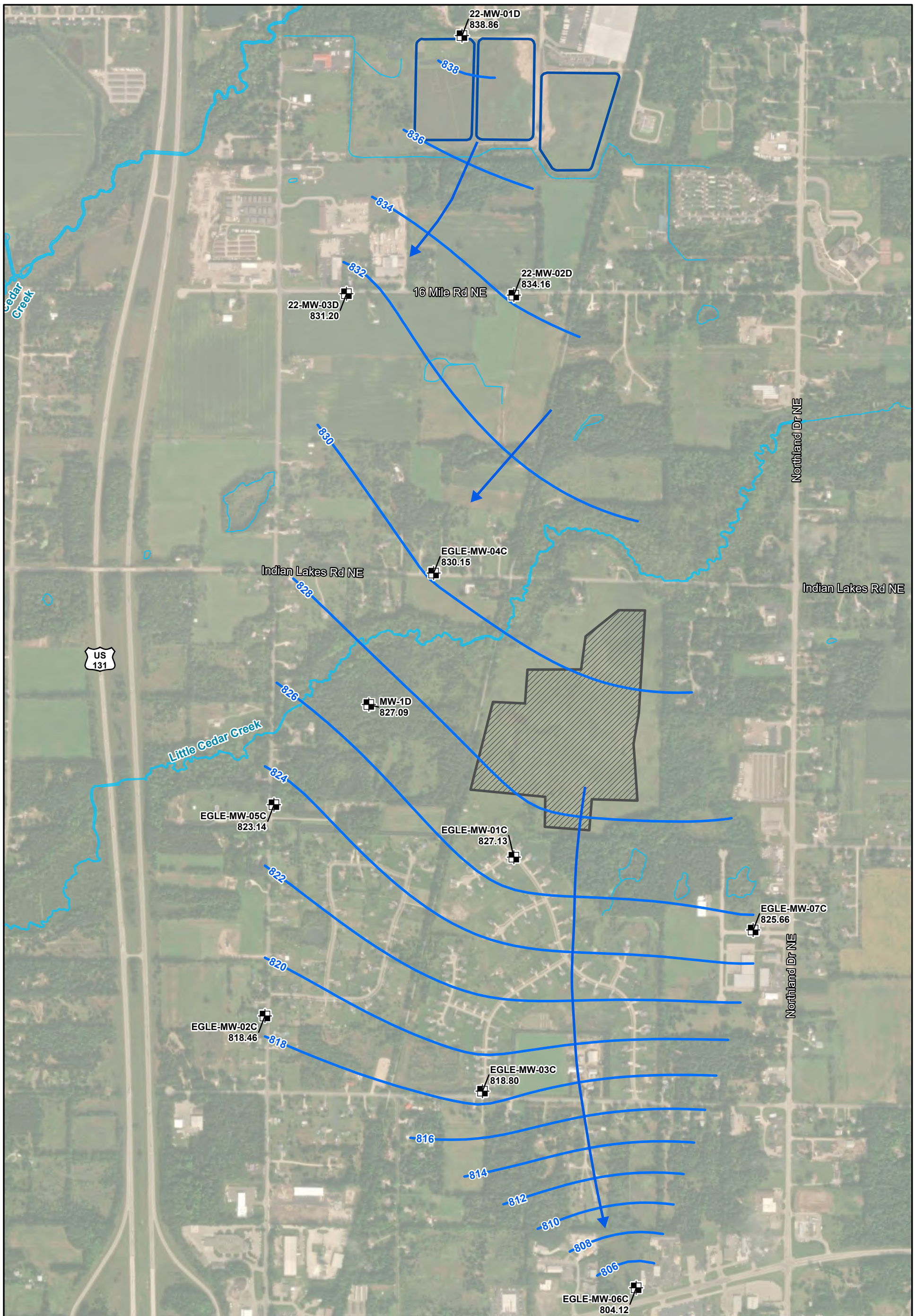

EGLE

AECOM

Prepared: 6/13/2024

Map Location

Legend

- Monitoring Well
- Groundwater Contour (1 ft interval)
- Groundwater Flow Direction
- Discharge Area
- Former Wastewater Treatment Lagoon

N

0 500 1,000 Feet

FIGURE 5
DEEP GROUNDWATER CONTOUR MAP - MARCH 2024

CEDAR SPRINGS WWTP INVESTIGATION
KENT COUNTY, MI

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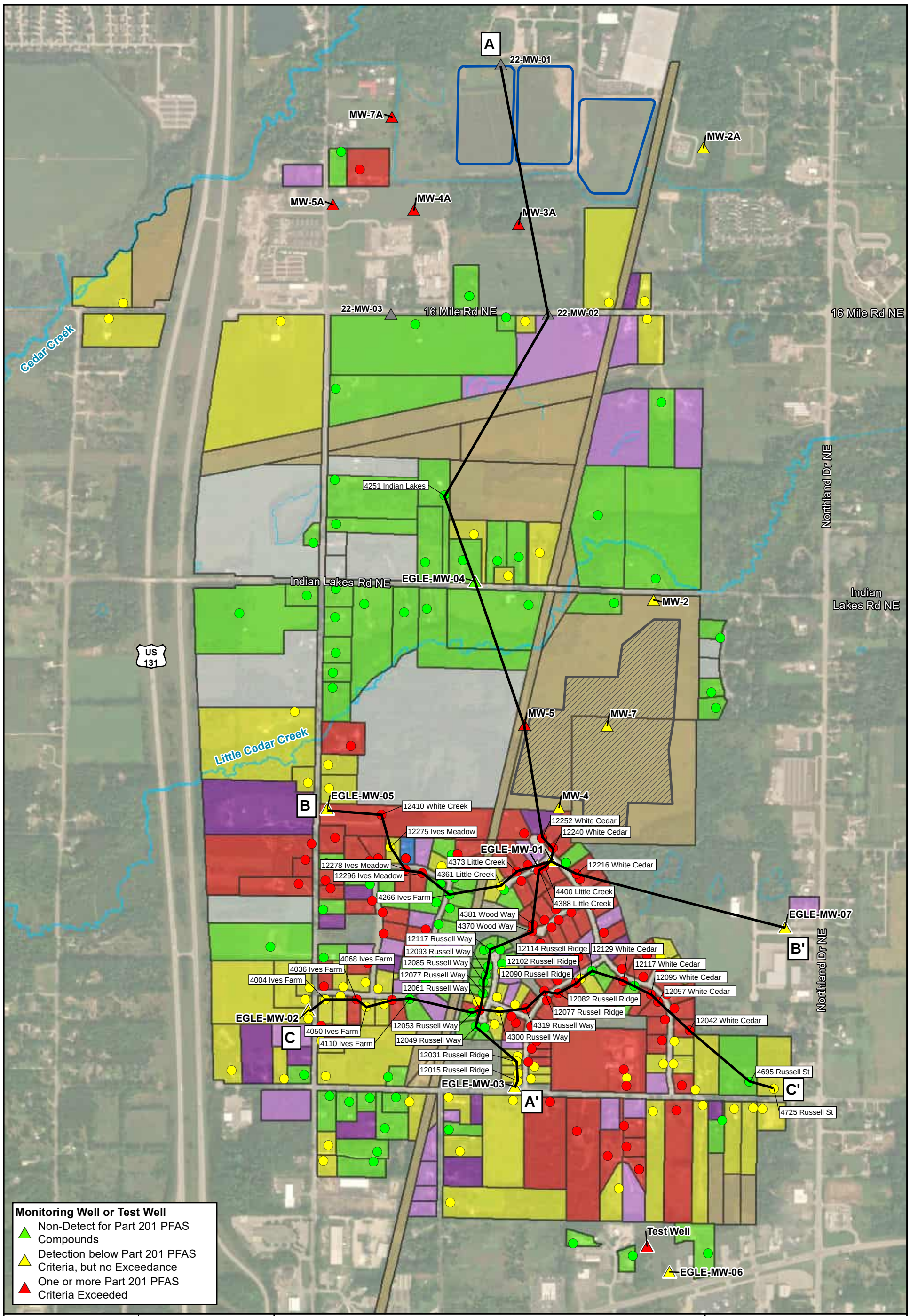

EGLE

AECOM

Prepared: 8/24/2023

Map Location

Legend

Residential Well Samples

- Non-Detect for Part 201 PFAS Compounds
- Detection below Part 201 PFAS Criteria, but no Exceedance
- One or more Part 201 PFAS Criteria Exceeded
- Discharge Area
- Former Wastewater Treatment Lagoon

Parcel Status

- Sampled - Non-Detect
- Sampled - Detection
- Sampled - Exceeds
- Whole House Filter
- No Response to Sampling Request
- Resident Declined Sampling
- Not Sampled
- Vacant

N

0 500 1,000 Feet

FIGURE 6
CROSS SECTION TRANSECTS OVERVIEW

DRAFT

CEDAR SPRINGS WWTP INVESTIGATION
KENT COUNTY, MI

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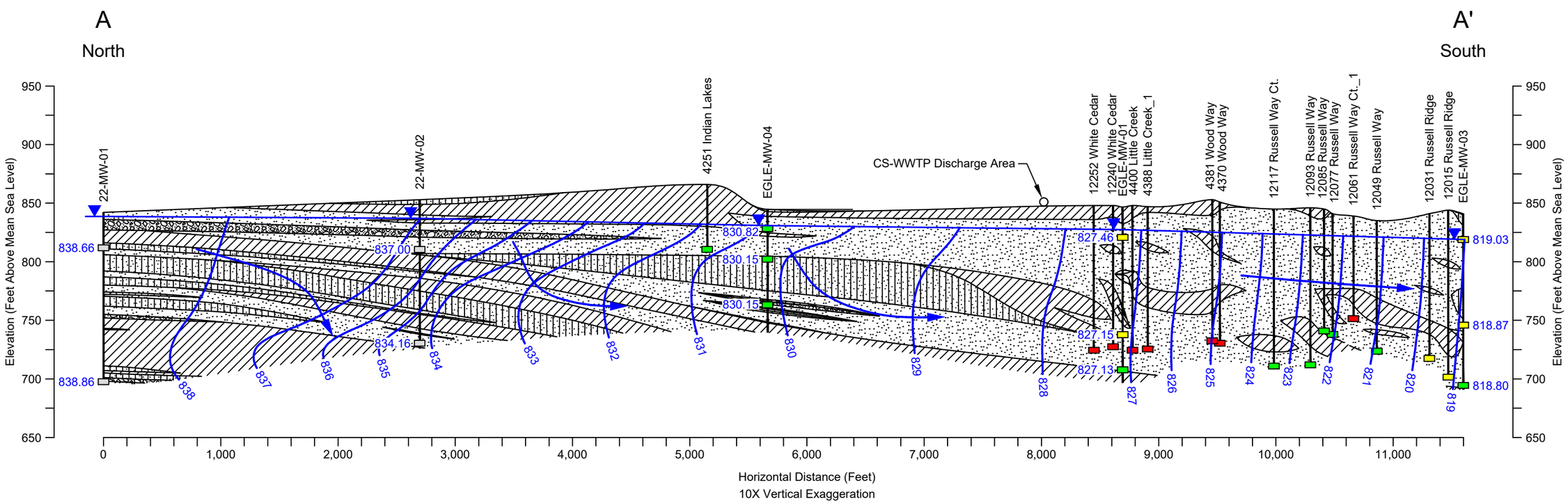


0 900' 1,800'
H: 1" = 900'
V: 1" = 90'
0 90' 180'

Borehole Legend

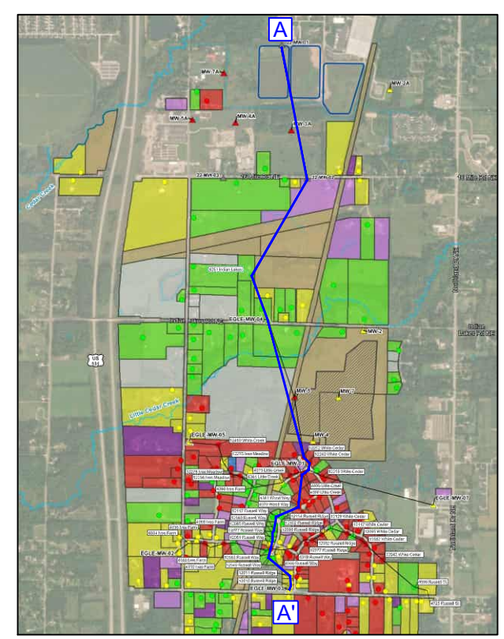
Well I.D.

Groundwater Table

Well Screen Interval
- Not Sampled for Part 201 PFAS Compounds
- Non-Detect for Part 201 PFAS Compounds
- One or More Detections for Part 201 PFAS Compounds, But No Criteria Exceeded
- One or More Part 201 PFAS Criteria Exceeded

Main Stratigraphic Units
- Clay
- Silt
- Sand with Silt or Silty Sand
- Sand
- Sand with Gravel
- Gravel

Groundwater Flow
- 838.86 Groundwater Elevation - Measured at Each Well in Cluster
- 830 Groundwater Contour
- Groundwater Flow Direction



Index Map

N
0 3000
Feet

EGLE

Figure: 7

GEOLOGIC CROSS SECTION A-A'

CEDAR SPRINGS WWTP INVESTIGATION
KENT COUNTY, MICHIGAN

Project No.: 60637339 Date: 2024-06-14

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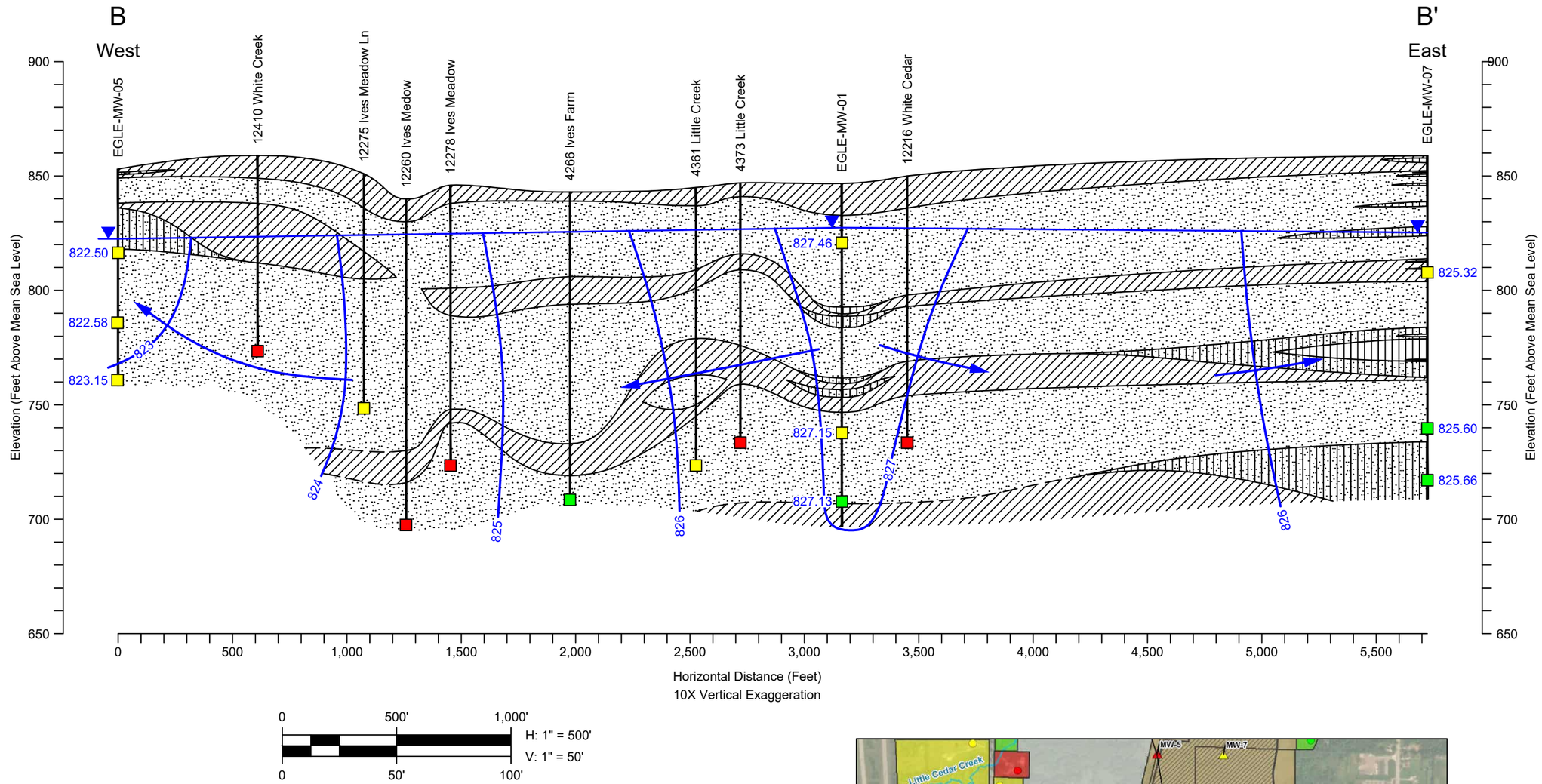


0 500' 1,000'

H: 1" = 500'

V: 1" = 50'

0 50' 100'

Borehole Legend

Well I.D.

Groundwater Table

Well Screen Interval

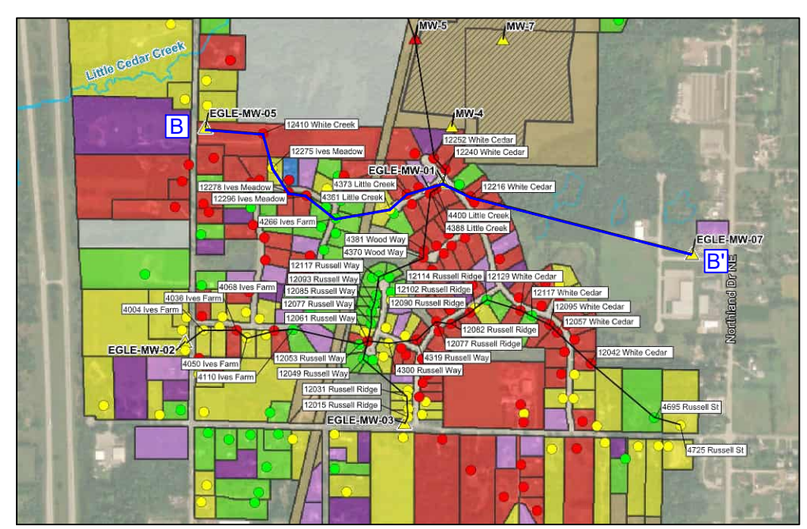
- Not Sampled for Part 201 PFAS Compounds
- Non-Detect for Part 201 PFAS Compounds
- One or More Detections for Part 201 PFAS Compounds, But No Criteria Exceeded
- One or More Part 201 PFAS Criteria Exceeded

Main Stratigraphic Units

- Clay
- Silt
- Sand with Silt or Silty Sand
- Sand
- Sand with Gravel
- Gravel

Groundwater Flow

- 823.15 Groundwater Elevation - Measured at Each Well in Cluster
- 824 Groundwater Contour
- Groundwater Flow Direction



Index Map

N

0 1500

Feet

CEDAR SPRINGS WWTP INVESTIGATION
KENT COUNTY, MICHIGAN

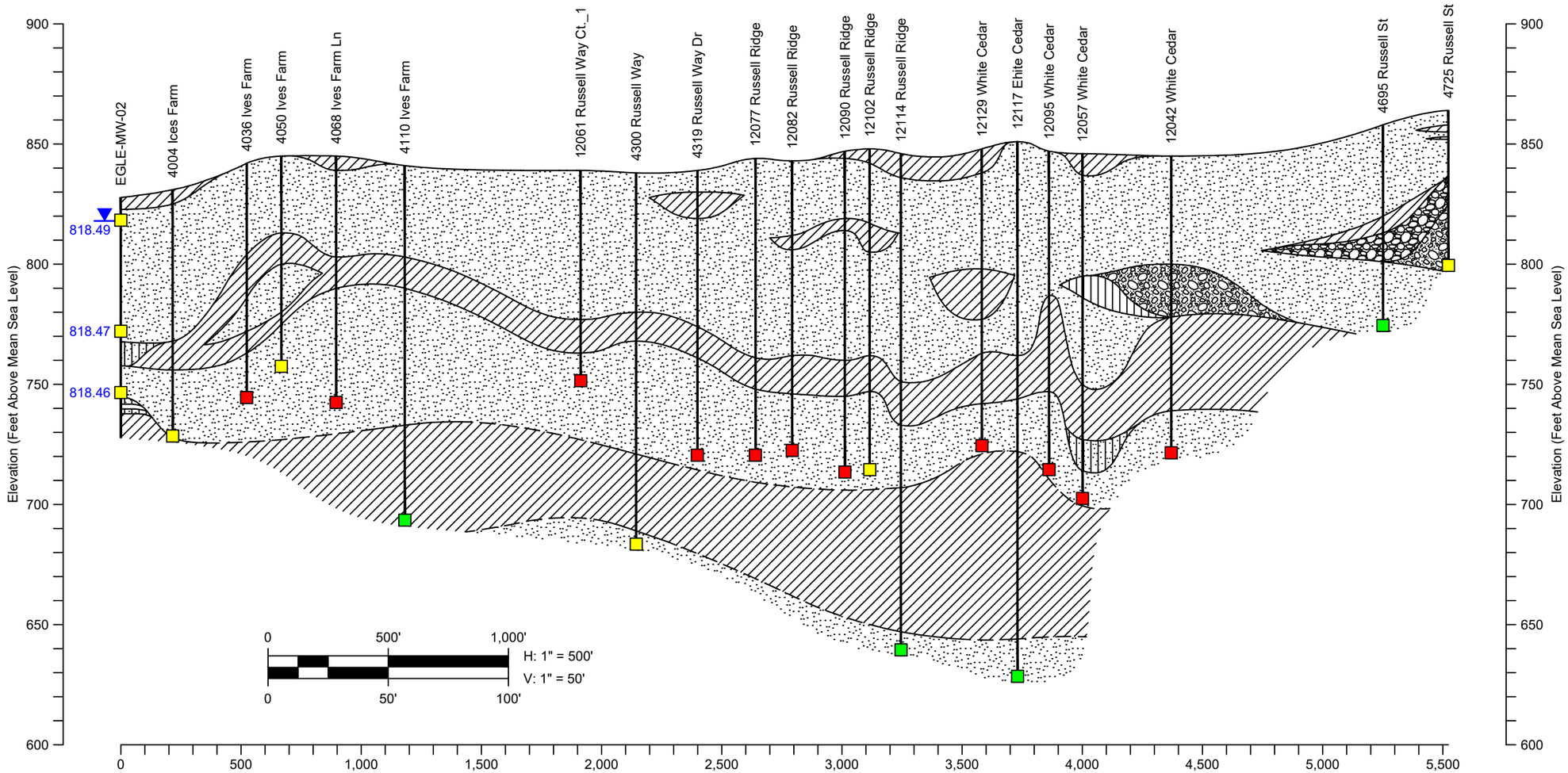
GEOLOGIC CROSS SECTION B-B'

Project No.: 60637339 Date: 2024-06-14

Figure: 8

Last saved by: WILZBACHERN(2024-06-14) Last Plotted: 2024-06-14
Filename: C:\USERS\WILZBACHERN\ONEDRIVE - AECOM DIRECTORY\HOME DRIVE\PROJECT FOLDERS\60637339\910-CAD\01 MODELS\60637339 XSEC.DWG

Project Management Initials: Designer: NLW Checked: JB Approved:____ ANSI B 11" x 17"



Borehole Legend

Well I.D.

Groundwater Table

Well Screen Interval

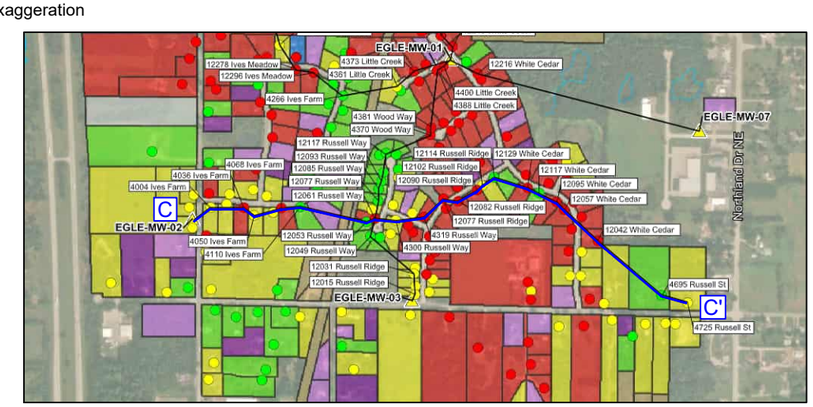
- Not Sampled for Part 201 PFAS Compounds
- Non-Detect for Part 201 PFAS Compounds
- One or More Detections for Part 201 PFAS Compounds, But No Criteria Exceeded
- One or More Part 201 PFAS Criteria Exceeded

Main Stratigraphic Units

- Clay
- Silt
- Sand with Silt or Silty Sand
- Sand
- Sand with Gravel
- Gravel

Groundwater Flow

818.46 Groundwater Elevation Measured at Each Well in Cluster



Index Map

EGLE

Figure: 9

GEOLOGIC CROSS SECTION C-C'

CEDAR SPRINGS WWTP INVESTIGATION
KENT COUNTY, MICHIGAN

Project No.: 60637339 Date: 2024-06-14

Last saved by: WILZBACHERN(2024-06-14) Last Plotted: 2024-06-14
Filename: C:\USERS\WILZBACHERN\ONEDRIVE - AECOM\DIRECTORY\HOME DRIV\EIPROJECT FOLDERS\60637339\910-CAD\01 MODELS\60637339 XSEC.DWG

Project Management Initials: Designer: NLW Checked: JB Approved:_____ ANSI B 11" x 17"

Tables

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Table 1
Monitoring Well Survey Coordinates and Water Level Measurements

Well ID	Northing	Easting	Ground Elevation (ft amsl)	TOC Elevation (ft amsl)	Measuring Point	TD (ft btoc)	Bottom Screen Elevation (ft amsl)	Date	DTW (ft btoc)	SWL Elevation (ft amsl)	Date	DTW (ft btoc)	SWL Elevation (ft amsl)
EGLE-MW-01A	618017.806	12804679.49	846.75	846.42	TOC	28.58	817.84	7/24/2023	18.64	827.78	3/21/2024	18.96	827.46
EGLE-MW-01B	618017.806	12804679.49	846.75	846.43	TOC	111.45	734.98	7/24/2023	19.21	827.22	3/21/2024	19.28	827.15
EGLE-MW-01C	618017.806	12804679.49	846.75	846.41	TOC	141.51	704.90	7/24/2023	19.21	827.20	3/21/2024	19.28	827.13
EGLE-MW-02A	616401.576	12802144.07	827.73	827.21	TOC	11.89	815.32	7/24/2023	8.34	818.87	3/21/2024	8.72	818.49
EGLE-MW-02B	616401.576	12802144.07	827.73	827.18	TOC	58.13	769.05	7/24/2023	8.38	818.80	3/21/2024	8.71	818.47
EGLE-MW-02C	616401.576	12802144.07	827.73	827.15	TOC	83.62	743.53	7/24/2023	8.32	818.83	3/21/2024	8.69	818.46
EGLE-MW-03A	615631.664	12804360.02	840.94	840.80	TOC	24.41	816.39	7/24/2023	20.94	819.86	3/21/2024	21.77	819.03
EGLE-MW-03B	615631.664	12804360.02	840.94	840.84	TOC	97.42	743.42	7/24/2023	21.10	819.74	3/21/2024	21.97	818.87
EGLE-MW-03C	615631.664	12804360.02	840.94	840.74	TOC	148.75	691.99	7/24/2023	NM	N/A	3/21/2024	21.94	818.80
EGLE-MW-04A	620914.954	12803862.79	844.72	844.69	TOC	19.11	825.58	7/24/2023	14.06	830.63	3/21/2024	13.87	830.82
EGLE-MW-04B	620914.954	12803862.79	844.72	844.69	TOC	45.04	799.65	7/24/2023	14.63	830.06	3/21/2024	14.54	830.15
EGLE-MW-04C	620914.954	12803862.79	844.72	844.60	TOC	83.89	760.71	7/24/2023	14.54	830.06	3/21/2024	14.45	830.15
EGLE-MW-05A	618547.998	12802235.52	853.23	853.16	TOC	39.17	813.99	7/24/2023	30.72	822.44	3/21/2024	30.66	822.50
EGLE-MW-05B	618552.310	12802235.85	853.12	852.90	TOC	69.71	783.19	7/24/2023	30.37	822.53	3/21/2024	30.32	822.58
EGLE-MW-05C	618552.310	12802235.85	853.12	852.90	TOC	94.85	758.05	7/24/2023	29.82	823.08	3/21/2024	29.76	823.14
EGLE-MW-06A	613624.929	12805927.16	849.62	848.80	TOC	49.9	798.90	7/24/2023	NM	N/A	3/21/2024	44.71	804.09
EGLE-MW-06B	613630.459	12805926.74	849.78	849.53	TOC	89.9	759.63	7/24/2023	NM	N/A	3/21/2024	45.40	804.13
EGLE-MW-06C	613630.120	12805926.98	849.78	849.57	TOC	143	706.57	7/24/2023	NM	N/A	3/21/2024	45.45	804.12
EGLE-MW-07A	617274.152	12807122.32	858.88	858.54	TOC	53.5	805.04	7/24/2023	31.98	826.56	3/21/2024	33.22	825.32
EGLE-MW-07B	617274.417	12807117.86	858.84	858.49	TOC	121.62	736.87	7/24/2023	31.69	826.80	3/21/2024	32.89	825.60
EGLE-MW-07C	617274.417	12807117.86	858.84	858.52	TOC	144.3	714.22	7/24/2023	31.73	826.79	3/21/2024	32.86	825.66
22-MW-01S	626390.526	12804157.33	N/A	841.72	TOC	32.75	809.21				3/21/2024	3.06	838.66
22-MW-01D	626390.542	12804151.25	N/A	841.85	TOC	147	694.98				3/21/2024	2.99	838.86
22-MW-02S	623746.478	12804684.82	N/A	852.65	TOC	45	807.57				3/21/2024	15.65	837.00
22-MW-02D	623746.144	12804679.5	N/A	852.68	TOC	125	727.60				3/21/2024	18.52	834.16
22-MW-03S	623760.868	12802979.72	N/A	845.77	TOC	25	820.73				3/21/2024	14.73	831.04
22-MW-03D	623760.953	12802974.93	N/A	845.69	TOC	126	719.73				3/21/2024	14.49	831.20
B-2	625995.280	12803092.46	N/A	841.33	TOC	N/A	N/A				3/21/2024	9.88	831.45
GSI-1S	625397.816	12801543.68	N/A	833.50	TOC	10.27	820.40				3/21/2024	6.46	827.04
GSI-1D	625404.514	12801547.37	N/A	833.20	TOC	18.7	811.97				3/21/2024	7.34	825.86
GSI-2S	626367.407	12802257.15	N/A	833.13	TOC	10.27	819.68				3/21/2024	4.12	829.01
GSI-2D	626369.633	12802254.75	N/A	832.24	TOC	18.7	811.25				3/21/2024	3.22	829.02
KOW-1	624976.093	12804947.74	N/A	851.66	TOC	35	813.59				3/21/2024	12.15	839.51
KOW-2	625103.495	12803525.85	N/A	845.25	TOC	19	823.18				3/21/2024	9.50	835.75
KOW-3	625189.209	12803304.19	N/A	844.15	TOC	17	823.27				3/21/2024	8.74	835.41
KOW-4	625193.124	12802971.5	N/A	843.95	TOC	21	820.11				3/21/2024	11.35	832.60
KOW-5	626343.377	12803031.76	N/A	840.00	TOC	21	815.24				3/21/2024	9.16	830.84
KOW-6	626081.690	12805027.77	N/A	848.76	TOC	18	830.07				3/21/2024	7.14	841.62
KOW-7	625174.500	12801432.99	N/A	835.51	TOC	19	813.86				3/21/2024	8.80	826.71
MW-2A	625514.557	12806320	N/A	856.12	TOC	40.08	813.63				3/21/2024	12.60	843.52
MW-3A	624639.647	12804372.45	N/A	N/A	TOC	39.7	808.30				3/21/2024	NM	N/A
MW-4A	624753.817	12803253.62	N/A	844.64	TOC	37.2	805.04				3/21/2024	9.33	835.31
MW-5A	624783.495	12802398.69	N/A	843.50	TOC	35.6	805.51				3/21/2024	12.57	830.93
MW-6A	625866.569	12802330.46	N/A	838.75	TOC	20.7	815.76				3/21/2024	9.02	829.73
MW-7A	625726.583	12802990.01	N/A	842.30	TOC	27.7	812.15				3/21/2024	10.54	831.76
MW-8A	N/A	N/A	N/A	N/A	TOC	33.62	N/A				3/21/2024	NM	N/A
WELL D	625821.788	12803607.23	N/A	843.07	TOC	N/A	N/A				3/21/2024	6.31	836.76
WELL E	N/A	N/A	N/A	N/A	TOC	N/A	N/A				3/21/2024	NM	N/A
WELL F	625193.415	12804246.2	N/A	846.61	TOC	N/A	N/A				3/21/2024	8.93	837.68
MW-1S	619573.490	12803206.69	N/A	847.48	TOC	N/A	N/A				3/21/2024	20.30	827.18
MW-1D	619572.785	12803202.69	N/A	848.91	TOC	N/A	N/A				3/21/2024	21.82	827.09
MW-2	620803.320	12805719.46	N/A	845.47	TOC	19.77	825.62				3/21/2024	10.92	834.55
MW-3	618606.595	12802703.75	N/A	N/A	TOC	N/A	N/A				3/21/2024	NM	N/A
MW-4	618539.965	12804778.18	N/A	846.22	TOC	26.35	816.80				3/21/2024	16.70	829.52
MW-5	619462.542	12804377.74	N/A	839.29	TOC	19.75	816.52				3/21/2024	8.70	830.59
MW-6	620312.137	12804930.91	N/A	838.07	TOC	14.6	819.34				3/21/2024	5.05	833.02
MW-7	619433.848	12805277.14	N/A	848.86	TOC	29.85	815.98				3/21/2024	16.04	832.82
MW-8	619093.441	12802646.01	N/A	840.47	TOC	N/A	N/A				3/21/2024	15.15	825.32
PZ-1	618992.687	12804418.74	N/A	846.49	TOC	N/A	N/A				3/21/2024	16.30	830.19
PZ-2	619812.901	12804967.23	N/A	841.63	TOC	N/A	N/A				3/21/2024	8.14	833.49
PZ-3	618995.695	12805326.35	N/A	847.91	TOC	N/A	N/A				3/21/2024	15.94	831.97
PZ-4	618721.487	12805885.09	N/A	854.56	TOC	N/A	N/A				3/21/2024	24.08	830.48
PZ-5	620389.314	12805818.9	N/A	847.97	TOC	N/A	N/A				3/21/2024	13.73	834.24
PZ-6	619732.731	12805962.67	N/A	851.41	TOC	N/A	N/A				3/21/2024	18.40	833.01

N/A = Not Available
NM = Not Measured
TOC = Top of Casing
SWL = Static Water Level
DTW = Depth to Water
ft btoc = Feet Below Top of Casing
ft amsl = Feet Above Mean Seal Level

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Table 2
Summary of Groundwater Parameters at Sample Collection

Sample Location	pH	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)
VAP-01 (25.0-30.0)	7.62	11.82	0.62	3.47	17.19	-76.6
VAP-01 (33.9-38.9)	7.79	16.85	0.78	0.32	1,528.1	-352.0
VAP-01 (42.5-47.5)	7.48	12.41	0.91	0.02	71.44	-330.7
VAP-01 (54.7-59.7)	7.47	13.59	0.93	0.27	503.10	-383.8
VAP-01 (63.1-68.1)	7.92	15.35	0.85	0.34	180.11	-432.6
VAP-01 (72.8-77.8)	7.65	13.29	0.93	0.11	120.19	-405.0
VAP-01 (82.6-87.6)	6.95	12.04	0.87	0.00	1,909.2	-541.3
VAP-01 (93.2-98.2)	7.43	14.15	0.87	0.00	536.20	-639.8
VAP-01 (102.5-107.5)	7.44	12.93	0.89	0.00	1,214.7	-650.6
VAP-01 (113.0-118.0)	7.47	13.99	0.64	0.00	2,890.4	-641.7
VAP-01 (122.9-127.9)	7.95	12.52	0.44	0.00	760.77	-573.5
VAP-01 (133.2-138.2)	8.21	12.02	0.48	0.00	638.73	-576.2
VAP-01 (144.2-149.2)	9.64	11.55	0.64	2.23	127.70	-283.9
VAP-02 (15.2-20.2)	7.08	10.85	0.50	3.19	45.41	-275.5
VAP-02 (24.4-29.4)	7.47	13.59	0.68	0.29	120.88	-364.2
VAP-02 (34.5-39.5)	7.42	12.27	0.59	0.82	294.50	-279.6
VAP-02 (45.4-50.4)	7.82	8.87	0.70	1.55	86.16	-238.9
VAP-02 (52.8-57.8)	7.60	9.47	0.71	0.00	257.99	-350.4
VAP-02 (66.5-71.5)	7.41	13.93	0.77	12.13	35.66	-216.3
VAP-02 (76.8-81.8)	7.00	13.20	0.84	0.89	98.16	-273.4
VAP-02 (85.3-90.3)	7.22	13.84	0.78	0.17	3,452.7	-313.0
VAP-03 (26.1-31.1)	7.31	14.68	0.00	9.90	7.84	-74.8
VAP-03 (33.9-38.9)	6.74	16.23	0.67	2.02	47.38	-285.9
VAP-03 (45.1-50.1)	6.84	15.90	0.57	1.35	372.15	-272.7
VAP-03 (54.1-59.2)	6.75	16.87	0.62	3.12	197.87	-207.4
VAP-03 (64.8-69.8)	NA	NA	NA	NA	NA	NA
VAP-03 (74.3-79.3)	7.06	13.08	0.50	3.94	304.48	-178.7
VAP-03 (84.7-89.7)	6.99	13.21	0.60	1.97	207.01	-241.2
VAP-03 (97.2-102.2)	7.20	14.60	0.66	0.38	2,383.3	-279.3
VAP-03 (105.9-110.9)	7.25	14.08	0.78	1.15	7,251.8	-239.1
VAP-03 (113.8-118.8)	7.23	14.63	0.93	0.00	732.48	-310.3
VAP-03 (127.1-132.1)	8.49	13.54	0.75	1.52	66.26	-215.5
VAP-03 (137.0-142.0)	8.84	14.35	0.78	0.00	1,455.1	-374.9
VAP-03 (146.5-151.5)	8.80	13.37	0.73	0.00	1,179.6	-290.1
EGLE-MW-01A	6.94	11.74	0.61	1.31	0.97	-123.2
EGLE-MW-01B	7.52	11.52	0.81	0.00	7.20	-230.8
EGLE-MW-01C	7.18	10.86	0.43	0.00	0.67	-159.6
EGLE-MW-02A	6.79	15.02	0.96	0.84	1.34	-111.5
EGLE-MW-02B	7.16	12.40	0.91	4.08	5.76	-105.3
EGLE-MW-02C	7.33	11.63	0.97	0.00	0.99	-224.5
EGLE-MW-03A	6.93	13.46	0.64	3.49	6.65	-107.9
EGLE-MW-03B	7.09	13.13	0.75	3.96	94.97	-99.4
EGLE-MW-03C	7.21	12.28	0.79	0.04	14.21	-183.2
EGLE-MW-04A	6.86	12.08	0.45	2.65	1.07	-66.3
EGLE-MW-04B	7.42	11.19	0.50	0.00	1.56	-190.7
EGLE-MW-04C	7.26	11.49	0.65	0.00	1.34	-162.8
EGLE-MW-05A	6.88	9.97	0.73	2.90	1.75	68.5
EGLE-MW-05B	7.29	11.07	0.67	0.00	18.59	-184.5
EGLE-MW-05C	7.49	11.22	0.70	0.04	10.52	-257.2
EGLE-MW-06A	7.27	11.63	0.36	9.50	1.49	51.2
EGLE-MW-06B	7.18	11.89	0.97	2.18	3.46	-14.8
EGLE-MW-06C	7.46	12.08	0.52	0.26	16.04	-67.4
EGLE-MW-07A	7.21	11.43	0.68	0.17	2.22	-99.5
EGLE-MW-07B	7.48	11.20	0.47	0.08	12.77	-189.2
EGLE-MW-07C	7.36	11.76	0.47	0.08	2.59	-207.8

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Table 3
Vertical Aquifer Profile Groundwater
PFAS Analytical Results

Location			Michigan Part 201 Residential Drinking Water Criteria (DWC)	EGLE-VAP-01	EGLE-VAP-01	EGLE-VAP-01	EGLE-VAP-01	EGLE-VAP-01	EGLE-VAP-01	EGLE-VAP-01	EGLE-VAP-01	EGLE-VAP-01
Sample				VAP-01 (25.0-30.0)	VAP-01 (33.9-38.9)	VAP-01 (42.5-47.5)	VAP-01 (54.7-59.7)	VAP-01 (54.7-59.7)-DUP	VAP-01 (63.1-68.1)	VAP-01 (72.8-77.8)	VAP-01 (82.6-87.6)	VAP-01 (93.2-98.2)
Sample Date				3/20/2023	3/21/2023	3/21/2023	3/22/2023	3/22/2023	3/22/2023	3/22/2023	3/23/2023	3/23/2023
Screened Interval (feet below ground surface)				25-30	33.9-38.9	42.5-47.5	54.7-59.7	54.7-59.7	63.1-68.1	72.8-77.8	82.6-87.6	93.2-98.2
Laboratory Work Order Number				2303159	2303159	2303159	2303159	2303159	2303159	2303159	2303159	2303159
Compound	CAS	Unit		Result	Result	Result	Result	Result	Result	Result	Result	Result
PFBA	375-22-4	ng/l	NA	<4.0	<4.0	**7.0**	<4.0	<4.0	**4.7**	**4.4**	**5.0**	<4.0
PFPeA	2706-90-3	ng/l	NA	**2.2**	**8.5**	**91**	**8.7**	**8.3**	**8.4**	**11**	**14**	**12**
PFHxA	307-24-4	ng/l	**400,000**	**2.8**	**7.1**	**61**	**6.5**	**7.1**	**7.4**	**9.6**	**12**	**9.1**
PFHpA	375-85-9	ng/l	NA	<2.0	<2.0	**14**	**2.1**	**2.4**	**2.9**	**2.7**	**3.6**	**2.6**
PFOA	335-67-1	ng/l	**8**	**5.1**	**3.9**	**15**	**9.6**	**9.3**	**6.8**	**6.7**	**5.8**	**8.5**
PFNA	375-95-1	ng/l	**6**	**3.3**	**2.5**	**6.8**	**2.1**	**2.1**	**2.1**	**2.2**	**2.1**	**2.1**
PFDA	335-76-2	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFUnA	2058-94-8	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFDoA	307-55-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFTrDA	72629-94-8	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
PFTeDA	376-06-7	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
PFDS	335-77-3	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFecHS	646-83-3	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFBS	375-73-5	ng/l	**420**	**3.3**	**2.7**	**5.7**	**5.4**	**5.7**	**3.7**	**5.0**	**4.6**	**3.9**
PFPeS	2706-91-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFHxS	355-46-4	ng/l	**51**	<2.0	<2.0	**2.3**	**2.7**	**2.1**	<2.0	<2.0	<2.0	**2.1**
PFHpS	375-92-8	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFOS	1763-23-1	ng/l	**16**	**14**	**6.3**	**12**	**3.2**	**3.5**	**2.0**	**3.0**	**3.0**	**2.5**
PFBSA	30334-69-1	ng/l	NA	<2.0	<2.0	**3.7**	**3.0**	**3.0**	<2.0	**2.4**	**2.5**	**2.7**
PFHxSA	41997-13-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFNS	68259-12-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFOSA	754-91-6	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4:2 FTSA	757124-72-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
6:2 FTSA	27619-97-2	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
8:2 FTSA	39108-34-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
3:3 FTCA	356-02-5	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
5:3 FTCA	914637-49-3	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
7:3 FTCA	812-70-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-EtFOSAA	2991-50-6	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-MeFOSAA	2355-31-9	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
9Cl-PF3ONS	756426-58-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
11Cl-PF3OUdS	763051-92-9	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ADONA	919005-14-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
HFPO-DA	13252-13-6	ng/l	**370**	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Total PFAS	NA	ng/l	NA	**31**	**31**	**219**	**43**	**44**	**38**	**47**	**53**	**46**

Notes:
Concentrations reported as nanograms per liter (ng/L)
NA = Not Available
ND = Contaminant not detected above laboratory reporting limits
Contaminant exceeds DWC
Bold values indicate analyte detection

AECOM

Table 3
Vertical Aquifer Profile Groundwater
PFAS Analytical Results

Location			Michigan Part 201 Residential Drinking Water Criteria (DWC)	EGLE-VAP-01	EGLE-VAP-01	EGLE-VAP-01	EGLE-VAP-01	EGLE-VAP-01	EGLE-VAP-02	EGLE-VAP-02	EGLE-VAP-02	EGLE-VAP-02
Sample				VAP-01 (102.5-107.5)	VAP-01 (113.0-118.0)	VAP-01 (122.9-127.9)	VAP-01 (133.2-138.2)	VAP-01 (144.2-149.2)	VAP-02 (15.2-20.2)	VAP-02 (15.2-20.2) -DUP	VAP-02 (24.4-29.4)	VAP-02 (34.5-39.5)
Sample Date				3/23/2023	3/24/2023	3/24/2023	3/28/2023	3/28/2023	3/28/2023	3/28/2023	3/30/2023	3/30/2023
Screened Interval (feet below ground surface)				102.5-107.5	113.0-118.0	122.9-127.9	133.2-138.2	144.2-149.2	15.2-20.2	15.2-20.2	24.4-29.4	34.5-39.5
Laboratory Work Order Number				2303159	2303200	2303200	2303200	2303200	2303200	2303200	2303200	2303200
Compound	CAS	Unit		Result	Result	Result	Result	Result	Result	Result	Result	Result
PFBA	375-22-4	ng/l	NA	<4.0	<4.0	<4.0	<4.0	**11**	**21**	**21**	**6.4**	**10**
PFPeA	2706-90-3	ng/l	NA	**12**	**6.2**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFHxA	307-24-4	ng/l	**400,000**	**9.8**	**4.6**	<2.0	<2.0	**4.0**	**2.2**	**2.4**	<2.0	<2.0
PFHpA	375-85-9	ng/l	NA	**2.5**	**2.2**	<2.0	<2.0	**2.9**	<2.0	<2.0	<2.0	<2.0
PFOA	335-67-1	ng/l	**8**	**8.5**	**5.6**	<2.0	<2.0	**4.6**	**5.3**	**5.8**	**2.1**	**2.3**
PFNA	375-95-1	ng/l	**6**	**2.6**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFDA	335-76-2	ng/l	NA	<2.0	<2.0	<2.0	<2.0	**2.4**	<2.0	<2.0	<2.0	<2.0
PFUnA	2058-94-8	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFDoA	307-55-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFTrDA	72629-94-8	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
PFTeDA	376-06-7	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
PFDS	335-77-3	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFecHS	646-83-3	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFBS	375-73-5	ng/l	**420**	**4.1**	<2.0	<2.0	<2.0	<2.0	**18**	**18**	**30**	**15**
PFPeS	2706-91-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFHxS	355-46-4	ng/l	**51**	<2.0	<2.0	<2.0	<2.0	<2.0	**2.5**	**2.7**	<2.0	**2.3**
PFHpS	375-92-8	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFOS	1763-23-1	ng/l	**16**	**3.2**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFBSA	30334-69-1	ng/l	NA	**3.2**	<2.0	<2.0	<2.0	<2.0	**2.4**	**2.4**	<2.0	<2.0
PFHxSA	41997-13-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFNS	68259-12-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFOSA	754-91-6	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4:2 FTSA	757124-72-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
6:2 FTSA	27619-97-2	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
8:2 FTSA	39108-34-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
3:3 FTCA	356-02-5	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
5:3 FTCA	914637-49-3	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
7:3 FTCA	812-70-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-EtFOSAA	2991-50-6	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-MeFOSAA	2355-31-9	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
9Cl-PF3ONS	756426-58-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
11Cl-PF3OUdS	763051-92-9	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ADONA	919005-14-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
HFPO-DA	13252-13-6	ng/l	**370**	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Total PFAS	NA	ng/l	NA	**46**	**16**	**ND**	**ND**	**20**	**28**	**50**	**39**	**30**

Notes:
Concentrations reported as nanograms per liter (ng/L)
NA = Not Available
ND = Contaminant not detected above laboratory reporting limits
Contaminant exceeds DWC
Bold values indicate analyte detection

AECOM

Table 3
Vertical Aquifer Profile Groundwater
PFAS Analytical Results

Location			Michigan Part 201 Residential Drinking Water Criteria (DWC)	EGLE-VAP-02	EGLE-VAP-02	EGLE-VAP-02	EGLE-VAP-02	EGLE-VAP-02	EGLE-VAP-03	EGLE-VAP-03	EGLE-VAP-03	EGLE-VAP-03
Sample				VAP-02 (45.4-50.4)	VAP-02 (52.8-57.8)	VAP-02 (66.5-71.5)	VAP-02 (76.8-81.8)	VAP-02 (85.3-90.3)	VAP-03 (26.1-31.1)	VAP-03 (26.1-31.1)-DUP	VAP-03 (33.9-38.9)	VAP-03 (45.1-50.1)
Sample Date				3/30/2023	3/31/2023	3/31/2023	4/3/2023	4/3/2023	4/5/2023	4/5/2023	4/6/2023	4/6/2023
Screened Interval (feet below ground surface)				45.4-50.4	52.8-57.8	66.5-71.5	76.18-81.1	85.3-90.3	26.1-31.1	26.1-31.1	33.9-38.9	45.1-50.1
Laboratory Work Order Number				2303200	2304058	2304058	2304058	2304058	2304058	2304058	2304058	2304058
Compound	CAS	Unit		Result	Result	Result	Result	Result	Result	Result	Result	Result
PFBA	375-22-4	ng/l	NA	**6.7**	<4.0	<4.0	<4.0	<4.0	**9.4**	**9.8**	**4.6**	<4.0
PFPeA	2706-90-3	ng/l	NA	<2.0	<2.0	**11**	**6.8**	**10**	**6.9**	**7.4**	<2.0	<2.0
PFHxA	307-24-4	ng/l	**400,000**	**2.1**	<2.0	**7.2**	**4.9**	**6.9**	**10**	**10**	**2.2**	<2.0
PFHpA	375-85-9	ng/l	NA	<2.0	<2.0	**3.6**	**2.9**	**2.9**	**10**	**10**	<2.0	<2.0
PFOA	335-67-1	ng/l	**8**	**3.5**	<2.0	<2.0	<2.0	**6.9**	**14**	**14**	**3.4**	**3.6**
PFNA	375-95-1	ng/l	**6**	<2.0	<2.0	<2.0	<2.0	<2.0	**2.0**	**2.0**	<2.0	<2.0
PFDA	335-76-2	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFUnA	2058-94-8	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFDoA	307-55-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFTrDA	72629-94-8	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
PFTeDA	376-06-7	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
PFDS	335-77-3	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFecHS	646-83-3	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFBS	375-73-5	ng/l	**420**	**7.7**	<2.0	<2.0	**2.7**	<2.0	<2.0	<2.0	**4.2**	**3.8**
PFPeS	2706-91-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFHxS	355-46-4	ng/l	**51**	<2.0	<2.0	**2.3**	**2.7**	<2.0	<2.0	<2.0	**3.0**	**4.4**
PFHpS	375-92-8	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFOS	1763-23-1	ng/l	**16**	<2.0	<2.0	<2.0	<2.0	<2.0	**2.1**	**2.5**	**2.5**	<2.0
PFBSA	30334-69-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFHxSA	41997-13-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFNS	68259-12-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFOSA	754-91-6	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4:2 FTSA	757124-72-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
6:2 FTSA	27619-97-2	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
8:2 FTSA	39108-34-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
3:3 FTCA	356-02-5	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
5:3 FTCA	914637-49-3	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
7:3 FTCA	812-70-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-EtFOSAA	2991-50-6	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-MeFOSAA	2355-31-9	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
9Cl-PF3ONS	756426-58-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
11Cl-PF3OUdS	763051-92-9	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ADONA	919005-14-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
HFPO-DA	13252-13-6	ng/l	**370**	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Total PFAS	NA	ng/l	NA	**20**	ND	**24**	**20**	**27**	**54**	**56**	**20**	**12**

Notes:
Concentrations reported as nanograms per liter (ng/L)
NA = Not Available
ND = Contaminant not detected above laboratory reporting limits
Contaminant exceeds DWC
Bold values indicate analyte detection

AECOM

Table 3
Vertical Aquifer Profile Groundwater
PFAS Analytical Results

Location			Michigan Part 201 Residential Drinking Water Criteria (DWC)	EGLE-VAP-03	EGLE-VAP-03	EGLE-VAP-03	EGLE-VAP-03	EGLE-VAP-03	EGLE-VAP-03	EGLE-VAP-03	EGLE-VAP-03	EGLE-VAP-03
Sample				VAP-03 (54.1-59.2)	VAP-03 (64.8-69.8)	VAP-03 (74.3-79.3)	VAP-03 (84.7-89.7)	VAP-03 (97.2-102.2)	VAP-03 (105.9-110.9)	VAP-03 (113.8-118.8)	VAP-03 (127.1-132.1)	VAP-03 (127.1-132.1) -DUP
Sample Date				4/6/2023	4/7/2023	4/7/2023	4/7/2023	4/10/2023	4/11/2023	4/11/2023	4/12/2023	4/12/2023
Screened Interval (feet below ground surface)				54.1-59.2	64.8-69.8	74.3-79.3	84.7-89.7	97.2-102.2	105.9-110.9	113.8-118.8	127.1-132.1	127.1-132.1
Laboratory Work Order Number				2304058	4304107	4304107	4304107	4304107	4304107	4304107	4304107	4304107
Compound	CAS	Unit		Result	Result	Result	Result	Result	Result	Result	Result	Result
PFBA	375-22-4	ng/l	NA	**4.5**	**5.1**	<4.0	**9.0**	**12**	<4.0	<4.0	<4.0	<4.0
PFPeA	2706-90-3	ng/l	NA	<2.0	<2.0	<2.0	**5.0**	**6.2**	<2.0	**11**	<2.0	<2.0
PFHxA	307-24-4	ng/l	**400,000**	<2.0	<2.0	<2.0	**14**	**5.6**	<2.0	**7.3**	<2.0	<2.0
PFHpA	375-85-9	ng/l	NA	<2.0	<2.0	<2.0	**2.4**	**4.9**	<2.0	**3.7**	<2.0	<2.0
PFOA	335-67-1	ng/l	**8**	**3.3**	<2.0	<2.0	**2.9**	**4.9**	<2.0	**14**	<2.0	<2.0
PFNA	375-95-1	ng/l	**6**	<2.0	<2.0	<2.0	<2.0	**3.0**	<2.0	<2.0	<2.0	<2.0
PFDA	335-76-2	ng/l	NA	<2.0	<2.0	<2.0	<2.0	**3.3**	<2.0	<2.0	<2.0	<2.0
PFUnA	2058-94-8	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFDoA	307-55-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFTrDA	72629-94-8	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
PFTeDA	376-06-7	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
PFDS	335-77-3	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFecHS	646-83-3	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFBS	375-73-5	ng/l	**420**	<2.0	<2.0	**2.6**	<2.0	<2.0	**2.3**	**3.9**	<2.0	<2.0
PFPeS	2706-91-4	ng/l	NA	<2.0	<2.0	**2.0**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFHxS	355-46-4	ng/l	**51**	**2.4**	**3.0**	<2.0	<2.0	<2.0	<2.0	**3.2**	<2.0	<2.0
PFHpS	375-92-8	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFOS	1763-23-1	ng/l	**16**	<2.0	<2.0	<2.0	**2.2**	<2.0	<2.0	<2.0	<2.0	<2.0
PFBSA	30334-69-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**2.3**	<2.0	<2.0
PFHxSA	41997-13-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFNS	68259-12-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFOSA	754-91-6	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4:2 FTSA	757124-72-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
6:2 FTSA	27619-97-2	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
8:2 FTSA	39108-34-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
3:3 FTCA	356-02-5	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
5:3 FTCA	914637-49-3	ng/l	NA	<2.0	<2.0	<2.0	**3.6**	<2.0	<2.0	<2.0	<2.0	<2.0
7:3 FTCA	812-70-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-EtFOSAA	2991-50-6	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-MeFOSAA	2355-31-9	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
9Cl-PF3ONS	756426-58-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
11Cl-PF3OUdS	763051-92-9	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ADONA	919005-14-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
HFPO-DA	13252-13-6	ng/l	**370**	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Total PFAS	NA	ng/l	NA	**10**	**8.1**	**4.6**	**39**	**40**	**2.3**	**45**	ND	ND

Notes:
Concentrations reported as nanograms per liter (ng/L)
NA = Not Available
ND = Contaminant not detected above laboratory reporting limits
Contaminant exceeds DWC
Bold values indicate analyte detection

AECOM

Table 3
Vertical Aquifer Profile Groundwater
PFAS Analytical Results

Location			Michigan Part 201 Residential Drinking Water Criteria (DWC)	EGLE-VAP-03	EGLE-VAP-03	QA/QC				
Sample				VAP-03 (137.0-142.0)	VAP-03 (146.5-151.5)	EB2303231635WPS	Trip Blank	EB2303301500WPS	Trip Blank	Trip Blank
Sample Date				4/13/2023	4/13/2023	3/23/2023	11/2/2022	3/28/2023	11/2/2022	11/2/2022
Screened Interval (feet below ground surface)				137.0-142.0	146.5-151.5	NA	NA	Equipment Blank - Geosul	NA	NA
Laboratory Work Order Number				4304107	4304107	2303159	2303159	2303200	2304058	4304107
Compound	CAS	Unit		Result	Result	Result	Result	Result	Result	Result
PFBA	375-22-4	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
PFPeA	2706-90-3	ng/l	NA	**6.0**	**11**	<2.0	<2.0	<2.0	<2.0	<2.0
PFHxA	307-24-4	ng/l	**400,000**	**3.7**	**5.7**	<2.0	<2.0	<2.0	<2.0	<2.0
PFHpA	375-85-9	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFOA	335-67-1	ng/l	**8**	**3.0**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFNA	375-95-1	ng/l	**6**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFDA	335-76-2	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFUnA	2058-94-8	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFDoA	307-55-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFTrDA	72629-94-8	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
PFTeDA	376-06-7	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
PFDS	335-77-3	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFecHS	646-83-3	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFBS	375-73-5	ng/l	**420**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFPeS	2706-91-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFHxS	355-46-4	ng/l	**51**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFHpS	375-92-8	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFOS	1763-23-1	ng/l	**16**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFBSA	30334-69-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFHxSA	41997-13-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFNS	68259-12-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFOSA	754-91-6	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
4:2 FTSA	757124-72-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
6:2 FTSA	27619-97-2	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
8:2 FTSA	39108-34-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
3:3 FTCA	356-02-5	ng/l	NA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
5:3 FTCA	914637-49-3	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
7:3 FTCA	812-70-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-EtFOSAA	2991-50-6	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-MeFOSAA	2355-31-9	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
9Cl-PF3ONS	756426-58-1	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
11Cl-PF3OUdS	763051-92-9	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ADONA	919005-14-4	ng/l	NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
HFPO-DA	13252-13-6	ng/l	**370**	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Total PFAS	NA	ng/l	NA	**12.7**	**17**	ND	ND	ND	ND	ND

Notes:
Concentrations reported as nanograms per liter (ng/L)
NA = Not Available
ND = Contaminant not detected above laboratory reporting limits
Contaminant exceeds DWC
Bold values indicate analyte detection

AECOM

Table 4
Monitoring Well Groundwater
PFAS Analytical Results

Monitoring Well ID			Michigan Part 201 Residential Drinking Water Criteria (DWC)	EGLE-MW-01A	EGLE-MW-01B	EGLE-MW-01C	EGLE-MW-02A	EGLE-MW-02B	EGLE-MW-02C	EGLE-MW-03A	EGLE-MW-03B	EGLE-MW-03C
Sample ID				MW-01A-2307241355WPS	MW-01B-2307241455WPS	MW-01C-2307241535WPS	MW-02A-2307251515TLO	MW-02B-2307260835TLO	MW-02C-2307260920TLO	MW-03A-2307251045TLO	MW-03B-2307251155TLO	MW-03C-2307251345TLO
Sample Date				7/24/2023	7/24/2023	7/24/2023	7/25/2023	7/26/2023	7/26/2023	7/25/2023	7/25/2023	7/25/2023
Laboratory Work Order Number				2308001	2308001	2308001	2308001	2308002	2308001	2308001	2308001	2308001
Compound	CAS	Unit		Result	Result	Result	Result	Result	Result	Result	Result	Result
PFBA	375-22-4	ng/l	NA	< 4.0	< 4.0	< 4.0	**5.8**	**6.7**	**7.9**	< 4.0	< 4.0	< 4.0
PFPeA	2706-90-3	ng/l	NA	**3.6**	**10**	< 2.0	< 2.0	< 2.0	**18**	< 2.0	**3.5**	**9.8**
PFHxA	307-24-4	ng/l	**400,000**	**3.1**	**7.7**	< 2.0	< 2.0	< 2.0	**6.1**	< 2.0	**2.2**	**4.1**
PFHpA	375-85-9	ng/l	NA	< 2.0	**2.1**	< 2.0	< 2.0	< 2.0	**2.3**	< 2.0	< 2.0	< 2.0
PFOA	335-67-1	ng/l	**8**	**6.3**	**7.1**	< 2.0	**3.9**	**2.0**	< 2.0	< 2.0	**2.4**	< 2.0
PFNA	375-95-1	ng/l	**6**	**3.2**	**2.4**	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFDA	335-76-2	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFUnA	2058-94-8	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFDoA	307-55-1	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFTrDA	72629-94-8	ng/l	NA	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
PFTeDA	376-06-7	ng/l	NA	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
PFDS	335-77-3	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFecHS	646-83-3	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFBS	375-73-5	ng/l	**420**	**2.8**	**3.7**	< 2.0	**9.9**	**6.6**	**3.7**	**5.8**	**2.8**	< 2.0
PFPeS	2706-91-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFHxS	355-46-4	ng/l	**51**	< 2.0	< 2.0	< 2.0	< 2.0	**3.6**	**3.5**	**2.4**	**2.0**	< 2.0
PFHpS	375-92-8	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFOS	1763-23-1	ng/l	**16**	**13**	**3.3**	< 2.0	**5.9**	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFBSA	30334-69-1	ng/l	NA	< 2.0	**2.4**	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFHxSA	41997-13-1	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFNS	68259-12-1	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFOSA	754-91-6	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
4:2 FTSA	757124-72-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
6:2 FTSA	27619-97-2	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
8:2 FTSA	39108-34-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
3:3 FTCA	356-02-5	ng/l	NA	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
5:3 FTCA	914637-49-3	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
7:3 FTCA	812-70-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
N-EtFOSAA	2991-50-6	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
N-MeFOSAA	2355-31-9	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
9Cl-PF3ONS	756426-58-1	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
11Cl-PF3OUdS	763051-92-9	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
ADONA	919005-14-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
HFPO-DA	13252-13-6	ng/l	**370**	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Total PFAS	NA	ng/l	NA	**32.0**	**38.7**	ND	**25.5**	**18.9**	**41.5**	**8.2**	**12.9**	**13.9**

Notes:
Concentrations reported as nanograms per liter (ng/L)
NA = Not Available
ND = Contaminant not detected above laboratory reporting limits
Contaminant exceeds DWC
Bold values indicate analyte detection

AECOM

Table 4
Monitoring Well Groundwater
PFAS Analytical Results

Monitoring Well ID			Michigan Part 201 Residential Drinking Water Criteria (DWC)	EGLE-MW-04A	EGLE-MW-04B		EGLE-MW-04C	EGLE-MW-05A		EGLE-MW-05B	EGLE-MW-05C	EGLE-MW-06A
Sample ID				MW-04A-2307270835TLO	MW-04B-2307270905TLO	MW-04B-2307270905TLO-DUP	MW-04C-2307270950TLO	MW-05A-2307311055TLO	MW-05A-2307311055TLO-DUP	MW-05B-2307261150TLO	MW-05C-2307261115TLO	MW-06A-2307311330TLO
Sample Date				7/27/2023	7/27/2023	7/27/2023	7/27/2023	7/31/2023	7/31/2023	7/26/2023	7/26/2023	7/31/2023
Laboratory Work Order Number				2308001	2308001	2308001	2308001	2308001	2308001	2308001	2308001	2308002
Compound	CAS	Unit		Result	Result	Result	Result	Result	Result	Result	Result	Result
PFBA	375-22-4	ng/l	NA	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
PFPeA	2706-90-3	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	**7.2**	**7.8**	< 2.0
PFHxA	307-24-4	ng/l	**400,000**	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	**3.5**	**4.0**	< 2.0
PFHpA	375-85-9	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFOA	335-67-1	ng/l	**8**	< 2.0	< 2.0	< 2.0	< 2.0	**5.7**	**6.5**	< 2.0	< 2.0	< 2.0
PFNA	375-95-1	ng/l	**6**	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFDA	335-76-2	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFUnA	2058-94-8	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFDoA	307-55-1	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFTrDA	72629-94-8	ng/l	NA	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
PFTeDA	376-06-7	ng/l	NA	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
PFDS	335-77-3	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFecHS	646-83-3	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFBS	375-73-5	ng/l	**420**	< 2.0	< 2.0	< 2.0	< 2.0	**3.1**	**2.8**	< 2.0	< 2.0	**2.2**
PFPeS	2706-91-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFHxS	355-46-4	ng/l	**51**	< 2.0	< 2.0	< 2.0	< 2.0	**2.0**	< 2.0	< 2.0	< 2.0	< 2.0
PFHpS	375-92-8	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFOS	1763-23-1	ng/l	**16**	< 2.0	< 2.0	< 2.0	< 2.0	**8.7**	**9.3**	< 2.0	< 2.0	< 2.0
PFBSA	30334-69-1	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFHxSA	41997-13-1	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFNS	68259-12-1	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFOSA	754-91-6	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
4:2 FTSA	757124-72-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
6:2 FTSA	27619-97-2	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
8:2 FTSA	39108-34-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
3:3 FTCA	356-02-5	ng/l	NA	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
5:3 FTCA	914637-49-3	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
7:3 FTCA	812-70-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
N-EtFOSAA	2991-50-6	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
N-MeFOSAA	2355-31-9	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
9Cl-PF3ONS	756426-58-1	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
11Cl-PF3OUdS	763051-92-9	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
ADONA	919005-14-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
HFPO-DA	13252-13-6	ng/l	**370**	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Total PFAS	NA	ng/l	NA	ND	ND	ND	ND	**19.5**	**18.6**	**10.7**	**11.8**	**2.2**

Notes:
Concentrations reported as nanograms per liter (ng/L)
NA = Not Available
ND = Contaminant not detected above laboratory reporting limits
Contaminant exceeds DWC
Bold values indicate analyte detection

AECOM

Table 4
Monitoring Well Groundwater
PFAS Analytical Results

Monitoring Well ID			Michigan Part 201 Residential Drinking Water Criteria (DWC)	EGLE-MW-06B	EGLE-MW-06C	EGLE-MW-07A	EGLE-MW-07B	EGLE-MW-07C	QA/QC	
Sample ID				MW-06B-2307311300TLO	MW-06C-2307311220TLO	MW-07A-2307310950TLO	MW-07B-2307310900TLO	MW-07C-2307271110TLO	EB-2307251110TLO	TRIP BLANK_230322
Sample Date				7/31/2023	7/31/2023	7/31/2023	7/31/2023	7/27/2023	7/25/2023	3/22/2023
Laboratory Work Order Number				2308002	2308002	2308001	2308001	2308001	2308001	2308002
Compound	CAS	Unit		Result	Result	Result	Result	Result	Result	Result
PFBA	375-22-4	ng/l	NA	**7.9**	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
PFPeA	2706-90-3	ng/l	NA	**5.7**	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFHxA	307-24-4	ng/l	**400,000**	**3.6**	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFHpA	375-85-9	ng/l	NA	**2.0**	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFOA	335-67-1	ng/l	**8**	**7.1**	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFNA	375-95-1	ng/l	**6**	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFDA	335-76-2	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFUnA	2058-94-8	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFDoA	307-55-1	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFTrDA	72629-94-8	ng/l	NA	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
PFTeDA	376-06-7	ng/l	NA	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
PFDS	335-77-3	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFecHS	646-83-3	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFBS	375-73-5	ng/l	**420**	**5.7**	< 2.0	**3.3**	< 2.0	< 2.0	< 2.0	< 2.0
PFPeS	2706-91-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFHxS	355-46-4	ng/l	**51**	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFHpS	375-92-8	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFOS	1763-23-1	ng/l	**16**	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFBSA	30334-69-1	ng/l	NA	**2.5**	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFHxSA	41997-13-1	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFNS	68259-12-1	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PFOSA	754-91-6	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
4:2 FTSA	757124-72-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
6:2 FTSA	27619-97-2	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
8:2 FTSA	39108-34-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
3:3 FTCA	356-02-5	ng/l	NA	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
5:3 FTCA	914637-49-3	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
7:3 FTCA	812-70-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
N-EtFOSAA	2991-50-6	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
N-MeFOSAA	2355-31-9	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
9Cl-PF3ONS	756426-58-1	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
11Cl-PF3OUdS	763051-92-9	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
ADONA	919005-14-4	ng/l	NA	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
HFPO-DA	13252-13-6	ng/l	**370**	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Total PFAS	NA	ng/l	NA	**34.5**	ND	**3.3**	ND	ND	ND	ND

Notes:
Concentrations reported as nanograms per liter (ng/L)
NA = Not Available
ND = Contaminant not detected above laboratory reporting limits
Contaminant exceeds DWC
Bold values indicate analyte detection

Appendix A

AECOM FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-01**
TOTAL DEPTH: **150'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Russell Ridge PFAS**	CONTRACTOR:	**Mateco**
SITE LOCATION:	**Cedar Springs, MI**	CREW CHIEF:	**Jeff Croel**
PROJECT NO.:	**60637339**	DRILL RIG TYPE:	**Geoprobe - Sonic Head**
PROJECT MANAGER:	**Matt VanderEide**	DRILLING METHOD:	**4 inch casing**
LOGGED BY:	**Wes Stambaugh**	HOLE DIAMETER:	**6 inch**
CREATED BY:	**Wes Stambaugh**	DATE START:	**03/20/23**
		DATE END:	**03/28/23**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
0	Hand Auger	Hand Auger	100%		OL	Clayey Organic Soil (OL): Brown (7.5YR 3/3), most, ~50% organic soil, ~40% plastic fines, ~5% fine to medium sand, ~5% fine sub-rounded gravel, roots/root casts		
					CL	Sandy Clay (CL): Brown (7.5YR 4/3), moist, ~80% plastic fines, ~20% fine to medium sand, trace fine sub-rounded gravel, low plasticity, cohesive, slow dilatency * plastic liner @ 3.5 ft bgs		
5	Sonic	4 inch casing	100%		CL	Lean Clay (CL): Brown (7.5YR 5/6), moist, ~90% plastic fines, ~5% fine to medium sand, ~5% non-plastic fines, medium plasticity, cohesive, slow dilatency *Frequent 2 inch seams of Poorly Graded Sand (SP): Brown (7.5YR 6/4), moist, ~95% fine to medium sand, ~5% non-plastic fines, from 6.0 to 14.0 ft bgs	Steel Riser	
10								
15	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): Brown (7.5YR 7/4), moist, ~85% fine to medium sand, ~10% fine to coarse sub-rounded gravel, ~5% non-plastic fines, crushed cobbles @ 17.0 and 19.0 ft bgs		
20								

EOB @ 150 ft bgs, Depth to Water @ 24.5 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-01**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
	Sonic	4 inch casing	100%			Poorly Graded Sand (SP): Brown (7.5YR 6/3), moist, ~95% fine sand, ~5% non-plastic fines		
25						* saturated at 27.0 ft bgs	Steel Screen	VAP-01 (25.0-30.0); 3/20/23 @ 1630 2x15 ml vials
30	Sonic	4 inch casing	100%		SP		Steel Riser	
35							Steel Screen	VAP-01 (33.9-38.9); 3/21/23 @ 1125 2x15 ml vials
40						Poorly Graded Sand (SP): Brown (7.5YR 6/3), wet, ~95% fine to medium sand, ~5% non-plastic fines, trace sub-rounded gravel	Steel Riser	

EOB @ 150 ft bgs, Depth to Water @ 24.5 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-01**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
45	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): Brown (7.5YR 6/3), wet, ~95% fine to medium sand, ~5% non-plastic fines, trace sub-rounded gravel (continued)	Steel Screen	VAP-01 (42.5-47.5); 3/21/23 @ 1605 4x15 ml vials w/ MS/MSD
50	Sonic	4 inch casing	100%		ML	Silt (ML): Grey (7.5YR 7/2), wet, ~70% non-plastic fines, ~30% fine sand, non-plastic, non-cohesive, rapid dilatency	Steel Riser	
55	Sonic	4 inch casing	100%		CL	Lean Clay (CL): Grey (7.5YR 5/1), moist, ~80% plastic fines, ~15% non-plastic fines, ~5% fine sand, high plasticity, cohesive, slow dilatency	Steel Screen	VAP-01 (54.7-59.7); 3/22/23 @ 1020 4x15 ml vials w/ DUP
60	Sonic	4 inch casing	100%		SM	Silty Sand (SM): Grey (7.5YR 6/2), wet, ~80% fine sand, ~20% non-plastic fines	Steel Riser	
65	Sonic	4 inch casing	100%			Poorly Graded Sand (SP): Grey (7.5YR 6/2), wet, ~90% fine to medium sand, ~5% fine sub-rounded gravel, ~5% non-plastic fines	Steel Screen	VAP-01 (63.1-68.1); 3/22/23 @ 1240 2x15 ml vials

EOB @ 150 ft bgs, Depth to Water @ 24.5 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-01**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
70	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): Grey (7.5YR 6/2), wet, ~90% fine to medium sand, ~5% fine sub-rounded gravel, ~5% non-plastic fines (continued)	Steel Riser	
75	Sonic	4 inch casing	100%		SP	* 4 inch seam at 73 ft bgs of Silty Sand (SM): Dark Grey (7.5YR 6/1), wet, ~75% fine sand, ~25% non-plastic fines	Steel Screen	VAP-01 (72.8-77.8); 3/22/23 @ 1500 2x15 ml vials
80	Sonic	4 inch casing	100%		SP		Steel Riser	
85	Sonic	4 inch casing	100%		SM	Silty Sand (SM): Grey (7.5YR 6/2), wet, ~80% fine to medium sand, ~20% non-plastic fines, frequent seams of grey lean clay	Steel Screen	VAP-01 (82.6-87.6); 3/23/23 @ 1045 2x15 ml vials
					CL	Lean Clay (CL): Brown/Grey (7.5YR 5/2), moist, ~90% plastic fines, ~5% non-plastic fines, ~5% fine sand, trace fine sub-rounded gravel, lenses of silt		
90					SM	Silty Sand (SM): Grey (7.5YR 6/1), wet, ~80% fine to medium sand, ~20% non-plastic fines, trace fine sub-rounded gravel	Steel Riser	

EOB @ 150 ft bgs, Depth to Water @ 24.5 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-01**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
95	Sonic	4 inch casing	50%		CL	Lean Clay (CL): Brown (7.5YR 5/3), moist, ~90% plastic fines, ~5% fine sand, ~5% fine sub-rounded gravel	Steel Screen	VAP-01 (93.2-98.2); 3/23/23 @ 1320 2x15 ml vials
100	Sonic	4 inch casing	100%			Poorly Graded Sand (SP): Grey (7.5YR 6/2), wet, ~95% fine sand, ~5% non-plastic fines	Steel Riser	
105	Sonic	4 inch casing	100%			* Mottling of Dark Grey (7.5YR 5/1) Silt crossbedding @ 106.0 ft bgs	Steel Screen	VAP-01 (102.5-107.5); 3/23/23 @ 1555 2x15 ml vials
110							Steel Riser	
115	Sonic	4 inch casing	50%				Steel Screen	VAP-01 (113.0-118.0); 3/24/23 @ 1100 2x15 ml vials

EOB @ 150 ft bgs, Depth to Water @ 24.5 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-01**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
						Poorly Graded Sand (SP): Grey (7.5YR 6/2), wet, ~95% fine sand, ~5% non-plastic fines (continued)		
120	Sonic	4 inch casing	50%		SP		Steel Riser	
125	Sonic	4 inch casing	50%				Steel Screen	VAP-01 (122.9-127.9); 3/24/23 @ 1355 2x15 ml vials
130	Sonic	4 inch casing	50%				Steel Riser	
135	Sonic	4 inch casing	50%				Steel Screen	VAP-01 (133.2-138.2); 3/24/23 @ 1635 2x15 ml vials
140					CH	Fat Clay (CH): Grey (7.5YR 5/1), moist, ~90% plastic fines, ~10% non-plastic fines, high plasticity, cohesive, slow dilatency, high dry strength	Steel Riser	

EOB @ 150 ft bgs, Depth to Water @ 24.5 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-01**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
145	Sonic	4 inch casing	100%		SC	Clayey Sand (SC): Grey (7.5YR 5/1), wet, ~60% fine sand, ~35% plastic fines, ~5% non-plastic fines, non-plastic, non-cohesive, frequent seams of clay	143 144 145 146 147 148 149 150 Steel Screen	VAP-01 (144.2-149.2); 3/27/23 @ 1200 4x15 ml vials w/ MS/MSD
150								

EOB @ 150 ft bgs, Depth to Water @ 24.5 ft bgs, Borehole abandoned with bentonite grout

AECOM FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-02**
TOTAL DEPTH: **100'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Russell Ridge PFAS**	CONTRACTOR:	**Mateco**
SITE LOCATION:	**Cedar Springs, MI**	CREW CHIEF:	**Jeff Croel**
PROJECT NO.:	**60637339**	DRILL RIG TYPE:	**Geoprobe - Sonic Head**
PROJECT MANAGER:	**Matt VanderEide**	DRILLING METHOD:	**4 inch casing**
LOGGED BY:	**Wes Stambaugh**	HOLE DIAMETER:	**6 inch**
CREATED BY:	**Wes Stambaugh**	DATE START:	**03/29/23**
		DATE END:	**04/04/23**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
0	Hand Auger	Hand Auger	100%		OL	Sandy Organic Soil with Clay (OL): Dark Brown (7.5YR 2/1), moist, ~60% organic soil, ~25% fine sand, ~15% plastic fines, non-plastic, non-cohesive, roots/root casts		
					SC	Clayey Sand (SC): Brown (7.5YR 5/3), moist, ~80% fine to medium sand, ~20% plastic fines, non-cohesive, trace roots/root casts		
5	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): Brown (7.5YR 6/3), moist, ~95% fine to medium sand, ~5% non-plastic fines	Steel Riser	
10								
15	Sonic	4 inch casing	100%				Steel Screen	VAP-02 (15.2-20.2); 3/29/23 @ 1740 4x15 ml vials w/ DUP
20								

EOB @ 100 ft bgs, Depth to Water @ 8.7 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-02**
TOTAL DEPTH: **100'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): Brown (7.5YR 6/3), moist, ~95% fine to medium sand, ~5% non-plastic fines (continued)	Steel Riser; Steel Screen; Steel Riser; Steel Screen; Steel Riser	VAP-02 (24.4-29.4); 3/30/23 @ 1105 2x15 ml vials; VAP-02 (34.5-39.5); 3/30/23 @ 1425 2x15 ml vials

EOB @ 100 ft bgs, Depth to Water @ 8.7 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-02**
TOTAL DEPTH: **100'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
45	Sonic	4 inch casing	100%			Poorly Graded Sand (SP): Brown (7.5YR 6/3), moist, ~95% fine to medium sand, ~5% non-plastic fines (continued)		
50					SP		Steel Screen; Steel Riser	VAP-02 (45.4-50.4); 3/30/23 @ 1625 2x15 ml vials
55	Sonic	4 inch casing	100%				Steel Screen	VAP-02 (52.8-57.8); 3/31/23 @ 1125 2x15 ml vials
60						Poorly Graded Sand with Silt (SP-SM): Brown/Grey (7.5YR 6/2), wet, ~90% fine sand, ~10% non-plastic fines	Steel Riser	
65	Sonic	4 inch casing	50%		SP-SM			VAP-02 (66.5-71.5);

EOB @ 100 ft bgs, Depth to Water @ 8.7 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-02**
TOTAL DEPTH: **100'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
70	Sonic	4 inch casing	50%		SP	Poorly Graded Sand (SP): Brown (7.5YR 4/3), wet, ~95% fine to medium sand, ~5% non-plastic fines	Steel Screen; Steel Riser; Steel Screen	3/31/23 @ 1640 2x15 ml vials
75								
80								VAP-02 (76.8-81.8); 4/3/23 @ 1200 4x15 ml vials w/ MS/MSD
85	Sonic	4 inch casing	100%		SM	Silty Sand (SM): Grey (7.5YR 5/1), wet, ~80% fine to coarse sand, ~15% non-plastic fines, ~5% fine sub-rounded gravel	Steel Riser	
					CL	Lean Clay with Sand (CL): Brown (7.5YR 5/3), moist, ~70% plastic fines, ~20% fine sand, ~5% non-plastic fines, ~5% fine to coarse sub-rounded gravel, medium plasticity, cohesive, slow dilatency, high dry strength	Steel Screen	VAP-02 (85.3-90.3); 4/3/23 @ 1540 2x15 ml vials
					SM	Silty Sand (SM): Grey (7.5YR 5/1), wet, ~80% fine to coarse sand, ~15% non-plastic fines, ~5% fine sub-rounded gravel		
90					CL	Lean Clay with Sand (CL): Brown (7.5YR 5/3), moist, ~70% plastic fines, ~20% fine sand, ~5% non-plastic fines, ~5% fine to coarse sub-rounded gravel, medium plasticity, cohesive, slow dilatency, high dry strength		

EOB @ 100 ft bgs, Depth to Water @ 8.7 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-02**
TOTAL DEPTH: **100'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
95	Sonic	4 inch casing	100%		SC	Clayey Sand (SC): Brown (7.5YR 6/3), wet, ~65% fine to coarse sand, ~25% plastic fines, ~10% fine to coarse sub-rounded gravel, trace non-plastic fines	94 95	
					CL	Lean Clay (CL): Brown (7.5YR 5/3), moist, ~75% plastic fines, ~15% fine sand, ~10% fine sub-rounded gravel, medium plasticity, cohesive, slow dilatency, high dry strength	96 97 98 99	
100							100	

EOB @ 100 ft bgs, Depth to Water @ 8.7 ft bgs, Borehole abandoned with bentonite grout

AECOM FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-03**
TOTAL DEPTH: **150'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Russell Ridge PFAS**	CONTRACTOR:	**Mateco**
SITE LOCATION:	**Cedar Springs, MI**	CREW CHIEF:	**Jeff Croel**
PROJECT NO.:	**60637339**	DRILL RIG TYPE:	**Geoprobe - Sonic Head**
PROJECT MANAGER:	**Matt VanderEide**	DRILLING METHOD:	**4 inch casing**
LOGGED BY:	**Wes Stambaugh**	HOLE DIAMETER:	**6 inch**
CREATED BY:	**Wes Stambaugh**	DATE START:	**04/03/23**
		DATE END:	**04/14/23**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
0	Hand Auger	Hand Auger	100%		OL	Organic Soil with Sand (OL): Dark Brown (7.5YR 2.5/2), moist, ~60% organic soil, ~35% fine sand, ~5% non-plastic fines, roots, topsoil		
					SP-SM	Poorly Graded Sand with Silt (SP-SM): Light Brown (7.5YR 7/6), dry, ~90% fine sand, ~10% non-plastic fines		
					SW-SM	Well Graded Sand with Silt (SW-SM): Brown (7.5YR 7/6), moist, ~80% fine to coarse sand, ~10% non-plastic fines, ~10% fine to coarse sub-rounded gravel		
5	Sonic	4 inch casing	100%					
10					SP	Poorly Graded Sand (SP): Brown (7.5YR 6/4), moist, ~90% fine to medium sand, ~5% non-plasatic fines, ~5% fine sub-rounded gravel	Steel Riser	
15	Sonic	4 inch casing	100%			* Saturation at 19.5 ft bgs		
20								

EOB @ 150 ft bgs, Depth to Water @ 22.5 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-03**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
						Poorly Graded Sand (SP): Light Brown (7.5YR 7/3), wet, ~95% fine sand, ~5% non-plastic fines		
25	Sonic	4 inch casing	100%				Steel Screen	VAP-03 (26.1-31.1); 4/5/23 @ 1000 4x15 ml vials w/ DUP
						* Orange/Brown mottling (7.5YR 6/8) @ 30.0 ft bgs		
30							Steel Riser	
					SP	* various seams of Grey (7.5YR 5/1) Silty Sand @ 35.0-63.0 ft bgs		
35	Sonic	4 inch casing	100%				Steel Screen	VAP-03 (33.9-38.9); 4/6/23 @ 1110 2x15 ml vials
40							Steel Riser	

EOB @ 150 ft bgs, Depth to Water @ 22.5 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-03**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
45	Sonic	4 inch casing	100%			Poorly Graded Sand (SP): Light Brown (7.5YR 7/3), wet, ~95% fine sand, ~5% non-plastic fines (continued)	45	
							46 Steel Screen	
							47	VAP-03 (45.1-50.1); 4/6/23 @ 1345 2x15 ml vials
							48	
							49	
50							50	
							51	
							52 Steel Riser	
							53	
					SP		54	
55	Sonic	4 inch casing	100%				55	
							56	
							57 Steel Screen	VAP-03 (54.2-59.2); 4/6/23 @ 1655 2x15 ml vials
							58	
							59	
60							60	
							61	
							62 Steel Riser	
						Silty Sand (SM): Brown (7.5YR 6/4), wet, ~80% fine sand, ~20% non-plastic fines	63	
							64	
65	Sonic	4 inch casing	100%				65	
					SM		66	
							67 Steel Screen	VAP-03 (64.3-69.3); 4/7/23 @ 1110 2x15 ml vials
							68	
							69	

EOB @ 150 ft bgs, Depth to Water @ 22.5 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-03**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
						Silty Sand (SM): Brown (7.5YR 6/4), wet, ~80% fine sand, ~20% non-plastic fines (continued)		
70	Sonic	4 inch casing	100%				70, 71, 72 Steel Riser, 73, 74	
75							75, 76, 77 Steel Screen, 78, 79	VAP-03 (74.8-79.8); 4/7/23 @ 1345 2x15 ml vials
					SM			
80							80, 81, 82 Steel Riser, 83, 84	
85	Sonic	4 inch casing	100%				85, 86, 87 Steel Screen, 88, 89	VAP-03 (84.7-89.7); 4/7/23 @ 1625 2x15 ml vials
90						Poorly Graded Sand (SP): Brown (7.5YR 6/3), wet, ~95% fine to medium sand, ~5% non-plastic fines	90, 91, 92, 93 Steel Riser	
					SP			

EOB @ 150 ft bgs, Depth to Water @ 22.5 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-03**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
95	Sonic	4 inch casing	50%		SP	Poorly Graded Sand (SP): Brown (7.5YR 6/3), wet, ~95% fine to medium sand, ~5% non-plastic fines (continued)	Steel Screen	VAP-03 (97.2-102.2); 4/10/23 @ 1235 4x15 ml vials w/ MS/MSD
100	Sonic	4 inch casing	100%		SM	Silty Sand (SM): Brown/Grey (7.5YR 6/2), wet, ~80% fine to medium sand, ~20% non-plastic fines, slight cementation	Steel Riser; Steel Screen	VAP-03 (105.9-110.9); 4/11/23 @ 1235 2x15 ml vials
105								
110	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): Brown (7.5YR 6/3), wet, ~95% fine to medium sand, ~5% non-plastic fines * Seams of Grey (7.5YR 5/1) Silty Sand @ 115.0-125.0 ft bgs	Steel Riser; Steel Screen	VAP-03 (113.8-118.8); 4/11/23 @ 1755 2x15 ml vials
115								

EOB @ 150 ft bgs, Depth to Water @ 22.5 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-03**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
						Poorly Graded Sand (SP): Brown (7.5YR 6/3), wet, ~95% fine to medium sand, ~5% non-plastic fines (continued)		
120	Sonic	4 inch casing	100%				Steel Riser	
125	Sonic	4 inch casing	100%		SP		Steel Screen	VAP-03 (127.1-132.1); 4/12/23 @ 1315 4x15 ml vials w/ DUP
130	Sonic	4 inch casing	100%				Steel Riser	
135	Sonic	4 inch casing	100%				Steel Screen	VAP-03 (137.0-142.0); 4/13/23 @ 1500 2x15 ml vials
140						Poorly Graded Sand (SP): Brown/Grey (7.5YR 6/2), wet, ~95% fine sand, ~5% non-plastic fines		
					SP			

EOB @ 150 ft bgs, Depth to Water @ 22.5 ft bgs, Borehole abandoned with bentonite grout

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-VAP-03**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION (Temp wells constructed with 2 inch Steel)	SAMPLE
145	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): Brown/Grey (7.5YR 6/2), wet, ~95% fine sand, ~5% non-plastic fines (continued)	143, 144, 145, 146, 147, 148 — Steel Riser	
150					CL	Lean Clay with Sand (CL): Grey (7.5YR 6/1), moist, ~65% plastic fines, ~25% fine sand, ~5% non-plastic fines, ~5% fine to coarse sub-rounded gravel, low plasticity, cohesive, medium dry strength, slow dilatency, trace cobbles	149, 150, 151 — Steel Screen	VAP-03 (146.5-151.5); 4/13/23 @ 1950 2x15 ml vials

EOB @ 150 ft bgs, Depth to Water @ 22.5 ft bgs, Borehole abandoned with bentonite grout

Appendix B

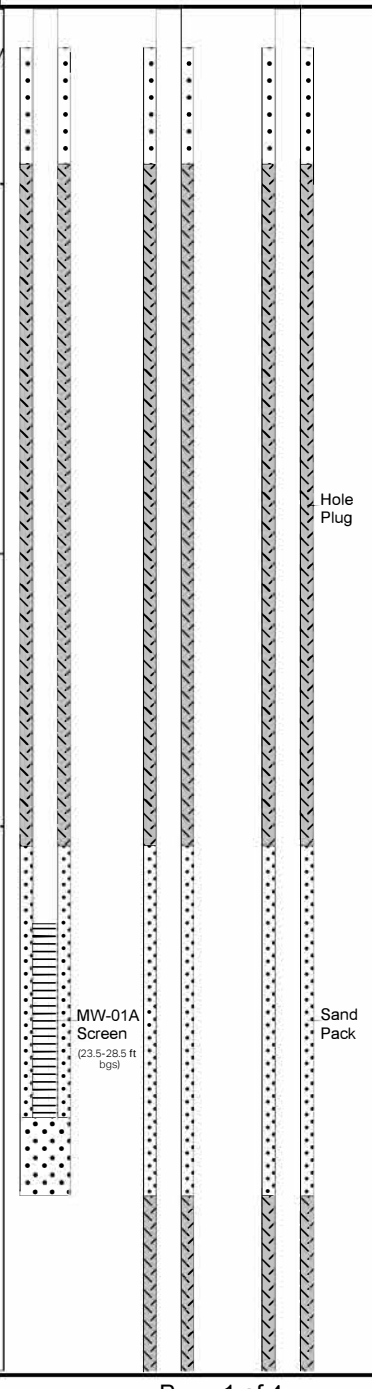
FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-01 A,B&C**
TOTAL DEPTH: **150'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Russell Ridge PFAS**	CONTRACTOR:	**Mateco**
SITE LOCATION:	**Cedar Springs, MI**	CREW CHIEF:	**Jeff Croel**
PROJECT NO.:	**60637339**	DRILL RIG TYPE:	**Geoprobe - Sonic Head**
PROJECT MANAGER:	**Matt VanderEide**	DRILLING METHOD:	**Sonic Drilling**
LOGGED BY:	**Wes Stambaugh**	HOLE DIAMETER:	**4 x 6 x 8"**
CREATED BY:	**Jillian Ashton**	DATE START:	**06/12/23**
		DATE END:	**06/14/23**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
0	Hand Auger	Hand Auger	100%	OL	Clayey Organic Soil (OL): Brown (7.5YR 3/3), most, ~50% organic soil, ~40% plastic fines, ~5% fine to medium sand, ~5% fine sub-rounded gravel, roots/root casts
				CL	Sandy Clay (CL): Brown (7.5YR 4/3), moist, ~80% plastic fines, ~20% fine to medium sand, trace fine sub-rounded gravel, low plasticity, cohesive, slow dilatency * plastic liner @ 3.5 ft bgs
5	Sonic	4 inch casing	100%		Lean Clay (CL): Brown (7.5YR 5/6), moist, ~90% plastic fines, ~5% fine to medium sand, ~5% non-plastic fines, medium plasticity, cohesive, slow dilatency *Frequent 2 inch seams of Poorly Graded Sand (SP): Brown (7.5YR 6/4), moist, ~95% fine to medium sand, ~5% non-plastic fines, from 6.0 to 14.0 ft bgs
10					
15	Sonic	4 inch casing	100%	SP	Poorly Graded Sand (SP): Brown (7.5YR 7/4), moist, ~85% fine to medium sand, ~10% fine to coarse sub-rounded gravel, ~5% non-plastic fines, crushed cobbles @ 17.0 and 19.0 ft bgs
20					Poorly Graded Sand (SP): Brown (7.5YR 6/3), moist, ~95% fine sand, ~5% non-plastic fines
25	Sonic	4 inch casing	100%		
30					* saturated at 27.0 ft bgs
35	nic	casing	0%		

WELL CONSTRUCTION



Notes: A, B, C wells installed in same borehole but are separate wells.
End of Boring @ 150 ft bgs; Depth to Water @ 24.5 ft bgs.

FIELD BOREHOLE LOG

BOREHOLE NO: **MW-01 A,B&C**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION A	B	C
	So	4 inch	10						
40						Poorly Graded Sand (SP): Brown (7.5YR 6/3), wet, ~95% fine to medium sand, ~5% non-plastic fines, trace sub-rounded gravel			
45	Sonic	4 inch casing	100%			Poorly Graded Sand (SP): Brown (7.5YR 6/3), wet, ~95% fine to medium sand, ~5% non-plastic fines, trace sub-rounded gravel (continued)			
50									
55	Sonic	4 inch casing	100%		ML	Silt (ML): Grey (7.5YR 7/2), wet, ~70% non-plastic fines, ~30% fine sand, non-plastic, non-cohesive, rapid dilatency			
					CL	Lean Clay (CL): Grey (7.5YR 5/1), moist, ~80% plastic fines, ~15% non-plastic fines, ~5% fine sand, high plasticity, cohesive, slow dilatency			
60					SM	Silty Sand (SM): Grey (7.5YR 6/2), wet, ~80% fine sand, ~20% non-plastic fines			
65	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): Grey (7.5YR 6/2), wet, ~90% fine to medium sand, ~5% fine sub-rounded gravel, ~5% non-plastic fines			Hole Plug
70						Poorly Graded Sand (SP): Grey (7.5YR 6/2), wet, ~90% fine to medium sand, ~5% fine sub-rounded gravel, ~5% non-plastic fines (continued)			Riser
75	Sonic	4 inch casing	100%			* 4 inch seam at 73 ft bgs of Silty Sand (SM): Dark Grey (7.5YR 6/1), wet, ~75% fine sand, ~25% non-plastic fines			

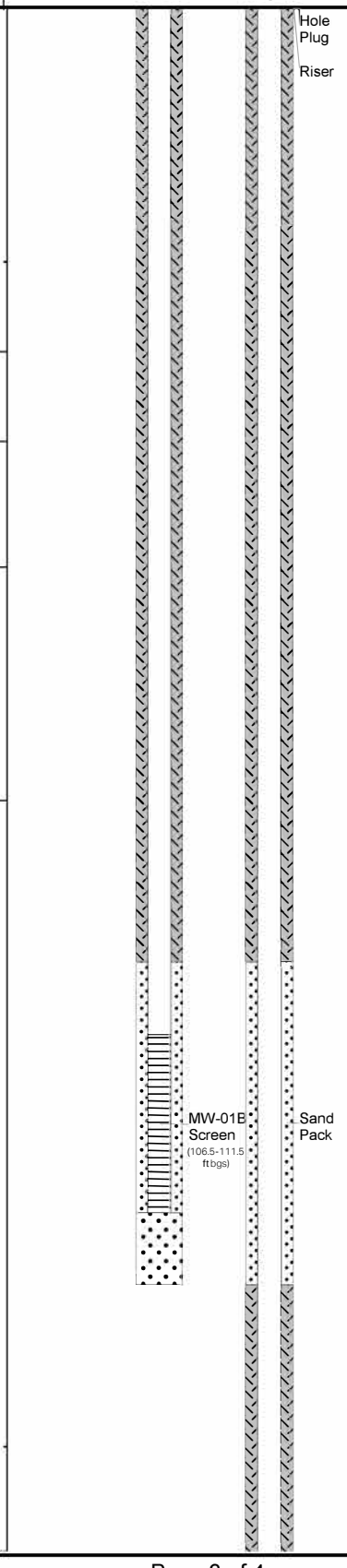
Notes: A, B, C wells installed in same borehole but are separate wells.
End of Boring @ 150 ft bgs; Depth to Water @ 24.5 ft bgs.

FIELD BOREHOLE LOG

BOREHOLE NO: **MW-01 A,B&C**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
80						
85	Sonic	4 inch casing	100%		SM	Silty Sand (SM): Grey (7.5YR 6/2), wet, ~80% fine to medium sand, ~20% non-plastic fines, frequent seams of grey lean clay
					CL	Lean Clay (CL): Brown/Grey (7.5YR 5/2), moist, ~90% plastic fines, ~5% non-plastic fines, ~5% fine sand, trace fine sub-rounded gravel, lenses of silt
90					SM SP	Silty Sand (SM): Grey (7.5YR 6/1), wet, ~80% fine to medium sand, ~20% non-plastic fines, trace fine sub-rounded gravel
95	Sonic	4 inch casing	50%		CL	Lean Clay (CL): Brown (7.5YR 5/3), moist, ~90% plastic fines, ~5% fine sand, ~5% fine sub-rounded gravel
100						Poorly Graded Sand (SP): Grey (7.5YR 6/2), wet, ~95% fine sand, ~5% non-plastic fines
105	Sonic	4 inch casing	100%			
110					SP	* Mottling of Dark Grey (7.5YR 5/1) Silt crossbedding @ 106.0 ft bgs
115	Sonic	4 inch casing	50%			
120						Poorly Graded Sand (SP): Grey (7.5YR 6/2), wet, ~95% fine sand, ~5% non-plastic fines (continued)

WELL CONSTRUCTION



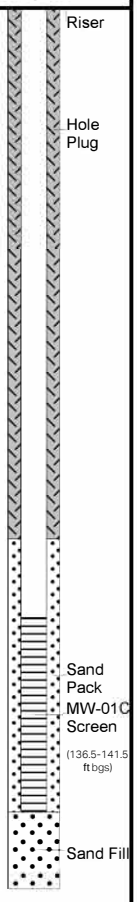
Notes: A, B, C wells installed in same borehole but are separate wells.
End of Boring @ 150 ft bgs; Depth to Water @ 24.5 ft bgs.

FIELD BOREHOLE LOG

BOREHOLE NO: **MW-01 A,B&C**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
125	Sonic	4 inch casing	50%			
130						
135	Sonic	4 inch casing	50%			
140					CH	Fat Clay (CH): Grey (7.5YR 5/1), moist, ~90% plastic fines, ~10% non-plastic fines, high plasticity, cohesive, slow dilatency, high dry strength
145	Sonic	4 inch casing	100%		SC	Clayey Sand (SC): Grey (7.5YR 5/1), wet, ~60% fine sand, ~35% plastic fines, ~5% non-plastic fines, non-plastic, non-cohesive, frequent seams of clay
150						

WELL CONSTRUCTION



Notes: A, B, C wells installed in same borehole but are separate wells.
End of Boring @ 150 ft bgs; Depth to Water @ 24.5 ft bgs.

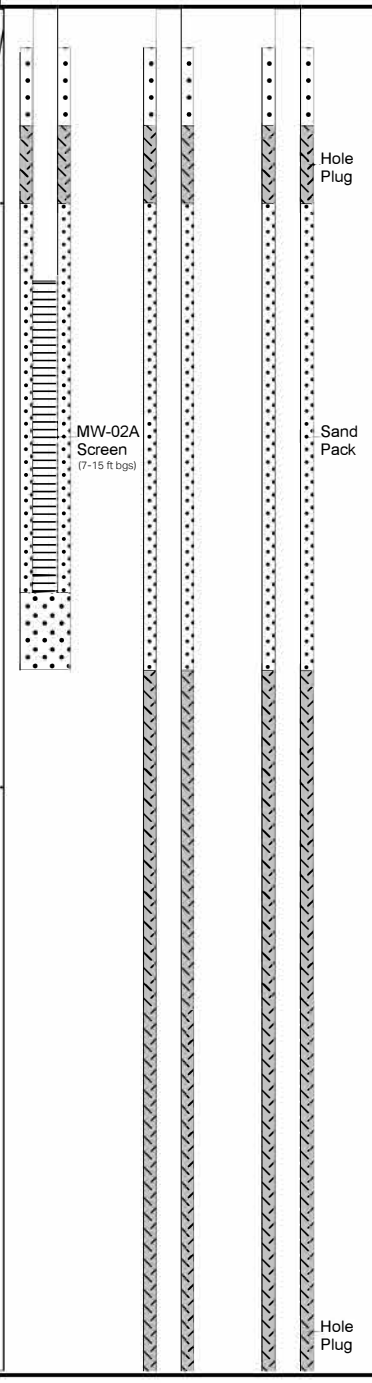
FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-02 A,B&C**
TOTAL DEPTH: **100'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Russell Ridge PFAS**	CONTRACTOR:	**Mateco**
SITE LOCATION:	**Cedar Springs, MI**	CREW CHIEF:	**Jeff Croel**
PROJECT NO.:	**60637339**	DRILL RIG TYPE:	**Geoprobe - Sonic Head**
PROJECT MANAGER:	**Matt VanderEide**	DRILLING METHOD:	**Sonic Drilling**
LOGGED BY:	**Wes Stambaugh**	HOLE DIAMETER:	**6 x 8"**
CREATED BY:	**Jillian Ashton**	DATE START:	**06/19/23**
		DATE END:	**06/21/23**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
0	Hand Auger	Hand Auger	100%		SC	Sandy Organic Soil with Clay (OL): Dark Brown (7.5YR 2/1), moist, ~60% organic soil, ~25% fine sand, ~15% plastic fines, non-plastic, non-cohesive, roots/root casts Clayey Sand (SC): Brown (7.5YR 5/3), moist, ~80% fine to medium sand, ~20% plastic fines, non-cohesive, trace roots/root casts
5	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): Brown (7.5YR 6/3), moist, ~95% fine to medium sand, ~5% non-plastic fines
10						
15	Sonic	4 inch casing	100%			
20						Poorly Graded Sand (SP): Brown (7.5YR 6/3), moist, ~95% fine to medium sand, ~5% non-plastic fines (continued)
25	Sonic	4 inch casing	100%			
30					SP	
35	nic	casing	0%			

WELL CONSTRUCTION



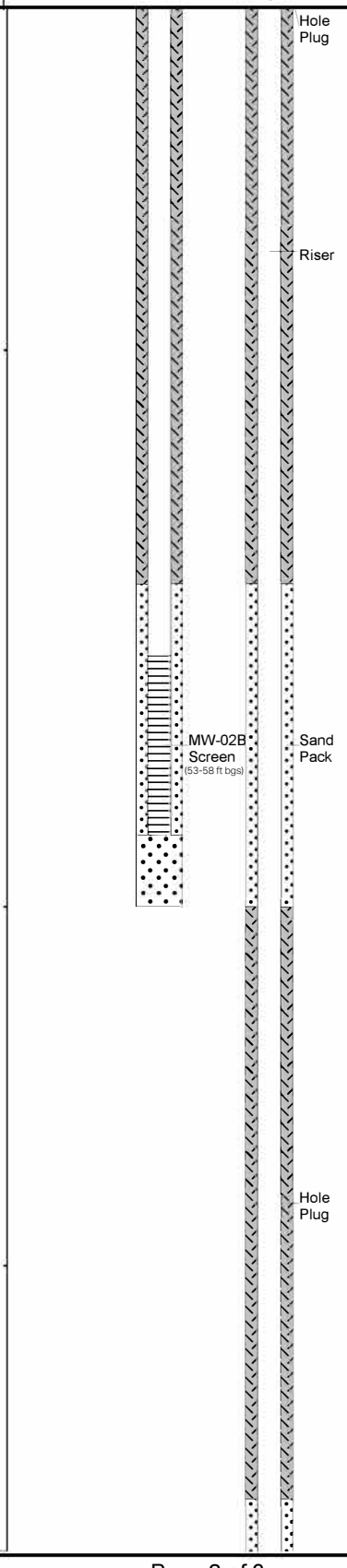
Notes: A, B, C wells installed in same borehole but are separate wells.
End of Boring @ 100 ft bgs; Depth to Water @ 8.7 ft bgs.

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-02 A,B&C**
TOTAL DEPTH: **100'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
	So	4 inch	10			
40						
45	Sonic	4 inch casing	100%			Poorly Graded Sand (SP): Brown (7.5YR 6/3), moist, ~95% fine to medium sand, ~5% non-plastic fines (continued)
50					SP	
55	Sonic	4 inch casing	100%			
60						Poorly Graded Sand with Silt (SP-SM): Brown/Grey (7.5YR 6/2), wet, ~90% fine sand, ~10% non-plastic fines
65	Sonic	4 inch casing	50%		SP-SM	
70						Poorly Graded Sand (SP): Brown (7.5YR 4/3), wet, ~95% fine to medium sand, ~5% non-plastic fines
75	Sonic	4 inch casing	50%		SP	

WELL CONSTRUCTION



Notes: A, B, C wells installed in same borehole but are separate wells.
End of Boring @ 100 ft bgs; Depth to Water @ 8.7 ft bgs.

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-02 A,B&C**

TOTAL DEPTH: **100'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION A	B	C
80	Sonic	4 inch casing	100%						Riser; Sand Pack; MW-02C Screen (78.5-83.5 ft bgs); Sand Fill
85					SM	Silty Sand (SM): Grey (7.5YR 5/1), wet, ~80% fine to coarse sand, ~15% non-plastic fines, ~5% fine sub-rounded gravel			
					CL	Lean Clay with Sand (CL): Brown (7.5YR 5/3), moist, ~70% plastic fines, ~20% fine sand, ~5% non-plastic fines, ~5% fine to coarse sub-rounded gravel, medium plasticity, cohesive, slow dilatency, high dry strength			
					SM	Silty Sand (SM): Grey (7.5YR 5/1), wet, ~80% fine to coarse sand, ~15% non-plastic fines, ~5% fine sub-rounded gravel			
90					CL	Lean Clay with Sand (CL): Brown (7.5YR 5/3), moist, ~70% plastic fines, ~20% fine sand, ~5% non-plastic fines, ~5% fine to coarse sub-rounded gravel, medium plasticity, cohesive, slow dilatency, high dry strength			
95	Sonic	4 inch casing	100%		SC	Clayey Sand (SC): Brown (7.5YR 6/3), wet, ~65% fine to coarse sand, ~25% plastic fines, ~10% fine to coarse sub-rounded gravel, trace non-plastic fines			
100					CL	Lean Clay (CL): Brown (7.5YR 5/3), moist, ~75% plastic fines, ~15% fine sand, ~10% fine sub-rounded gravel, medium plasticity, cohesive, slow dilatency, high dry strength			

Notes: A, B, C wells installed in same borehole but are separate wells.
End of Boring @ 100 ft bgs; Depth to Water @ 8.7 ft bgs.

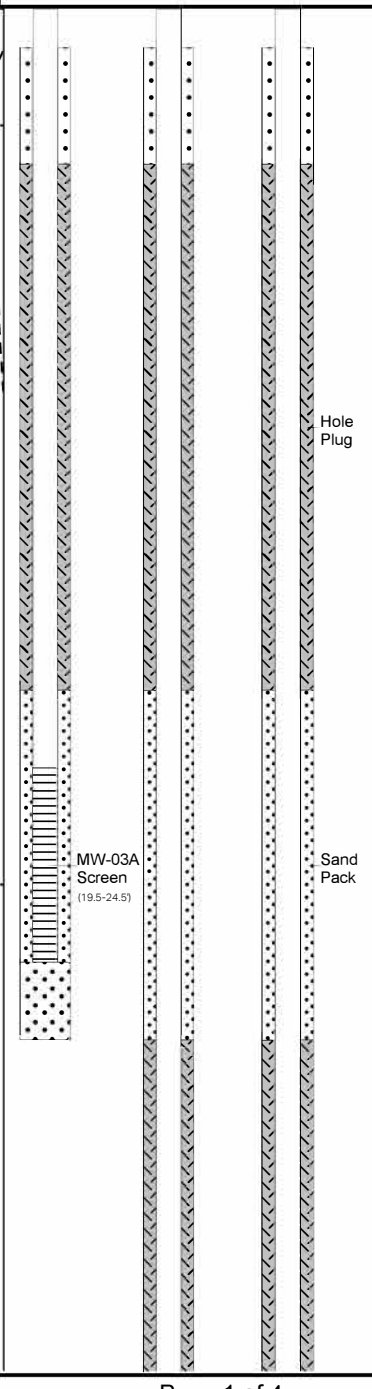
FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-03 A,B&C**
TOTAL DEPTH: **150'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Russell Ridge PFAS**	CONTRACTOR:	**Mateco**
SITE LOCATION:	**Cedar Springs, MI**	CREW CHIEF:	**Jeff Croel**
PROJECT NO.:	**60637339**	DRILL RIG TYPE:	**Geoprobe - Sonic Head**
PROJECT MANAGER:	**Matt VanderEide**	DRILLING METHOD:	**Sonic Drilling**
LOGGED BY:	**Wes Stambaugh**	HOLE DIAMETER:	**6 x 8"**
CREATED BY:	**Jillian Ashton**	DATE START:	**06/14/23**
		DATE END:	**06/19/23**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
0	Hand Auger	Hand Auger	100%		OL	Organic Soil with Sand (OL): Dark Brown (7.5YR 2.5/2), moist, ~60% organic soil, ~35% fine sand, ~5% non-plastic fines, roots, topsoil
					SP-SM	Poorly Graded Sand with Silt (SP-SM): Light Brown (7.5YR 7/6), dry, ~90% fine sand, ~10% non-plastic fines
5	Sonic	4 inch casing	100%		SW-SM	Well Graded Sand with Silt (SW-SM): Brown (7.5YR 7/6), moist, ~80% fine to coarse sand, ~10% non-plastic fines, ~10% fine to coarse sub-rounded gravel
						Poorly Graded Sand (SP): Brown (7.5YR 6/4), moist, ~90% fine to medium sand, ~5% non-plasatic fines, ~5% fine sub-rounded gravel
10						
15	Sonic	4 inch casing	100%		SP	
20						
						* Saturation at 19.5 ft bgs
						Poorly Graded Sand (SP): Light Brown (7.5YR 7/3), wet, ~95% fine sand, ~5% non-plastic fines
25	Sonic	4 inch casing	100%			
30						* Orange/Brown mottling (7.5YR 6/8) @ 30.0 ft bgs
35	Sonic	4 inch casing	100%		SP	

WELL CONSTRUCTION



Notes: A, B, C wells installed in same borehole but are separate wells.
End of Boring @ 150 ft bgs; Depth to Water @ 22.5 ft bgs.

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-03 A,B&C**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION A	B	C
	So	4 inch	10			* Intermittent seams of Grey (7.5YR 5/1) Silty Sand observed between 35.0-63.0 ft bgs			
40									
45	Sonic	4 inch casing	100%			Poorly Graded Sand (SP): Light Brown (7.5YR 7/3), wet, ~95% fine sand, ~5% non-plastic fines (continued) * Intermittent seams of Grey (7.5YR 5/1) Silty Sand observed between 35.0-63.0 ft bgs			
50									
55	Sonic	4 inch casing	100%		SP				Hole Plug
60									
65	Sonic	4 inch casing	100%		SM	Silty Sand (SM): Brown (7.5YR 6/4), wet, ~80% fine sand, ~20% non-plastic fines			
70						Silty Sand (SM): Brown (7.5YR 6/4), wet, ~80% fine sand, ~20% non-plastic fines (continued)			
75	Sonic	4 inch casing	100%						Riser

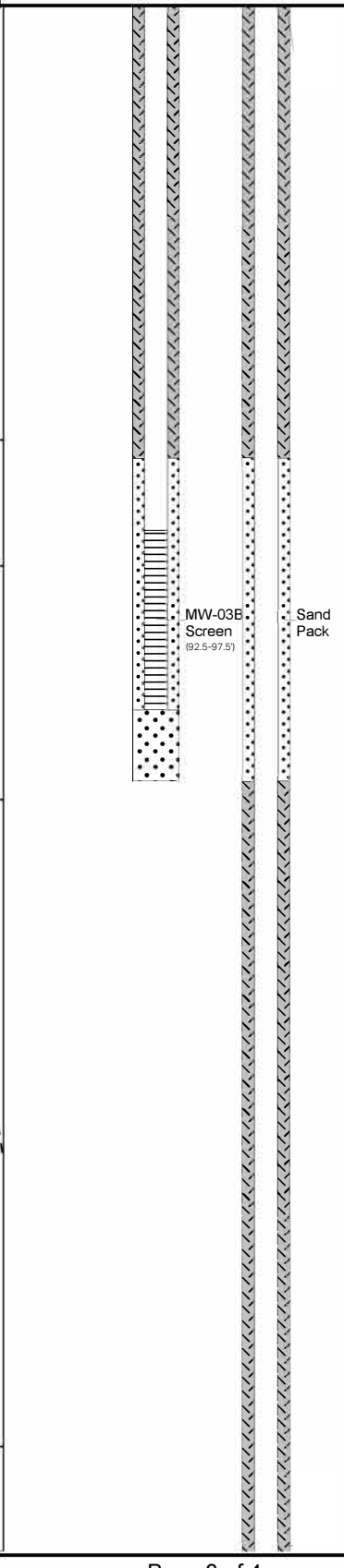
Notes: A, B, C wells installed in same borehole but are separate wells.
End of Boring @ 150 ft bgs; Depth to Water @ 22.5 ft bgs.

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-03 A,B&C**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
80	Sonic	4 inch casing	100%		SM	
85	Sonic	4 inch casing	100%		SM	
90	Sonic	4 inch casing	50%		SP	Poorly Graded Sand (SP): Brown (7.5YR 6/3), wet, ~95% fine to medium sand, ~5% non-plastic fines
95	Sonic	4 inch casing	50%		SP	Poorly Graded Sand (SP): Brown (7.5YR 6/3), wet, ~95% fine to medium sand, ~5% non-plastic fines (continued)
100	Sonic	4 inch casing	100%		SM	Silty Sand (SM): Brown/Grey (7.5YR 6/2), wet, ~80% fine to medium sand, ~20% non-plastic fines, slight cementation
105	Sonic	4 inch casing	100%		SM	
110	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): Brown (7.5YR 6/3), wet, ~95% fine to medium sand, ~5% non-plastic fines
115	Sonic	4 inch casing	100%		SP	* Intermittent seams of Grey (7.5YR 5/1) Silty Sand observed between 115.0-125.0 ft bgs
120						Poorly Graded Sand (SP): Brown (7.5YR 6/3), wet, ~95% fine to medium sand, ~5% non-plastic fines (continued)

WELL CONSTRUCTION



Notes: A, B, C wells installed in same borehole but are separate wells.
End of Boring @ 150 ft bgs; Depth to Water @ 22.5 ft bgs.

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-03 A,B&C**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION A	B	C
125	Sonic	4 inch casing	100%		SP				
130									
135	Sonic	4 inch casing	100%						
140					SP	Poorly Graded Sand (SP): Brown/Grey (7.5YR 6/2), wet, ~95% fine sand, ~5% non-plastic fines			
145	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): Brown/Grey (7.5YR 6/2), wet, ~95% fine sand, ~5% non-plastic fines (continued)			Sand Pack MW-03C Screen (144-149)
150					CL	Lean Clay with Sand (CL): Grey (7.5YR 6/1), moist, ~65% plastic fines, ~25% fine sand, ~5% non-plastic fines, ~5% fine to coarse sub-rounded gravel, low plasticity, cohesive, medium dry strength, slow dilatency, trace cobbles			Sand Fill

Notes: A, B, C wells installed in same borehole but are separate wells.
End of Boring @ 150 ft bgs; Depth to Water @ 22.5 ft bgs.

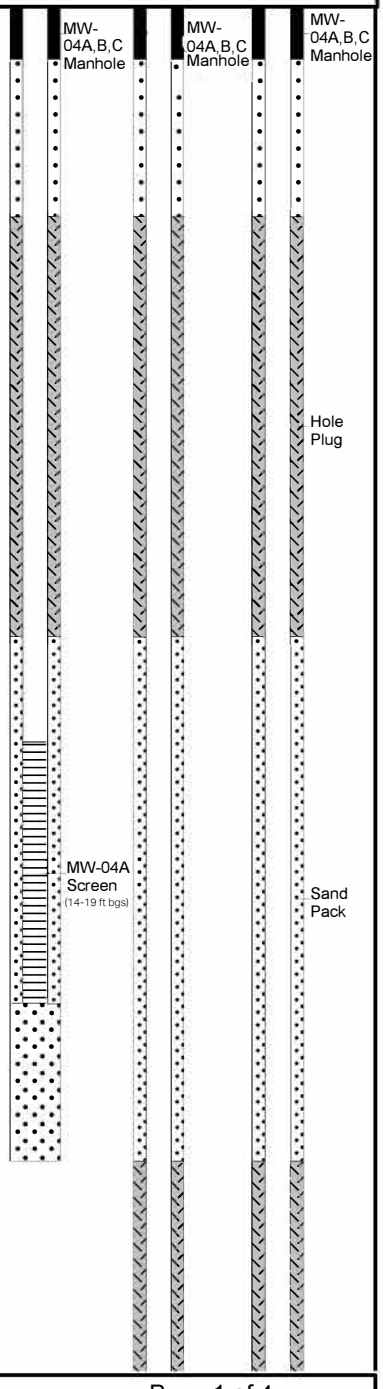
FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-04 A,B&C**
TOTAL DEPTH: **105'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Russell Ridge PFAS**	CONTRACTOR:	**Mateco**
SITE LOCATION:	**Cedar Springs, MI**	CREW CHIEF:	**Jeff Croel**
PROJECT NO.:	**60637339**	DRILL RIG TYPE:	**Geoprobe - Sonic Head**
PROJECT MANAGER:	**Matt VanderEide**	DRILLING METHOD:	**Sonic Drilling**
LOGGED BY:	**Traci McWhorter-Ott**	HOLE DIAMETER:	**6 x 8 inch**
CREATED BY:	**Jillian Ashton**	DATE START:	**06/21/23**
		DATE END:	**06/22/23**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
0	Hand Auger	Hand Auger	100%		SM	Silty Sand (SM): 7.5YR 7/2, ~60% fine sand, ~40% non-plastic fines, roots * Same as above, change to 7.5YR 8/6 with no roots @ 1.0 ft bgs
					CL	Lean Clay (CL): 7.5YR 4/6, ~90% clay, ~10% fine sand, medium plasticity, intermittent lens of sand * Same as above with increase of coarse sand @ 4.0 ft bgs
5	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): 7.5YR 6/6, ~100% fine to medium sand, trace non-plastic fines Poorly Graded Sand (SP): 7.5YR 8/6, ~95% fine to medium sand, ~5% non-plastic fines * Same as above with color change to 7.5YR 6/6 @ 9.5 ft bgs
10	Sonic	4 inch casing	50%		NR	No Recovery
15					SP	Poorly Graded Sand (SP): ~100% fine to medium sand, trace non-plastic fines
20					CL	Lean Clay (CL): 10YR 6/2, ~95% clay, ~5% plastic fines, medium plasticity
25	Sonic	4 inch casing	100%			Poorly Graded Sand (SP): 10YR 6/3, ~95% medium to coarse sand, ~5% gravel

WELL CONSTRUCTION
('A,B&C' wells installed in same borehole but are separate wells)



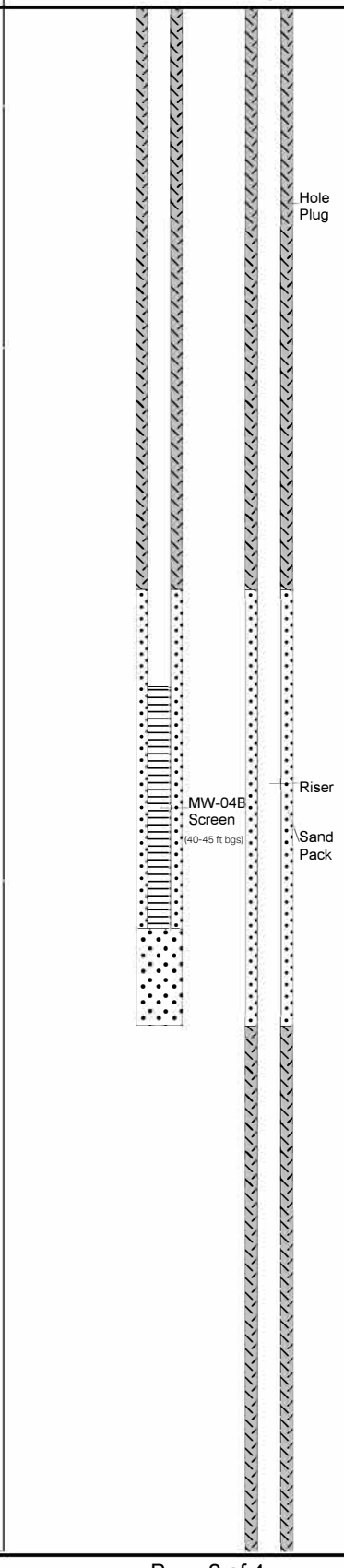
Notes: 'A', 'B' and 'C' wells installed in same borehole but are separate wells.
End of Boring @ 105 ft bgs; Depth to Water @ 15 ft bgs. NR=No Recovery

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-04 A,B&C**
TOTAL DEPTH: **105'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
30	Sonic	4 inch casing	100%		SP	* Same as above with decrease in grain size @ 28.0 ft bgs
35						* Same as above with color change to 10YR 6/2 @ 33.0 ft bgs
40						Poorly Graded Sand with Silt (SP-SM): 10YR 6/1, ~90% fine sand, ~10% non-plastic fines
45	Sonic	4 inch casing	50%			* Same as above with color change to 10YR 6/2 @ 44.0 ft bgs
50						
55	Sonic	4 inch casing	100%		SP-SM	

WELL CONSTRUCTION



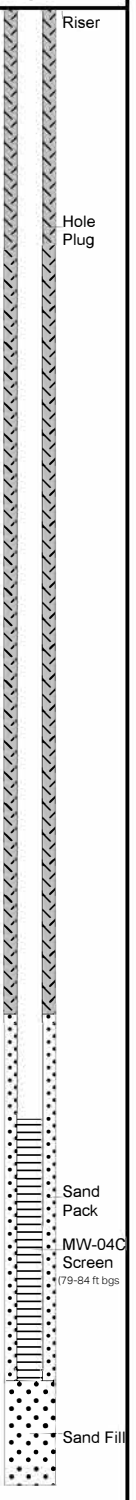
Notes: 'A', 'B' and 'C' wells installed in same borehole but are separate wells.
End of Boring @ 105 ft bgs; Depth to Water @ 15 ft bgs. NR=No Recovery

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-04 A,B&C**
TOTAL DEPTH: **105'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
60	Sonic	4 inch casing	100%			
65	Sonic	4 inch casing	100%			
70	Sonic	4 inch casing	100%		SP	Poorly Graded Sand with Gravel (SP): 10YR 6/2, ~90% fine to medium sand, ~10% fine to medium gravel Poorly Graded Sand (SP): 10YR 6/2, ~95% fine sand, ~5% non-plastic fines
75	Sonic	4 inch casing	100%		SP	* Same as above with color change to 10YR 7/2 @ 75.0 ft bgs
					GW	Well Graded Gravel with Sand (GW): 10YR 7/1, ~80% fine to coarse gravel, ~20% coarse sand
					CL	Lean Clay (CL): 10YR 7/2, ~90% clay, ~10% plastic fines, trace coarse gravel
80					GP	Poorly Graded Gravel with Sand (GP): 10YR 7/1, ~80% fine gravel, ~20% fine to coarse sand
					SW	Well Graded Sand (SW): 10YR 7/3, ~90% medium to coarse sand, ~10% fine to medium gravel * Same as above with increase in fine sand @ 82.0 ft bgs
					SP	Poorly Graded Sand with Gravel (SP): 10YR 7/3, ~70% fine to medium sand, ~30% medium to coarse gravel
85	Sonic	4 inch casing	100%		GP	Poorly Graded Gravel with Sand (GP): 10YR 7/3, ~90% coarse gravel, ~10% fine to coarse sand
					ML	Silt with Gravel (ML): 10YR 7/2, ~80% non-plastic fines, ~20% coarse gravel * 0.5 inch very thinly bedded coarse gravel @ 86.5 ft bgs
					CL	Lean Clay (CL): 7.5YR 6/2, ~90% clay, ~10% coarse gravel
						Poorly Graded Sand (SP): 10YR 7/2, ~100% sand (90% coarse, 10% fine to medium)

WELL CONSTRUCTION



Notes: 'A', 'B' and 'C' wells installed in same borehole but are separate wells.
End of Boring @ 105 ft bgs; Depth to Water @ 15 ft bgs. NR=No Recovery

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-04 A,B&C**
TOTAL DEPTH: **105'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION A	B	C
90	Sonic	4 inch casing	50%		SP	* Same as above with color transition to 10YR 5/3 and mostly fine sand			
95					ML	Silt (ML): 10YR 6/2, ~90% non-plastic fines, ~10% fine sand			
100	Sonic	4 inch casing	100%		CH	Fat Clay (CH): 7.5YR 5/3			
105									

Notes: 'A', 'B' and 'C' wells installed in same borehole but are separate wells.
End of Boring @ 105 ft bgs; Depth to Water @ 15 ft bgs. NR=No Recovery

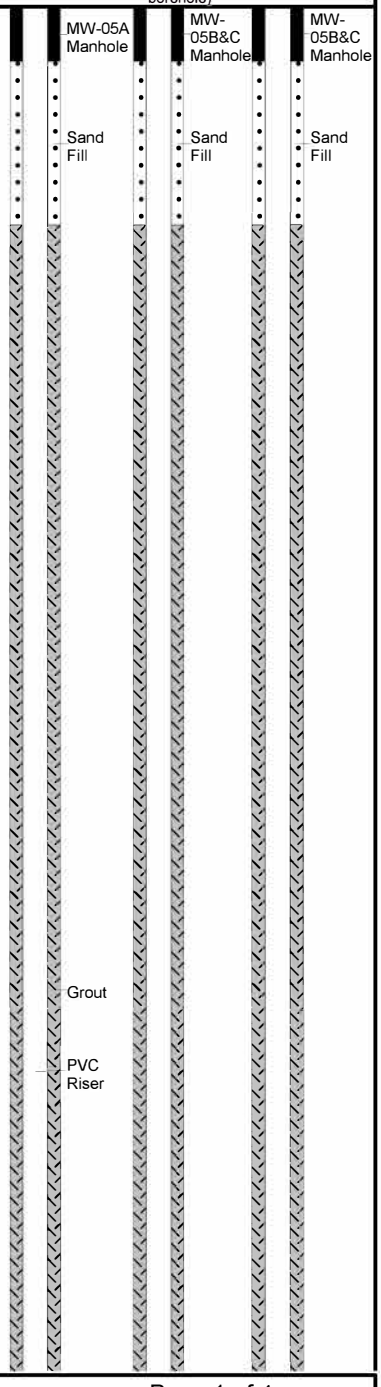
FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-05 A,B&C**
TOTAL DEPTH: **95'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Russell Ridge PFAS**	CONTRACTOR:	**Mateco**
SITE LOCATION:	**Cedar Springs, MI**	CREW CHIEF:	**Jeff Croel**
PROJECT NO.:	**60637339**	DRILL RIG TYPE:	**Geoprobe - Sonic Head**
PROJECT MANAGER:	**Matt VanderEide**	DRILLING METHOD:	**Roto-Sonic**
LOGGED BY:	**Andrew Alder**	HOLE DIAMETER:	**6 x 8 inch**
CREATED BY:	**Jillian Ashton**	DATE START:	**07/11/23**
		DATE END:	**07/11/23**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
0	Hand Auger	Hand Auger	80%		OL	Organic Soil (OL): 7.5YR 4/3, 60% organic soil, 20% sand, 20% plastic fines
					Asphalt	Crushed asphalt (7.5YR 3/1)
					CL	Lean Clay with Sand (CL): 7.5YR 4/4, moist, ~75% plastic fines, ~20% sand, ~5% fine subangular gravel, medium plasticity, low dilatency, cohesive, medium toughness, mottling
5	Sonic	4 inch casing	0%		NR	No Recovery
10						
15	Sonic	4 inch casing	50%		CH	Fat Clay (CH): 7.5YR 6/3, moist, ~95% plastic fines, ~5% sand, high plasticity, low dilatency, medium toughness, very hard dry strength
20						Poorly Graded Sand with Silt (SP-SM): 7.5YR 7/6, ~90% fine to coarse sand, ~10% fines
25	nic	casing	0%			

WELL CONSTRUCTION
('B&C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole)



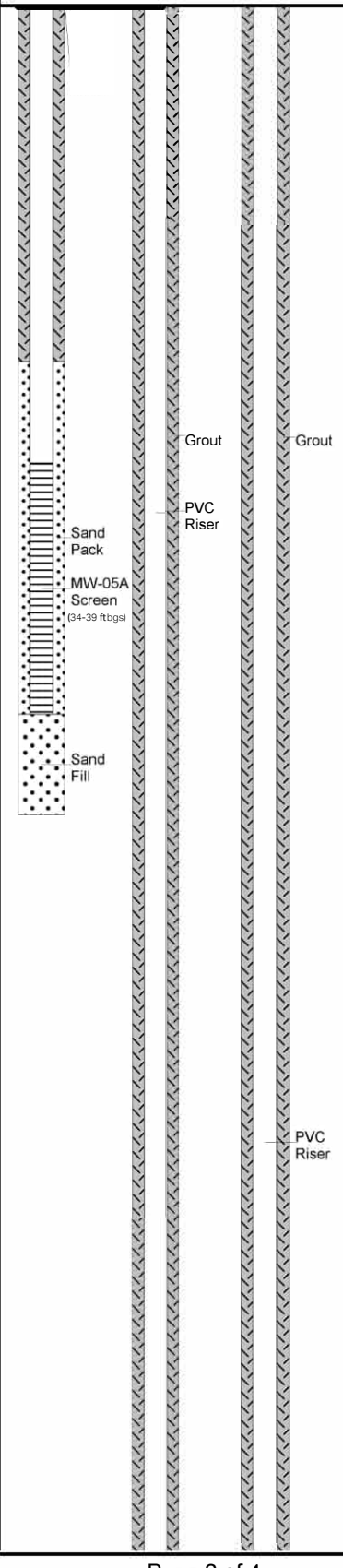
Notes: 'B' and 'C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole.
End of Boring @ 150 ft bgs; Depth to Water @ 49 ft bgs. NR=No Recovery

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-05 A,B&C**
TOTAL DEPTH: **95'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
	So	4 inch	10		SP-SM	
30						
35	Sonic	4 inch casing	100%			Poorly Graded Sand (SP): 7.5YR 5/4, ~90% fine to coarse sand, ~5% fine to coarse subrounded gravel, ~5% fines
40						
45	Sonic	4 inch casing	100%			Poorly Graded Sand (SP): 7.5YR 7/2, wet, ~95% fine to medium sand, ~5% non-plastic fines
50						
55	Sonic	inch casing	100%			

WELL CONSTRUCTION



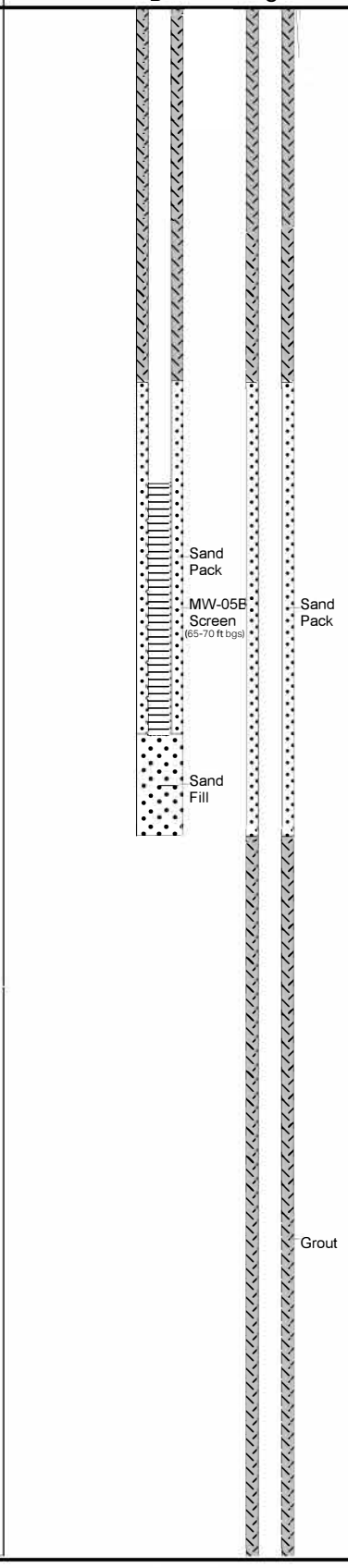
Notes: 'B' and 'C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole.
End of Boring @ 150 ft bgs; Depth to Water @ 49 ft bgs. NR=No Recovery

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-05 A,B&C**
TOTAL DEPTH: **95'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
60		4				
65	Sonic	4 inch casing	100%		SP	
70						
75	Sonic	4 inch casing	100%			* Same as above with color change (7.5YR 6/2) starting @ 75 ft bgs
80						
85	Sonic	4 inch casing	100%			

WELL CONSTRUCTION



Notes: 'B' and 'C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole.
End of Boring @ 150 ft bgs; Depth to Water @ 49 ft bgs. NR=No Recovery

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-05 A,B&C**

TOTAL DEPTH: **95'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION A	B	C
90 – 95	Sonic	4 inch casing	100%						PVC Riser; Grout; Sand Pack; MW-05C Screen (90-95 ft bgs)

Notes: 'B' and 'C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole.
End of Boring @ 150 ft bgs; Depth to Water @ 49 ft bgs. NR=No Recovery

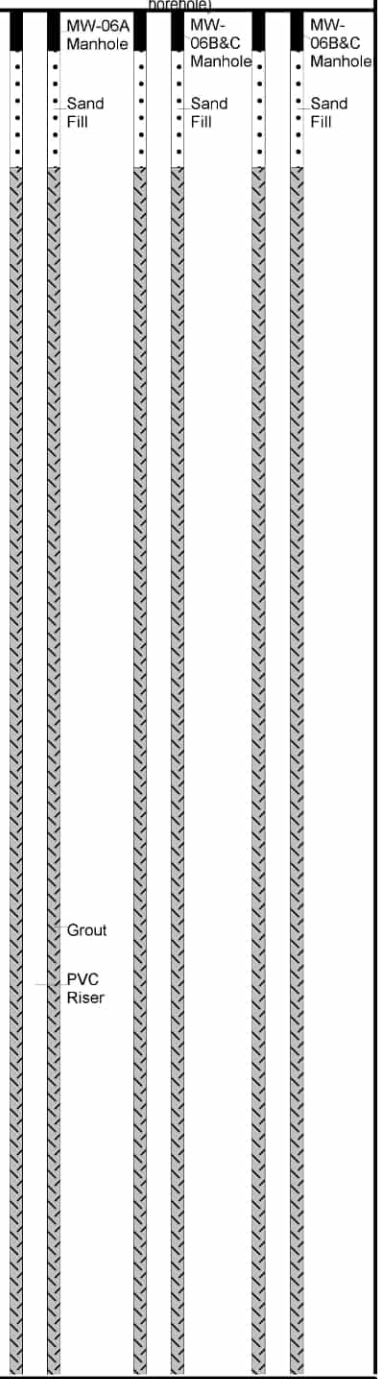
AECOM FIELD BOREHOLE LOG

BOREHOLE NO: **MW-06 A,B&C**
TOTAL DEPTH: **150'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Russell Ridge PFAS**	CONTRACTOR:	**Mateco**
SITE LOCATION:	**Cedar Springs, MI**	CREW CHIEF:	**Jeff Croel**
PROJECT NO.:	**60637339**	DRILL RIG TYPE:	**Geoprobe - Sonic Head**
PROJECT MANAGER:	**Matt VanderEide**	DRILLING METHOD:	**4 inch casing**
LOGGED BY:	**Andrew Alder**	HOLE DIAMETER:	**6 inch**
CREATED BY:	**Jillian Ashton**	DATE START:	**07/12/23**
		DATE END:	**07/17/23**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
0	Hand Auger	Hand Auger	100%		OL	Organic Soil (OL): Dark Brown (7.5YR 4/2), 60% organic soil, 25% fine sand, 15% non-plastic fines
					SW	Well Graded Sand (SW): Brown (7.5YR 5/6), ~95% fine to coarse sand, ~5% fine sub-angular gravel, trace non-plastic fines
					CL	Lean Clay with Sand (CL): Brown (7.5YR 4/6), moist, ~80% plastic fines, ~20% fine to coarse sand, low plasticity, no dilatency, low toughness, low dry strength
5	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): Brown (7.5YR 4/6), ~95% fine to coarse sand, ~5% non-plastic fines, trace fine sub-angular gravel
					CL	Lean Clay with Sand (CL): Brown (7.5YR 6/4), moist, ~80% plastic fines, ~20% fine to coarse sand, low plasticity, no dilatency, low toughness, low dry strength
10					SP	Poorly Graded Sand (SP): Brown (7.5YR 6/4), dry, 95% fine to coarse sand, 5% non-plastic fines, trace fine sub-angular gravel
					NR	No Recovery
15	Sonic	4 inch casing	75%		SP	Poorly Graded Sand (SP): Brown (7.5YR 6/4), dry, 95% fine to coarse sand, 5% non-plastic fines, trace fine sub-angular gravel (continued)
20					SP	Poorly Graded Sand (SP): Light Brown (7.5YR 7/4), dry, ~95% fine to coarse sand, ~5% fine to coarse sub-rounded gravel, trace non-plastic fines
25	Sonic	4 inch casing	60%		NR	No Recovery
30					SP	Poorly Graded Sand (SP): Gray (10YR 4/1), ~95% fine to coarse sand, ~5% non-plastic fines
					SM	Silty Sand (SM): Light Gray (10YR 7/1), ~80% fine to medium sand, ~20% non-plastic fines, cemented
35	nic	casing	0%			Poorly Graded Sand (SP): Light Brown (10YR 7/2), dry, 95% fine to medium sand, 5% non-plastic fines

WELL CONSTRUCTION
('B&C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole)



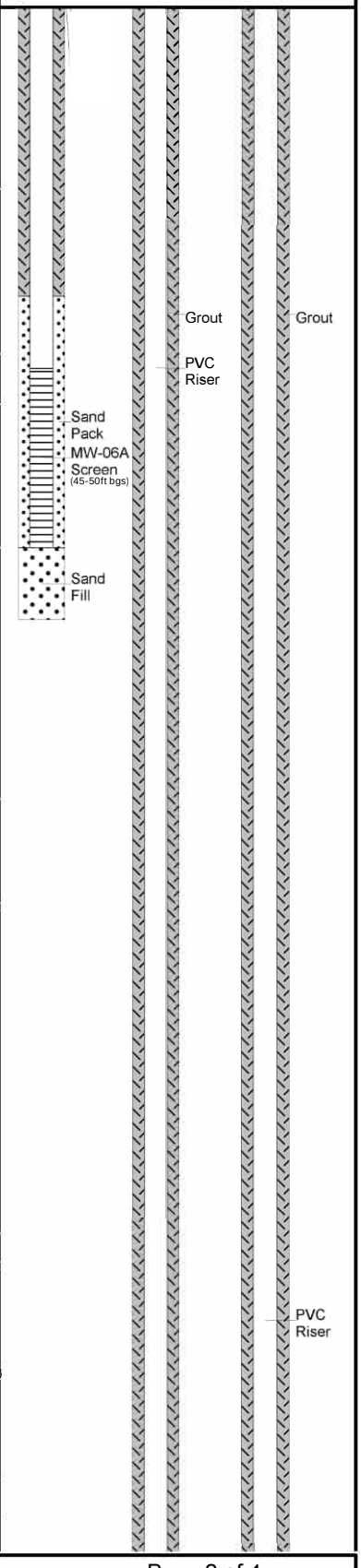
Notes: 'B' and 'C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole.
End of Boring @ 150 ft bgs; Depth to Water @ 39.5 ft bgs. NR=No Recovery

FIELD BOREHOLE LOG

BOREHOLE NO: **MW-06 A,B&C**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
	So	4 inch	10			
40						* Transition to Brown (7.5YR 6/2) at 40 ft bgs with Gray (10YR 5/1) mottling; Wet at 46 ft bgs
45	Sonic	4 inch casing	100%			Poorly Graded Sand (SP): Light Brown (10YR 7/2), dry, 95% fine to medium sand, 5% non-plastic fines (continued)
					SP	* Transition to Brown (7.5YR 6/4) at 46 ft bgs
50						* Transition to Dark Gray (10YR 5/1) at 50 ft bgs
55	Sonic	4 inch casing	100%			
						* Transition to Light Brown (7.5YR 7/4) at 57 ft bgs
60						No Recovery
65	Sonic	4 inch casing	0%		NR	
						No Recovery (Continued)
70					SP	Poorly Graded Sand (SP): Light Brown (7.5YR 7/4), wet, 95% fine to coarse sand, 5% non-plastic fines
75	Sonic	4 inch casing	100%		SW	Well Graded Sand with Gravel (SW): Brown (7.5YR 6/4), wet, ~85% fine to coarse sand, ~15% fine to coarse sub-rounded gravel, trace non-plastic fines
					CH	Fat Clay (CH): Brown (7.5YR 5/4), wet, ~95% plastic fines, ~5% fine sand, high plasticity, no dilatency, high toughness, very high dry strength
						Poorly Graded Sand (SP): Light Brown (7.5YR 7/4), wet, 95% fine to medium sand.

WELL CONSTRUCTION



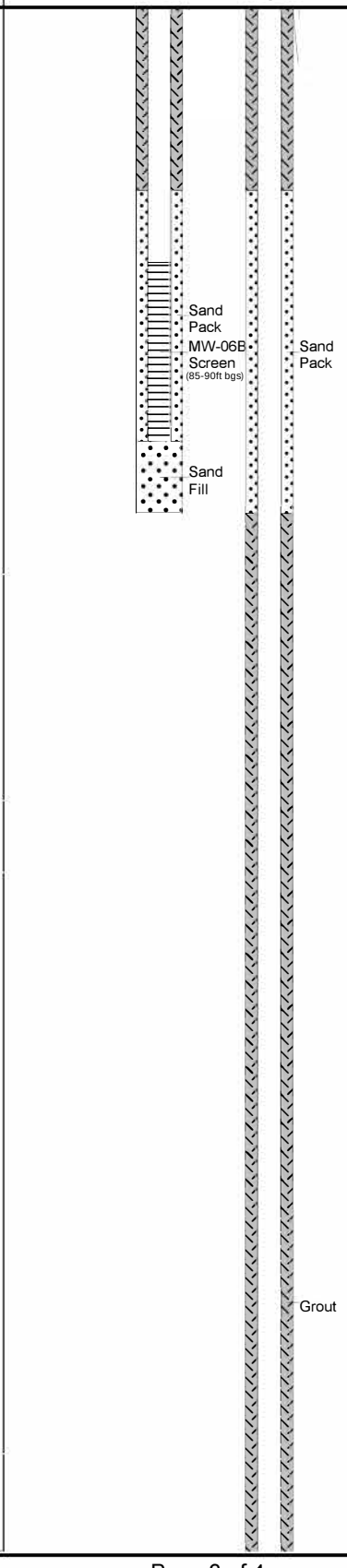
Notes: 'B' and 'C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole.
End of Boring @ 150 ft bgs; Depth to Water @ 39.5 ft bgs. NR=No Recovery

FIELD BOREHOLE LOG

BOREHOLE NO: **MW-06 A,B&C**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
					SP	5% non-plastic fines
80	Sonic	4 inch casing	100%			Poorly Graded Sand (SP): Brown (7.5YR 5/4), wet, 95% fine to coarse sand, 5% non-plastic fines
85						
90						
95	Sonic	4 inch casing	50%		SP	Poorly Graded Sand (SP): Brown (7.5YR 5/4), wet, 95% fine to coarse sand, 5% non-plastic fines (continued)
100						* Brown (7.5YR 6/4) and Black (N 3/) mottling at 100-102 ft bgs
						* Transition to Brown (7.5YR 6/4) at 102 ft bgs
105	Sonic	4 inch casing	100%			
110						Poorly Graded Sand (SP): Dark Brown (7.5YR 6/2), wet, ~95% fine sand, ~5% non-plastic fines
115	Sonic	4 inch casing	50%			
120						Poorly Graded Sand (SP): Dark Brown (7.5YR 6/2), wet, 95% fine sand, 5% non-plastic fines (continued)

WELL CONSTRUCTION



Notes: 'B' and 'C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole.
End of Boring @ 150 ft bgs; Depth to Water @ 39.5 ft bgs. NR=No Recovery

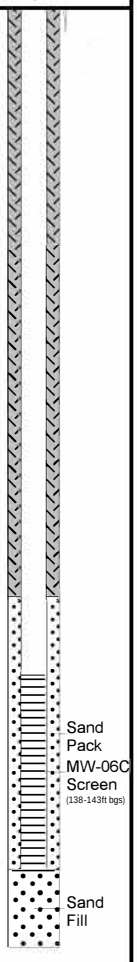
FIELD BOREHOLE LOG

BOREHOLE NO: **MW-06 A,B&C**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
125	Sonic	4 inch casing	50%			
130					SP	
135	Sonic	4 inch casing	50%			
140						
145	Sonic	4 inch casing	100%			Poorly Graded Sand (SP): Dark Brown (7.5YR 6/2), wet, 95% fine sand, 5% non-plastic fines (continued)
150						

WELL CONSTRUCTION

A B C



Notes: 'B' and 'C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole.
End of Boring @ 150 ft bgs; Depth to Water @ 39.5 ft bgs. NR=No Recovery

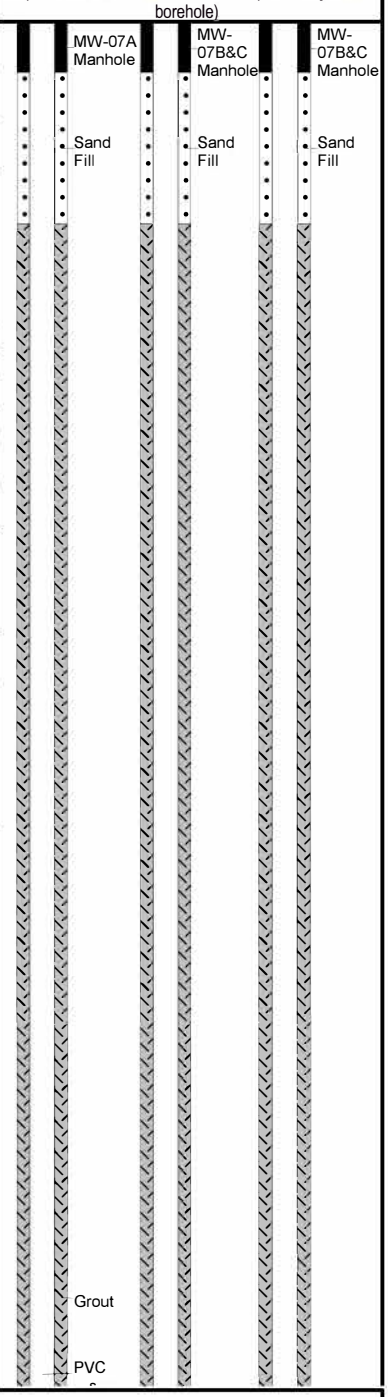
FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-07 A,B&C**
TOTAL DEPTH: **150'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Russell Ridge PFAS**	CONTRACTOR:	**Mateco**
SITE LOCATION:	**Cedar Springs, MI**	CREW CHIEF:	**Jeff Croel**
PROJECT NO.:	**60637339**	DRILL RIG TYPE:	**Geoprobe - Sonic Head**
PROJECT MANAGER:	**Matt VanderEide**	DRILLING METHOD:	**Roto-Sonic**
LOGGED BY:	**Traci McWhorter-Ott**	HOLE DIAMETER:	**6 x 8 inch**
CREATED BY:	**Jillian Ashton**	DATE START:	**06/23/23**
		DATE END:	**06/30/23**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
0	Hand Auger	Hand Auger	100%		OL	Organic Soil (OL): 7.5YR 7/2, dry
					ML	Silt (ML): 7.5YR 7/3, ~100% silt * Same as above with color change (7.5YR 6/3) @ 2.0 ft bgs
5					CL	Lean Clay (CL): ~95% clay, ~5% fine sand, medium plasticity * ~0.5" lens of coarse gravel and fine sand (7.5YR 8.1) @ 6.0 ft bgs
	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): 10YR 7/6, ~95% fine sand, ~5% silt
					SP-SM	Poorly Graded Sand with Silt (SP-SM): 5YR 5/6, ~90% fine sand, ~10% silt
					SP	Poorly Graded Sand (SP): 7.5YR 6/6, ~95% fine sand, ~5% non-plastic fines, thin layer of gravel at bottom of interval
					ML	Silt with Sand (ML): 5YR 5/6, ~80% silt, ~20% sand
10					SP	Poorly Graded Sand (SP): 5YR 5/6, ~95% fine sand, ~5% non-plastic fines * Same as above with color change (7.5YR 7/4) @ 10.0 ft bgs
					SM	Silty Sand (SM): 7.5YR 7/4, ~80% fine sand, ~20% non-plastic fines
15	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): 10YR 8/3, ~95% fine to medium sand, ~5% non-plastic fines * Same as above with color change (10YR 8/2) @ 16.0 ft bgs
20					SP-SM	Poorly Graded Sand with Silt (SP-SM): 10YR 5/1, ~90% fine sand, ~10% non-plastic fines
25	Sonic	4 inch casing	100%		SP	Poorly Graded Sand (SP): 10YR 7/3, moist, ~95% fine to medium sand, ~5% non-plastic fines Poorly Graded Sand (SP): Light Brown (10YR 7/4), dry, ~95% medium sand, ~5% non-plastic fines

WELL CONSTRUCTION
('B&C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole)



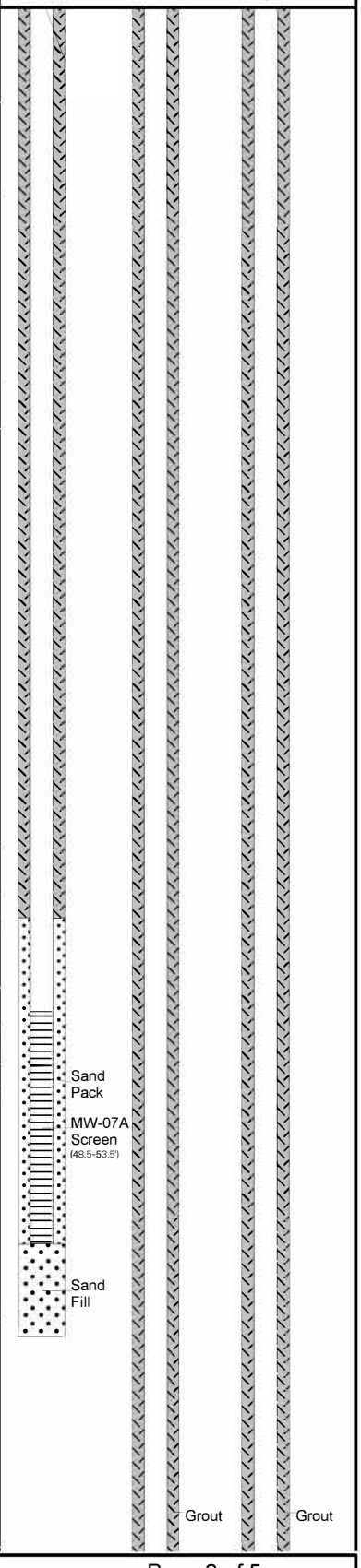
Notes: 'B' and 'C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole.
End of Boring @ 150 ft bgs; Depth to Water @ 49 ft bgs. NR=No Recovery

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-07 A,B&C**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
30	Sonic	4 inch casing	100%			* Same as above with thin seam of sand with silt (ML) (10YR 7/1), non-plastic, with mottling (10YR 5/8) @ 29.0 ft bgs
						Poorly Graded Sand (SP): Gray/Brown (10YR 7/1), dry, ~95% fine to medium sand, ~5% non-plastic fines
					SM	Silty Sand (SM): Gray (10YR 5/1), dry, ~80% fine sand, ~20% non-plastic fines
35					SP	Poorly Graded Sand (SP): Light Brown (10YR 7/3), dry, ~95% medium sand, ~5% non-plastic fines
						* Same as above with color change (10YR 8/3) @ 36.0 ft bgs
40						* Same as above with color change back to 10YR 7/3 @ 39.0 ft bgs
45	Sonic	4 inch casing	100%		CL	Lean Clay (CL): Gray (10YR 6/1), ~90% clay, ~10% fines, medium plasticity, some dark gray mottling
					SP-SM	Poorly Graded Sand with Silt (SP-SM): Brown/Gray (10YR 6/2), ~90% fine to medium sand, ~10% non-plastic fines
					CH	Fat Clay (CH): Gray (10YR 6/1), ~95% clay, ~5% plastic fines, high plasticity
						* Same as above with color change (7.5YR 6/4) @ 48.0 ft bgs
					SP	Poorly Graded Sand (SP): Brown (7.5YR 7/4), ~95% fine to medium sand, ~5% non-plastic fines
50					CH	Fat Clay (CH): Reddish Brown (7.5YR 6/4), ~95% clay, ~5% non-plastic fines, high plasticity
					NR	No Recovery
55	Sonic	4 inch casing	50%			Poorly Graded Sand (SP): Brown (7.5YR 7/4), ~95% fine to medium sand, ~5% non-plastic fines
60						

WELL CONSTRUCTION



Notes: 'B' and 'C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole.
End of Boring @ 150 ft bgs; Depth to Water @ 49 ft bgs. NR=No Recovery

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-07 A,B&C**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION A	B	C
	Sonic	4 inch casing	100%		SP	* Same as above with color change (10YR 6/1) and increase of fine sand @ 60.0 ft bgs			
65						* Same as above with color change (10YR 7/2) and increase of medium sand @ 62.0 ft bgs			
70						* Same as above with color change (10YR 5/1) @ 70.0 ft bgs			PVC Riser
						* Same as above with color change (10YR 6/2) @ 73.0 ft bgs			
75	Sonic	4 inch casing	100%		SM	Silty Sand (SM): Gray/Brown (10YR 6/2), ~85% fine sand, ~15% non-plastic fines			
						* Same as above with intermitten lean clay (CL) mottling @ 77.0 ft bgs			
					SP	Poorly Graded Sand (SP): Gray/Brown (10YR 6/2), ~95% fine to medium sand, ~5% non-plastic fines			
					SM	Silty Sand (SM): Gray/Brown (10YR 6/2), ~85% fine sand, ~15% non-plastic fines			
80					ML	Silt with Sand (ML): Gray/Brown (10YR 6/2), wet, ~85% non-plastic fines, ~15% fine sand			
85	Sonic	4 inch casing	100%			* Thin seam of lean clay (CL), 10YR 6/2, ~95% clay, ~5% non-plastic fines @ 87.0 ft bgs			
						* Same as above			
					SP	Poorly Graded Sand (SP): Gray/Brown (10YR 6/2), wet, ~95% fine sand, ~5% non-plastic fines			
90					ML	Silt with Sand (ML): Gray/Brown (10YR 6/2), wet, ~85% non-plastic fines, ~15% fine sand			
						Poorly Graded Sand with Silt (SP-SM): Gray/Brown (10YR 6/2), ~90% fine sand, ~10% non-plastic fines			

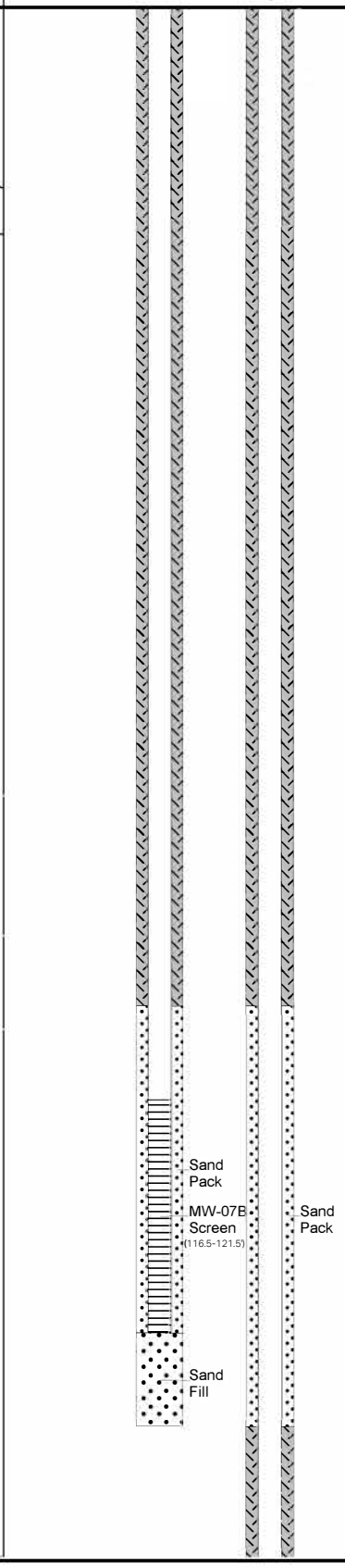
Notes: 'B' and 'C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole.
End of Boring @ 150 ft bgs; Depth to Water @ 49 ft bgs. NR=No Recovery

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-07 A,B&C**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)
95	Sonic	4 inch casing	100%		SP-SM	
					CL	Lean Clay (CL): Gray/Brown (10YR 6/2), ~95% clay, ~5% non-plastic fines, medium plasticity
					SP	Poorly Graded Sand (SP): 10YR 7/2, ~95% fine to medium sand, ~5% non-plastic fines
100						
105	Sonic	4 inch casing	20%			
110						* Same as above with color change to 10YR 7/1 @ 110 ft bgs
						* Same as above with color change to 10YR 6/1 @ 113 ft bgs
115	Sonic	4 inch casing	70%			* Same as above with color change to 10YR 7/2 @ 115 ft bgs
120						
125	Sonic	4 inch casing	100%			Poorly Graded Sand with Silt (SP-SM): Gray (7.5YR 5/1), ~90% fine sand, ~10% non-plastic fines

WELL CONSTRUCTION



Notes: 'B' and 'C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole.
End of Boring @ 150 ft bgs; Depth to Water @ 49 ft bgs. NR=No Recovery

FIELD BOREHOLE LOG

BOREHOLE NO: **EGLE-MW-07 A,B&C**
TOTAL DEPTH: **150'**

DEPTH	SAMPLE TYPE	ATTEMPT	RECOVERY	SOIL SYMBOLS	USCS	SOIL DESCRIPTION (Soil percentages are observational estimations made in the field)	WELL CONSTRUCTION A	B	C
130	Sonic	4 inch casing	100%			* Same as above with color change (7.5YR 7/2) from 131 to 133 ft bgs			Grout
						* Same as above with color change back to 7.5YR 5/1 @ 133 ft bgs			
135					SP-SM				
140									Sand Pack; MW-07C Screen (139-144')
145	Sonic	4 inch casing	100%						Sand Fill
150									

Notes: 'B' and 'C' wells installed in same borehole but are separate wells; 'A' well installed in separate adjacent borehole.
End of Boring @ 150 ft bgs; Depth to Water @ 49 ft bgs. NR=No Recovery

Appendix C

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

28 March 2023

Work Order: 2303159

Price: $3,000.00

KELLY MOSS
EGLE-RRD-GRAND RAPIDS
350 Ottawa Ave. NW, Unit 10
Grand Rapids, MI 49503-2341

RE: RUSSELL RIDGE PFAS

This is the official environmental laboratory report for testing conducted by the Michigan Department of Environment, Great Lakes, and Energy. Analyses performed by the laboratory were conducted using methods published by the U.S. Environmental Protection Agency, Standard Methods for the Examination of Water and Wastewater, ASTM, or other published or approved reference methods.

Kirby Shane
Laboratory Director

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY

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Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

EGLE-RRD-GRAND RAPIDS	Project: RUSSELL RIDGE PFAS	
350 Ottawa Ave. NW, Unit 10	Site Code: LB042388	**Reported:**
Grand Rapids MI, 49503-2341	Project Manager: KELLY MOSS	03/28/2023

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
VAP-01 (42.5-47.5)	2303159-01	Water	03/21/2023	03/24/2023	
VAP-01 (25.0-30.0)	2303159-02	Water	03/20/2023	03/24/2023	
VAP-01 (33.9-38.9)	2303159-03	Water	03/21/2023	03/24/2023	
VAP-01 (54.7-59.7)	2303159-04	Water	03/22/2023	03/24/2023	
VAP-01 (54.7-59.7)-DUP	2303159-05	Water	03/22/2023	03/24/2023	
VAP-01 (63.1-68.1)	2303159-06	Water	03/22/2023	03/24/2023	
VAP-01 (72.8-77.8)	2303159-07	Water	03/22/2023	03/24/2023	
VAP-01 (82.6-87.6)	2303159-08	Water	03/23/2023	03/24/2023	
VAP-01 (93.2-98.2)	2303159-09	Water	03/23/2023	03/24/2023	
VAP-01 (102.5-107.5)	2303159-10	Water	03/23/2023	03/24/2023	
EB2303231635WPS	2303159-11	Water	03/23/2023	03/24/2023	
TRIP BLANK	2303159-12	Water	11/02/2022	03/24/2023	

Notes and Definitions

ND	Indicates compound analyzed for but not detected at or above the reporting limit (RL).
RL	Reporting Limit
NA	Not Applicable

Case Narrative

Samples were received **3/24/2023 11:05:00AM** for client **EGLE-RRD-GRAND RAPIDS** as a part of project **RUSSELL RIDGE PFAS**.

Samples were logged and designated as Work Order # **2303159** on **3/24/2023 12:30:00PM**.

This Report was created **3/28/2023 9:13:48AM**.

Additional Notes/Narrative (if applicable):

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENVIRONMENTAL LABORATORY

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Lansing, MI 48909
TEL: (517) 335-9800
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Client ID: VAP-01 (42.5-47.5)

Lab ID: 2303159-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/24/23	B3C2408	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/24/23	B3C2408	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
375-22-4	**PFBA**	**7.0**	4.0	ng/L	1	03/24/23	B3C2408	8327	BM	
375-73-5	**PFBS**	**5.7**	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
30334-69-1	**PFBSA**	**3.7**	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
375-85-9	**PFHpA**	**14**	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
307-24-4	**PFHxA**	**61**	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
355-46-4	**PFHxS**	**2.3**	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
375-95-1	**PFNA**	**6.8**	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
335-67-1	**PFOA**	**15**	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
1763-23-1	**PFOS**	**12**	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
2706-90-3	**PFPeA**	**91**	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/24/23	B3C2408	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/24/23	B3C2408	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/24/23	B3C2408	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*100 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*103 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*92.2 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*98.2 %*	*25-250*		*03/24/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*87.5 %*	*25-250*		*03/24/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*70.2 %*	*25-250*		*03/24/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*98.1 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (42.5-47.5)

Lab ID: 2303159-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*96.6 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*94.9 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*95.8 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*101 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*98.9 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*98.3 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*97.1 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*99.2 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*98.2 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*98.9 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*96.2 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*101 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*102 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*97.5 %*	*50-200*		*03/24/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (25.0-30.0)

Lab ID: 2303159-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-73-5	**PFBS**	**3.3**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-24-4	**PFHxA**	**2.8**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-95-1	**PFNA**	**3.3**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-67-1	**PFOA**	**5.1**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
1763-23-1	**PFOS**	**14**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-90-3	**PFPeA**	**2.2**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*92.2 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*100 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*89.9 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*73.5 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*97.2 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (25.0-30.0)

Lab ID: 2303159-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*97.1 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*95.6 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*97.6 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*100 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*100 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*99.7 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*99.6 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*100 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*98.8 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*98.2 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*99.0 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*96.3 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (33.9-38.9)

Lab ID: 2303159-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-73-5	**PFBS**	**2.7**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-24-4	**PFHxA**	**7.1**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-95-1	**PFNA**	**2.5**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-67-1	**PFOA**	**3.9**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
1763-23-1	**PFOS**	**6.3**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-90-3	**PFPeA**	**8.5**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*112 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*90.3 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*103 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*91.5 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*72.6 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (33.9-38.9)

Lab ID: 2303159-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*97.0 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*94.8 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*99.0 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*104 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*104 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*99.7 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*98.4 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*105 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*105 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (54.7-59.7)

Lab ID: 2303159-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-73-5	**PFBS**	**5.4**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
30334-69-1	**PFBSA**	**3.0**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-85-9	**PFHpA**	**2.1**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-24-4	**PFHxA**	**6.5**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
355-46-4	**PFHxS**	**2.7**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-95-1	**PFNA**	**2.1**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-67-1	**PFOA**	**9.6**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
1763-23-1	**PFOS**	**3.2**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-90-3	**PFPeA**	**8.7**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*97.2 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*105 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*89.1 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*101 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*93.6 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*81.6 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (54.7-59.7)

Lab ID: 2303159-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*95.7 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*94.8 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*97.9 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*99.8 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*97.9 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*97.0 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*96.7 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*100 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*98.0 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (54.7-59.7)-DUP

Lab ID: 2303159-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-73-5	**PFBS**	**5.7**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
30334-69-1	**PFBSA**	**3.0**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-85-9	**PFHpA**	**2.4**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-24-4	**PFHxA**	**7.1**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
355-46-4	**PFHxS**	**2.1**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-95-1	**PFNA**	**2.1**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-67-1	**PFOA**	**9.3**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
1763-23-1	**PFOS**	**3.5**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-90-3	**PFPeA**	**8.3**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*98.6 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*107 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*89.7 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*106 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*96.8 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*81.9 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (54.7-59.7)-DUP

Lab ID: 2303159-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*96.9 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*95.8 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*98.1 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*100 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*99.2 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*104 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*97.2 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*96.4 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*96.1 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*97.9 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (63.1-68.1)

Lab ID: 2303159-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-22-4	**PFBA**	**4.7**	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-73-5	**PFBS**	**3.7**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-85-9	**PFHpA**	**2.9**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-24-4	**PFHxA**	**7.4**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-95-1	**PFNA**	**2.1**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-67-1	**PFOA**	**6.8**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
1763-23-1	**PFOS**	**2.0**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-90-3	**PFPeA**	**8.4**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*100 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*109 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*92.4 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*96.9 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*88.7 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*75.5 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (63.1-68.1)

Lab ID: 2303159-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*97.9 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*97.1 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*98.6 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*98.8 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*97.4 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*99.4 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*98.3 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*100 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*97.3 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (72.8-77.8)

Lab ID: 2303159-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-22-4	**PFBA**	**4.4**	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-73-5	**PFBS**	**5.0**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
30334-69-1	**PFBSA**	**2.4**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-85-9	**PFHpA**	**2.7**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-24-4	**PFHxA**	**9.6**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-95-1	**PFNA**	**2.2**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-67-1	**PFOA**	**6.7**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
1763-23-1	**PFOS**	**3.0**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-90-3	**PFPeA**	**11**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*98.9 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*90.1 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*104 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*96.3 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*84.0 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (72.8-77.8)

Lab ID: 2303159-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*95.8 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*93.9 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*98.0 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*99.1 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*104 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*97.6 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*97.0 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*104 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*98.6 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (82.6-87.6)

Lab ID: 2303159-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-22-4	**PFBA**	**5.0**	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-73-5	**PFBS**	**4.6**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
30334-69-1	**PFBSA**	**2.5**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-85-9	**PFHpA**	**3.6**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-24-4	**PFHxA**	**12**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-95-1	**PFNA**	**2.1**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-67-1	**PFOA**	**5.8**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
1763-23-1	**PFOS**	**3.0**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-90-3	**PFPeA**	**14**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*105 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*114 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*97.7 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*91.5 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*80.7 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*63.2 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (82.6-87.6)

Lab ID: 2303159-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*97.7 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*95.2 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*99.9 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*105 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*105 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*97.9 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*98.3 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*105 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*98.2 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*97.8 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*99.9 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*96.5 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (93.2-98.2)

Lab ID: 2303159-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-73-5	**PFBS**	**3.9**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
30334-69-1	**PFBSA**	**2.7**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-85-9	**PFHpA**	**2.6**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-24-4	**PFHxA**	**9.1**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
355-46-4	**PFHxS**	**2.1**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-95-1	**PFNA**	**2.1**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-67-1	**PFOA**	**8.5**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
1763-23-1	**PFOS**	**2.5**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-90-3	**PFPeA**	**12**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*99.6 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*87.5 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*89.1 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*79.7 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*64.4 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (93.2-98.2)

Lab ID: 2303159-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*97.4 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*95.1 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*99.2 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*100 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*99.8 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*96.0 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*96.0 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*95.0 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*94.3 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*95.4 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*93.6 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (102.5-107.5)

Lab ID: 2303159-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-73-5	**PFBS**	**4.1**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
30334-69-1	**PFBSA**	**3.2**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-85-9	**PFHpA**	**2.5**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-24-4	**PFHxA**	**9.8**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-95-1	**PFNA**	**2.6**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-67-1	**PFOA**	**8.5**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
1763-23-1	**PFOS**	**3.2**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-90-3	**PFPeA**	**12**	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*99.2 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*104 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*95.1 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*111 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*103 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*90.1 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*108 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: VAP-01 (102.5-107.5)

Lab ID: 2303159-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*97.3 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*97.3 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*99.6 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*100 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*104 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*105 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*98.0 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*98.6 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: EB2303231635WPS

Lab ID: 2303159-11

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*99.3 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*111 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*97.0 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*98.6 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*88.7 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*72.7 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*100 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*94.9 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: EB2303231635WPS

Lab ID: 2303159-11

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*96.8 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*98.4 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*99.6 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*99.1 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*93.1 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*95.8 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*93.5 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*94.9 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: TRIP BLANK

Lab ID: 2303159-12

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/25/23	B3C2408	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/25/23	B3C2408	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*98.2 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*86.7 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*106 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*98.6 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*87.0 %*	*25-250*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*109 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*96.2 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Client ID: TRIP BLANK

Lab ID: 2303159-12

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*97.5 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*104 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*101 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*102 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*96.6 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*98.4 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*103 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*100 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*100 %*	*50-200*		*03/25/23*	B3C2408	*8327*	*BM*	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3C2408 - Method: 3512				**Prepared: 03/24/2023**							
Blank (B3C2408-BLK1)											
11Cl-PF3OUdS	ND	2.0	ng/L							03/24/2023	
3:3FTCA	ND	4.0	ng/L							03/24/2023	
4:2FTS	ND	2.0	ng/L							03/24/2023	
5:3FTCA	ND	2.0	ng/L							03/24/2023	
6:2FTS	ND	2.0	ng/L							03/24/2023	
7:3FTCA	ND	2.0	ng/L							03/24/2023	
8:2FTS	ND	2.0	ng/L							03/24/2023	
9Cl-PF3ONS	ND	2.0	ng/L							03/24/2023	
ADONA	ND	2.0	ng/L							03/24/2023	
HFPO-DA	ND	4.0	ng/L							03/24/2023	
NEtFOSAA	ND	2.0	ng/L							03/24/2023	
NMeFOSAA	ND	2.0	ng/L							03/24/2023	
PFBA	ND	4.0	ng/L							03/24/2023	
PFBS	ND	2.0	ng/L							03/24/2023	
PFBSA	ND	2.0	ng/L							03/24/2023	
PFDA	ND	2.0	ng/L							03/24/2023	
PFDoDA	ND	2.0	ng/L							03/24/2023	
PFDS	ND	2.0	ng/L							03/24/2023	
PFECHS	ND	2.0	ng/L							03/24/2023	
PFHpA	ND	2.0	ng/L							03/24/2023	
PFHpS	ND	2.0	ng/L							03/24/2023	
PFHxA	ND	2.0	ng/L							03/24/2023	
PFHxS	ND	2.0	ng/L							03/24/2023	
PFHxSA	ND	2.0	ng/L							03/24/2023	
PFNA	ND	2.0	ng/L							03/24/2023	
PFNS	ND	2.0	ng/L							03/24/2023	
PFOA	ND	2.0	ng/L							03/24/2023	
PFOS	ND	2.0	ng/L							03/24/2023	
PFOSA	ND	2.0	ng/L							03/24/2023	
PFPeA	ND	2.0	ng/L							03/24/2023	
PFPeS	ND	2.0	ng/L							03/24/2023	
PFTeDA	ND	4.0	ng/L							03/24/2023	
PFTrDA	ND	4.0	ng/L							03/24/2023	
PFUnDA	ND	2.0	ng/L							03/24/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*151*		ng/L	*150.1*		*101*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*147*		ng/L	*152.2*		*96.4*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*142*		ng/L	*153.6*		*92.7*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*155*		ng/L	*160.0*		*97.0*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*150*		ng/L	*160.0*		*94.0*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*143*		ng/L	*160.0*		*89.4*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C3-HFPODA	*319*		ng/L	*320.0*		*99.8*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C3-PFBS	*143*		ng/L	*149.1*		*96.0*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C3-PFHxS	*147*		ng/L	*151.7*		*97.2*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C4-PFBA	*158*		ng/L	*160.0*		*98.9*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C4-PFHpA	*158*		ng/L	*160.0*		*99.0*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C5-PFHxA	*161*		ng/L	*160.0*		*101*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C5-PFPeA	*159*		ng/L	*160.0*		*99.2*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C6-PFDA	*154*		ng/L	*160.0*		*96.2*	*50-200*			03/24/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3C2408 - Method: 3512				**Prepared: 03/24/2023**							
Blank (B3C2408-BLK1)											
Isotope Dilution Analog: 13C7-PFUnDA	*157*		ng/L	*160.0*		*98.0*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOA	*157*		ng/L	*160.0*		*97.9*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOS	*152*		ng/L	*153.4*		*99.2*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOSA	*155*		ng/L	*160.0*		*96.6*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C9-PFNA	*157*		ng/L	*160.0*		*98.4*	*50-200*			03/24/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*158*		ng/L	*160.0*		*98.6*	*50-200*			03/24/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*159*		ng/L	*160.0*		*99.3*	*50-200*			03/24/2023	
LCS (B3C2408-BS1)											
11Cl-PF3OUdS	39.7	2.0	ng/L	37.72		105	70-130			03/24/2023	
3:3FTCA	43.6	4.0	ng/L	40.00		109	70-130			03/24/2023	
4:2FTS	40.2	2.0	ng/L	37.48		107	70-130			03/24/2023	
5:3FTCA	43.1	2.0	ng/L	40.00		108	70-130			03/24/2023	
6:2FTS	40.3	2.0	ng/L	38.04		106	70-130			03/24/2023	
7:3FTCA	48.4	2.0	ng/L	40.00		121	70-130			03/24/2023	
8:2FTS	39.2	2.0	ng/L	38.40		102	70-130			03/24/2023	
9Cl-PF3ONS	39.2	2.0	ng/L	37.32		105	70-130			03/24/2023	
ADONA	40.1	2.0	ng/L	37.80		106	70-130			03/24/2023	
HFPO-DA	46.4	4.0	ng/L	40.00		116	70-130			03/24/2023	
NEtFOSAA	42.2	2.0	ng/L	40.00		106	70-130			03/24/2023	
NMeFOSAA	45.3	2.0	ng/L	40.00		113	70-130			03/24/2023	
PFBA	44.4	4.0	ng/L	40.00		111	70-130			03/24/2023	
PFBS	39.4	2.0	ng/L	35.48		111	70-130			03/24/2023	
PFBSA	46.5	2.0	ng/L	40.00		116	70-130			03/24/2023	
PFDA	44.7	2.0	ng/L	40.00		112	70-130			03/24/2023	
PFDoDA	44.2	2.0	ng/L	40.00		111	70-130			03/24/2023	
PFDS	43.1	2.0	ng/L	38.60		112	70-130			03/24/2023	
PFECHS	38.4	2.0	ng/L	36.96		104	70-130			03/24/2023	
PFHpA	44.8	2.0	ng/L	40.00		112	70-130			03/24/2023	
PFHpS	43.0	2.0	ng/L	38.12		113	70-130			03/24/2023	
PFHxA	45.9	2.0	ng/L	40.00		115	70-130			03/24/2023	
PFHxS	41.8	2.0	ng/L	36.56		114	70-130			03/24/2023	
PFHxSA	45.5	2.0	ng/L	40.00		114	70-130			03/24/2023	
PFNA	44.9	2.0	ng/L	40.00		112	70-130			03/24/2023	
PFNS	42.3	2.0	ng/L	38.48		110	70-130			03/24/2023	
PFOA	44.3	2.0	ng/L	40.00		111	70-130			03/24/2023	
PFOS	39.6	2.0	ng/L	37.12		107	70-130			03/24/2023	
PFOSA	45.1	2.0	ng/L	40.00		113	70-130			03/24/2023	
PFPeA	42.9	2.0	ng/L	40.00		107	70-130			03/24/2023	
PFPeS	42.0	2.0	ng/L	37.64		112	70-130			03/24/2023	
PFTeDA	44.4	4.0	ng/L	40.00		111	70-130			03/24/2023	
PFTrDA	43.2	4.0	ng/L	40.00		108	70-130			03/24/2023	
PFUnDA	44.6	2.0	ng/L	40.00		112	70-130			03/24/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*153*		ng/L	*150.1*		*102*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*155*		ng/L	*152.2*		*102*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*153*		ng/L	*153.6*		*99.4*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*166*		ng/L	*160.0*		*104*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*164*		ng/L	*160.0*		*102*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*161*		ng/L	*160.0*		*101*	*25-250*			03/24/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3C2408 - Method: 3512				**Prepared: 03/24/2023**							
LCS (B3C2408-BS1)											
Isotope Dilution Analog: 13C3-HFPODA	*322*		ng/L	*320.0*		*101*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C3-PFBS	*147*		ng/L	*149.1*		*98.8*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C3-PFHxS	*147*		ng/L	*151.7*		*96.9*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C4-PFBA	*161*		ng/L	*160.0*		*100*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C4-PFHpA	*159*		ng/L	*160.0*		*99.2*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C5-PFHxA	*160*		ng/L	*160.0*		*99.8*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C5-PFPeA	*160*		ng/L	*160.0*		*100*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C6-PFDA	*158*		ng/L	*160.0*		*98.9*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*161*		ng/L	*160.0*		*101*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOA	*160*		ng/L	*160.0*		*100*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOS	*157*		ng/L	*153.4*		*103*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOSA	*156*		ng/L	*160.0*		*97.2*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C9-PFNA	*162*		ng/L	*160.0*		*101*	*50-200*			03/24/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*160*		ng/L	*160.0*		*100*	*50-200*			03/24/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*165*		ng/L	*160.0*		*103*	*50-200*			03/24/2023	
LCS Dup (B3C2408-BSD1)											
11Cl-PF3OUdS	41.1	2.0	ng/L	37.72		109	70-130	3.51	200	03/24/2023	
3:3FTCA	45.7	4.0	ng/L	40.00		114	70-130	4.57	200	03/24/2023	
4:2FTS	41.9	2.0	ng/L	37.48		112	70-130	4.29	200	03/24/2023	
5:3FTCA	44.0	2.0	ng/L	40.00		110	70-130	2.02	200	03/24/2023	
6:2FTS	43.0	2.0	ng/L	38.04		113	70-130	6.34	200	03/24/2023	
7:3FTCA	46.2	2.0	ng/L	40.00		115	70-130	4.65	200	03/24/2023	
8:2FTS	44.7	2.0	ng/L	38.40		116	70-130	13.2	200	03/24/2023	
9Cl-PF3ONS	41.9	2.0	ng/L	37.32		112	70-130	6.46	200	03/24/2023	
ADONA	43.6	2.0	ng/L	37.80		115	70-130	8.22	200	03/24/2023	
HFPO-DA	46.9	4.0	ng/L	40.00		117	70-130	1.03	200	03/24/2023	
NEtFOSAA	44.2	2.0	ng/L	40.00		111	70-130	4.72	200	03/24/2023	
NMeFOSAA	44.0	2.0	ng/L	40.00		110	70-130	3.05	200	03/24/2023	
PFBA	45.1	4.0	ng/L	40.00		113	70-130	1.56	200	03/24/2023	
PFBS	39.9	2.0	ng/L	35.48		113	70-130	1.36	200	03/24/2023	
PFBSA	47.1	2.0	ng/L	40.00		118	70-130	1.37	200	03/24/2023	
PFDA	47.6	2.0	ng/L	40.00		119	70-130	6.24	200	03/24/2023	
PFDoDA	44.9	2.0	ng/L	40.00		112	70-130	1.62	200	03/24/2023	
PFDS	42.7	2.0	ng/L	38.60		111	70-130	0.979	200	03/24/2023	
PFECHS	42.3	2.0	ng/L	36.96		114	70-130	9.52	200	03/24/2023	
PFHpA	44.2	2.0	ng/L	40.00		111	70-130	1.26	200	03/24/2023	
PFHpS	43.5	2.0	ng/L	38.12		114	70-130	1.25	200	03/24/2023	
PFHxA	44.4	2.0	ng/L	40.00		111	70-130	3.32	200	03/24/2023	
PFHxS	42.0	2.0	ng/L	36.56		115	70-130	0.621	200	03/24/2023	
PFHxSA	44.6	2.0	ng/L	40.00		112	70-130	1.95	200	03/24/2023	
PFNA	44.3	2.0	ng/L	40.00		111	70-130	1.48	200	03/24/2023	
PFNS	43.7	2.0	ng/L	38.48		114	70-130	3.12	200	03/24/2023	
PFOA	45.9	2.0	ng/L	40.00		115	70-130	3.55	200	03/24/2023	
PFOS	42.7	2.0	ng/L	37.12		115	70-130	7.68	200	03/24/2023	
PFOSA	45.8	2.0	ng/L	40.00		115	70-130	1.63	200	03/24/2023	
PFPeA	43.1	2.0	ng/L	40.00		108	70-130	0.605	200	03/24/2023	
PFPeS	42.4	2.0	ng/L	37.64		113	70-130	0.900	200	03/24/2023	
PFTeDA	45.9	4.0	ng/L	40.00		115	70-130	3.50	200	03/24/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3C2408 - Method: 3512				**Prepared: 03/24/2023**							
LCS Dup (B3C2408-BSD1)											
PFTrDA	45.2	4.0	ng/L	40.00		113	70-130	4.57	200	03/24/2023	
PFUnDA	44.4	2.0	ng/L	40.00		111	70-130	0.449	200	03/24/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*151*		ng/L	*150.1*		*100*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*152*		ng/L	*152.2*		*100*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*139*		ng/L	*153.6*		*90.4*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*159*		ng/L	*160.0*		*99.5*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*157*		ng/L	*160.0*		*98.0*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*153*		ng/L	*160.0*		*95.6*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C3-HFPODA	*307*		ng/L	*320.0*		*96.1*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C3-PFBS	*148*		ng/L	*149.1*		*99.0*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C3-PFHxS	*147*		ng/L	*151.7*		*97.1*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C4-PFBA	*161*		ng/L	*160.0*		*100*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C4-PFHpA	*161*		ng/L	*160.0*		*101*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C5-PFHxA	*160*		ng/L	*160.0*		*100*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C5-PFPeA	*162*		ng/L	*160.0*		*101*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C6-PFDA	*156*		ng/L	*160.0*		*97.6*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*159*		ng/L	*160.0*		*99.2*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOA	*157*		ng/L	*160.0*		*98.4*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOS	*149*		ng/L	*153.4*		*97.0*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOSA	*156*		ng/L	*160.0*		*97.5*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C9-PFNA	*159*		ng/L	*160.0*		*99.3*	*50-200*			03/24/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*164*		ng/L	*160.0*		*102*	*50-200*			03/24/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*159*		ng/L	*160.0*		*99.4*	*50-200*			03/24/2023	
MRL Check (B3C2408-MRL1)											
11Cl-PF3OUdS	4.00	2.0	ng/L	3.772		106	50-150			03/24/2023	
3:3FTCA	3.52	4.0	ng/L	4.000		88.0	50-150			03/24/2023	
4:2FTS	4.58	2.0	ng/L	3.748		122	50-150			03/24/2023	
5:3FTCA	4.06	2.0	ng/L	4.000		102	50-150			03/24/2023	
6:2FTS	4.62	2.0	ng/L	3.804		121	50-150			03/24/2023	
7:3FTCA	5.20	2.0	ng/L	4.000		130	50-150			03/24/2023	
8:2FTS	4.02	2.0	ng/L	3.840		105	50-150			03/24/2023	
9Cl-PF3ONS	4.02	2.0	ng/L	3.732		108	50-150			03/24/2023	
ADONA	4.10	2.0	ng/L	3.780		108	50-150			03/24/2023	
HFPO-DA	4.16	4.0	ng/L	4.000		104	50-150			03/24/2023	
NEtFOSAA	4.16	2.0	ng/L	4.000		104	50-150			03/24/2023	
NMeFOSAA	4.32	2.0	ng/L	4.000		108	50-150			03/24/2023	
PFBA	4.42	4.0	ng/L	4.000		110	50-150			03/24/2023	
PFBS	5.26	2.0	ng/L	3.548		148	50-150			03/24/2023	
PFBSA	4.36	2.0	ng/L	4.000		109	50-150			03/24/2023	
PFDA	4.38	2.0	ng/L	4.000		110	50-150			03/24/2023	
PFDoDA	4.22	2.0	ng/L	4.000		106	50-150			03/24/2023	
PFDS	4.36	2.0	ng/L	3.860		113	50-150			03/24/2023	
PFECHS	4.34	2.0	ng/L	3.696		117	50-150			03/24/2023	
PFHpA	4.04	2.0	ng/L	4.000		101	50-150			03/24/2023	
PFHpS	3.56	2.0	ng/L	3.812		93.4	50-150			03/24/2023	
PFHxA	3.82	2.0	ng/L	4.000		95.5	50-150			03/24/2023	
PFHxS	4.22	2.0	ng/L	3.656		115	50-150			03/24/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3C2408 - Method: 3512				**Prepared: 03/24/2023**							
MRL Check (B3C2408-MRL1)											
PFHxSA	4.44	2.0	ng/L	4.000		111	50-150			03/24/2023	
PFNA	3.96	2.0	ng/L	4.000		99.0	50-150			03/24/2023	
PFNS	4.00	2.0	ng/L	3.848		104	50-150			03/24/2023	
PFOA	4.40	2.0	ng/L	4.000		110	50-150			03/24/2023	
PFOS	4.30	2.0	ng/L	3.712		116	50-150			03/24/2023	
PFOSA	4.08	2.0	ng/L	4.000		102	50-150			03/24/2023	
PFPeA	3.20	2.0	ng/L	4.000		80.0	50-150			03/24/2023	
PFPeS	4.08	2.0	ng/L	3.764		108	50-150			03/24/2023	
PFTeDA	5.16	4.0	ng/L	4.000		129	50-150			03/24/2023	
PFTrDA	4.30	4.0	ng/L	4.000		108	50-150			03/24/2023	
PFUnDA	4.88	2.0	ng/L	4.000		122	50-150			03/24/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*151*		ng/L	*150.1*		*100*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*154*		ng/L	*152.2*		*101*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*142*		ng/L	*153.6*		*92.2*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*160*		ng/L	*160.0*		*99.8*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*153*		ng/L	*160.0*		*95.4*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*141*		ng/L	*160.0*		*88.3*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C3-HFPODA	*310*		ng/L	*320.0*		*96.8*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C3-PFBS	*143*		ng/L	*149.1*		*95.9*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C3-PFHxS	*147*		ng/L	*151.7*		*96.8*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C4-PFBA	*159*		ng/L	*160.0*		*99.1*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C4-PFHpA	*160*		ng/L	*160.0*		*99.8*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C5-PFHxA	*162*		ng/L	*160.0*		*101*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C5-PFPeA	*159*		ng/L	*160.0*		*99.4*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C6-PFDA	*154*		ng/L	*160.0*		*96.5*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*154*		ng/L	*160.0*		*96.3*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOA	*159*		ng/L	*160.0*		*99.4*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOS	*152*		ng/L	*153.4*		*98.8*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOSA	*157*		ng/L	*160.0*		*98.3*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C9-PFNA	*159*		ng/L	*160.0*		*99.4*	*50-200*			03/24/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*157*		ng/L	*160.0*		*97.9*	*50-200*			03/24/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*160*		ng/L	*160.0*		*100*	*50-200*			03/24/2023	
Matrix Spike (B3C2408-MS1)	**Source: 2303146-01**										
11Cl-PF3OUdS	41.5	2.0	ng/L	37.72	ND	110	70-130			03/24/2023	
3:3FTCA	45.1	4.0	ng/L	40.00	ND	113	70-130			03/24/2023	
4:2FTS	44.3	2.0	ng/L	37.48	ND	118	70-130			03/24/2023	
5:3FTCA	42.7	2.0	ng/L	40.00	ND	107	70-130			03/24/2023	
6:2FTS	43.9	2.0	ng/L	38.04	ND	115	70-130			03/24/2023	
7:3FTCA	48.0	2.0	ng/L	40.00	ND	120	70-130			03/24/2023	
8:2FTS	44.0	2.0	ng/L	38.40	ND	115	70-130			03/24/2023	
9Cl-PF3ONS	42.6	2.0	ng/L	37.32	ND	114	70-130			03/24/2023	
ADONA	44.4	2.0	ng/L	37.80	ND	118	70-130			03/24/2023	
HFPO-DA	51.2	4.0	ng/L	40.00	ND	128	70-130			03/24/2023	
NEtFOSAA	47.6	2.0	ng/L	40.00	ND	119	70-130			03/24/2023	
NMeFOSAA	45.7	2.0	ng/L	40.00	ND	114	70-130			03/24/2023	
PFBA	49.7	4.0	ng/L	40.00	ND	124	70-130			03/24/2023	
PFBS	42.8	2.0	ng/L	35.48	2.18	115	70-130			03/24/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3C2408 - Method: 3512				**Prepared: 03/24/2023**							
Matrix Spike (B3C2408-MS1)	**Source: 2303146-01**										
PFBSA	45.2	2.0	ng/L	40.00	ND	113	70-130			03/24/2023	
PFDA	46.1	2.0	ng/L	40.00	ND	115	70-130			03/24/2023	
PFDoDA	45.0	2.0	ng/L	40.00	ND	112	70-130			03/24/2023	
PFDS	44.2	2.0	ng/L	38.60	ND	115	70-130			03/24/2023	
PFECHS	44.5	2.0	ng/L	36.96	ND	121	70-130			03/24/2023	
PFHpA	47.8	2.0	ng/L	40.00	0.480	118	70-130			03/24/2023	
PFHpS	44.8	2.0	ng/L	38.12	ND	118	70-130			03/24/2023	
PFHxA	48.1	2.0	ng/L	40.00	1.86	116	70-130			03/24/2023	
PFHxS	44.1	2.0	ng/L	36.56	1.18	118	70-130			03/24/2023	
PFHxSA	48.0	2.0	ng/L	40.00	ND	120	70-130			03/24/2023	
PFNA	47.8	2.0	ng/L	40.00	ND	119	70-130			03/24/2023	
PFNS	45.0	2.0	ng/L	38.48	ND	117	70-130			03/24/2023	
PFOA	48.1	2.0	ng/L	40.00	1.08	117	70-130			03/24/2023	
PFOS	45.1	2.0	ng/L	37.12	0.860	119	70-130			03/24/2023	
PFOSA	46.3	2.0	ng/L	40.00	ND	116	70-130			03/24/2023	
PFPeA	47.7	2.0	ng/L	40.00	ND	119	70-130			03/24/2023	
PFPeS	43.6	2.0	ng/L	37.64	ND	116	70-130			03/24/2023	
PFTeDA	45.6	4.0	ng/L	40.00	ND	114	70-130			03/24/2023	
PFTrDA	45.9	4.0	ng/L	40.00	ND	115	70-130			03/24/2023	
PFUnDA	44.0	2.0	ng/L	40.00	ND	110	70-130			03/24/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*154*		ng/L	*150.1*		*102*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*171*		ng/L	*152.2*		*112*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*150*		ng/L	*153.6*		*97.5*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*155*		ng/L	*160.0*		*97.0*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*140*		ng/L	*160.0*		*87.4*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*115*		ng/L	*160.0*		*71.9*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C3-HFPODA	*295*		ng/L	*320.0*		*92.3*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C3-PFBS	*137*		ng/L	*149.1*		*91.9*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C3-PFHxS	*153*		ng/L	*151.7*		*101*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C4-PFBA	*145*		ng/L	*160.0*		*90.9*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C4-PFHpA	*162*		ng/L	*160.0*		*101*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C5-PFHxA	*157*		ng/L	*160.0*		*98.0*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C5-PFPeA	*145*		ng/L	*160.0*		*90.9*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C6-PFDA	*157*		ng/L	*160.0*		*98.1*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*157*		ng/L	*160.0*		*98.0*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOA	*167*		ng/L	*160.0*		*104*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOS	*152*		ng/L	*153.4*		*99.3*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOSA	*157*		ng/L	*160.0*		*98.1*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C9-PFNA	*162*		ng/L	*160.0*		*101*	*50-200*			03/24/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*153*		ng/L	*160.0*		*95.8*	*50-200*			03/24/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*158*		ng/L	*160.0*		*98.8*	*50-200*			03/24/2023	
Matrix Spike Dup (B3C2408-MSD1)	**Source: 2303146-01**										
11Cl-PF3OUdS	40.8	2.0	ng/L	37.72	ND	108	70-130	1.70	30	03/24/2023	
3:3FTCA	45.8	4.0	ng/L	40.00	ND	115	70-130	1.58	30	03/24/2023	
4:2FTS	45.2	2.0	ng/L	37.48	ND	121	70-130	2.06	30	03/24/2023	
5:3FTCA	41.4	2.0	ng/L	40.00	ND	104	70-130	3.14	30	03/24/2023	
6:2FTS	42.1	2.0	ng/L	38.04	ND	111	70-130	4.23	30	03/24/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3C2408 - Method: 3512				**Prepared: 03/24/2023**							
Matrix Spike Dup (B3C2408-MSD1)	**Source: 2303146-01**										
7:3FTCA	45.9	2.0	ng/L	40.00	ND	115	70-130	4.51	30	03/24/2023	
8:2FTS	42.4	2.0	ng/L	38.40	ND	111	70-130	3.56	30	03/24/2023	
9Cl-PF3ONS	41.8	2.0	ng/L	37.32	ND	112	70-130	2.09	30	03/24/2023	
ADONA	44.2	2.0	ng/L	37.80	ND	117	70-130	0.496	30	03/24/2023	
HFPO-DA	48.7	4.0	ng/L	40.00	ND	122	70-130	5.01	30	03/24/2023	
NEtFOSAA	44.4	2.0	ng/L	40.00	ND	111	70-130	7.09	30	03/24/2023	
NMeFOSAA	42.6	2.0	ng/L	40.00	ND	106	70-130	6.93	30	03/24/2023	
PFBA	46.8	4.0	ng/L	40.00	ND	117	70-130	6.05	30	03/24/2023	
PFBS	40.6	2.0	ng/L	35.48	2.18	108	70-130	5.22	30	03/24/2023	
PFBSA	47.0	2.0	ng/L	40.00	ND	118	70-130	3.95	30	03/24/2023	
PFDA	42.7	2.0	ng/L	40.00	ND	107	70-130	7.66	30	03/24/2023	
PFDoDA	46.2	2.0	ng/L	40.00	ND	116	70-130	2.81	30	03/24/2023	
PFDS	43.5	2.0	ng/L	38.60	ND	113	70-130	1.55	30	03/24/2023	
PFECHS	42.7	2.0	ng/L	36.96	ND	116	70-130	4.12	30	03/24/2023	
PFHpA	47.2	2.0	ng/L	40.00	0.480	117	70-130	1.18	30	03/24/2023	
PFHpS	44.7	2.0	ng/L	38.12	ND	117	70-130	0.134	30	03/24/2023	
PFHxA	47.0	2.0	ng/L	40.00	1.86	113	70-130	2.31	30	03/24/2023	
PFHxS	43.4	2.0	ng/L	36.56	1.18	116	70-130	1.60	30	03/24/2023	
PFHxSA	48.2	2.0	ng/L	40.00	ND	120	70-130	0.374	30	03/24/2023	
PFNA	46.5	2.0	ng/L	40.00	ND	116	70-130	2.63	30	03/24/2023	
PFNS	42.7	2.0	ng/L	38.48	ND	111	70-130	5.33	30	03/24/2023	
PFOA	47.2	2.0	ng/L	40.00	1.08	115	70-130	1.76	30	03/24/2023	
PFOS	43.7	2.0	ng/L	37.12	0.860	116	70-130	2.97	30	03/24/2023	
PFOSA	48.9	2.0	ng/L	40.00	ND	122	70-130	5.51	30	03/24/2023	
PFPeA	46.5	2.0	ng/L	40.00	ND	116	70-130	2.50	30	03/24/2023	
PFPeS	45.4	2.0	ng/L	37.64	ND	121	70-130	3.91	30	03/24/2023	
PFTeDA	47.5	4.0	ng/L	40.00	ND	119	70-130	4.13	30	03/24/2023	
PFTrDA	44.9	4.0	ng/L	40.00	ND	112	70-130	2.11	30	03/24/2023	
PFUnDA	44.7	2.0	ng/L	40.00	ND	112	70-130	1.49	30	03/24/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*150*		ng/L	*150.1*		*99.8*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*168*		ng/L	*152.2*		*110*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*146*		ng/L	*153.6*		*95.3*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*153*		ng/L	*160.0*		*95.6*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*133*		ng/L	*160.0*		*82.9*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*99.8*		ng/L	*160.0*		*62.4*	*25-250*			03/24/2023	
Isotope Dilution Analog: 13C3-HFPODA	*307*		ng/L	*320.0*		*95.8*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C3-PFBS	*137*		ng/L	*149.1*		*91.7*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C3-PFHxS	*153*		ng/L	*151.7*		*101*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C4-PFBA	*145*		ng/L	*160.0*		*90.5*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C4-PFHpA	*163*		ng/L	*160.0*		*102*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C5-PFHxA	*158*		ng/L	*160.0*		*98.9*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C5-PFPeA	*145*		ng/L	*160.0*		*90.8*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C6-PFDA	*160*		ng/L	*160.0*		*100*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*164*		ng/L	*160.0*		*103*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOA	*168*		ng/L	*160.0*		*105*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOS	*151*		ng/L	*153.4*		*98.1*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C8-PFOSA	*154*		ng/L	*160.0*		*96.2*	*50-200*			03/24/2023	
Isotope Dilution Analog: 13C9-PFNA	*166*		ng/L	*160.0*		*104*	*50-200*			03/24/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3C2408 - Method: 3512				**Prepared: 03/24/2023**							
Matrix Spike Dup (B3C2408-MSD1)	**Source: 2303146-01**										
Isotope Dilution Analog: d3-N-MeFOSAA	*161*		ng/L	*160.0*		*100*	*50-200*			03/24/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*155*		ng/L	*160.0*		*96.9*	*50-200*			03/24/2023	

Department of Environment, Great Lakes, and Energy
Laboratory Services Section

PFAS Analysis Request Sheet

Lab Work Order Number	Project Name	Matrix
2303159	Russell Ridge PFAS	INVESTIGATION-GW

Location ID: LB042338	Program:	Report CC Email 1: MossK@michigan.gov	Project TAT Days*: Standard	Sample Collector: Wes Stambaugh
Dept-Division-District: EGLE-RRD	Activity: P120	Report CC Email 2: VorceK@michigan.gov	Report Batch QC: Yes [X] No [ ]	Sample Collector Phone: 567-239-1351
State Project Manager: Kelly Moss	Funding Source: 1610	Report CC Email 3: james.buzzell@aecom.com	Lab Use Only	Contract Firm: AECOM
State Project Manager Email: MossK@michigan.gov	Location Code: 6G14	Overflow Lab Choice 1:	Sample Receipt Temperature: 1.0 °C	Contract Firm Primary Contact: Jim Buzzell
State Project Manager Phone: 734-223-2553	SUD Location Code:	Overflow Lab Choice 2:	Received On Ice: Yes [X] No [ ]	Primary Contact Phone: 616-206-7528

*** Project Turnaround time (TAT) other than standard 21 days must be pre-approved and scheduled with the laboratory. Surcharges apply.**

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments
1		VAP-01 (~~42.5-47.5~~) (42.5 - 47.5) ([redacted])	3/21/2023	16:05	4	;Sample MS/MSD Required For Batch QC
2		VAP-01 (25.0-30.0)	3/20/2023	16:30	2	
3		VAP-01 (33.9-38.9)	3/21/2023	11:25	2	
4		VAP-01 (54.7-59.7)	3/22/2023	10:20	2	
5		VAP-01 (54.7-59.7)-DUP	3/22/2023	10:20	2	field duplicate
6		VAP-01 (63.1-68.1)	3/22/2023	12:40	2	
7		VAP-01 (72.8-77.8)	3/22/2023	15:00	2	
8		VAP-01 (82.6-87.6)	3/23/2023	10:45	2	
9		VAP-01 (93.2-98.2)	3/23/2023	13:20	2	
10		VAP-01 (102.5-107.5)	3/23/2023	15:55	2	
11		EB2303231635WPS	3/23/2023	16:35	2	Well Screen Equipment Blank
12		Trip Blank	11/02/22	:	2	
13				:	2	
14				:	2	
15				:	2	
16				:	2	
17				:	2	
18				:	2	
19				:	2	
20				:	2	

PFAS - Semi-Volatile Organic Compounds

PFAS - EPA 8327

Chain of Custody

	Relinquished by	Received By	Date / Time
Print Name & Org.	Wes Stambaugh AECOM	James Janejak / AECOM	03/ 23 /2023 18:10
Signature:			
Print Name & Org.	Lobby	Nicole Hardigan	3/24/2023 11:05
Signature:			
Print Name & Org.			/ /2023 :
Signature:			

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CORRECTED REPORT

11 April 2023

Work Order: 2303200

Price: $2,500.00

KELLY MOSS
EGLE-RRD-GRAND RAPIDS
350 Ottawa Ave. NW, Unit 10
Grand Rapids, MI 49503-2341

RE: CEDAR SPRINGS WWTP INVESTIGATION-PFAS

A correction has been made to the original report that was sent to you. A description of the correction should be present in the case narrative section of this report in order to clarify any changes.

This is the official environmental laboratory report for testing conducted by the Michigan Department of Environment, Great Lakes, and Energy. Analyses performed by the laboratory were conducted using methods published by the U.S. Environmental Protection Agency, Standard Methods for the Examination of Water and Wastewater, ASTM, or other published or approved reference methods.

Kirby Shane
Laboratory Director

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CORRECTED REPORT

EGLE-RRD-GRAND RAPIDS	Project: CEDAR SPRINGS WWTP INVESTIGATION-PFAS	
350 Ottawa Ave. NW, Unit 10	Site Code: 6G14	**Reported:**
Grand Rapids MI, 49503-2341	Project Manager: KELLY MOSS	04/11/2023

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
VAP-01 (144.2-149.2)	2303200-01	Water	03/28/2023	03/31/2023	
VAP-01 (113.0-118.0)	2303200-02	Water	03/24/2023	03/31/2023	
VAP-01 (122.9-127.9)	2303200-03	Water	03/24/2023	03/31/2023	
VAP-01 (133.2-138.2)	2303200-04	Water	03/28/2023	03/31/2023	
VAP-02 (15.2-20.2)	2303200-05	Water	03/29/2023	03/31/2023	
VAP-02 (15.2-20.2) - DUP	2303200-06	Water	03/29/2023	03/31/2023	
VAP-02 (24.4-29.4)	2303200-07	Water	03/30/2023	03/31/2023	
VAP-02 (34.5-39.5)	2303200-08	Water	03/30/2023	03/31/2023	
VAP-02 (45.4-50.4)	2303200-09	Water	03/30/2023	03/31/2023	
EB2303301500WPS	2303200-10	Water	03/30/2023	03/31/2023	

Notes and Definitions

ND	Indicates compound analyzed for but not detected at or above the reporting limit (RL).
RL	Reporting Limit
NA	Not Applicable

Case Narrative

Samples were received **3/31/2023 10:37:00AM** for client **EGLE-RRD-GRAND RAPIDS** as a part of project **CEDAR SPRINGS WWTP INVESTIGATION-PFAS**.

Samples were logged and designated as Work Order # **2303200** on **3/31/2023 10:38:00AM**.

This Report was created **4/11/2023 8:41:20AM**.

Additional Notes/Narrative (if applicable):

This is an amended report. This report for laboratory work order 2303200, CEDAR SPRINGS WWTP INVESTIGATION-PFAS, received on 03/31/2023 10:37 has been modified from the original report. Field IDs for samples 2303200-(05-09) were corrected per attached request at the end of this report.

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CORRECTED REPORT

Client ID: VAP-01 (144.2-149.2)

Lab ID: 2303200-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-22-4	**PFBA**	**11**	4.0	ng/L	1	03/31/23	B3C3106	8327	
375-73-5	PFBS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
335-76-2	**PFDA**	**2.4**	2.0	ng/L	1	03/31/23	B3C3106	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-85-9	**PFHpA**	**2.9**	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
307-24-4	**PFHxA**	**4.0**	2.0	ng/L	1	03/31/23	B3C3106	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
335-67-1	**PFOA**	**4.6**	2.0	ng/L	1	03/31/23	B3C3106	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
Surrogate: 13C2-4:2FTS			*113 %*	*50-200*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-6:2FTS			*112 %*	*50-200*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-8:2FTS			*99.6 %*	*50-200*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA			*106 %*	*25-250*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA			*102 %*	*25-250*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-PFTeDA			*96.6 %*	*25-250*		*03/31/23*	B3C3106	*8327*	

Lab Work Order # 2303200

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CORRECTED REPORT

Client ID: VAP-01 (144.2-149.2)

Lab ID: 2303200-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
	Surrogate: 13C3-HFPODA		*110 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C3-PFBS		*102 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C3-PFHxS		*101 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C4-PFBA		*98.3 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C4-PFHpA		*104 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C5-PFHxA		*103 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C5-PFPeA		*103 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C6-PFDA		*97.4 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C7-PFUnDA		*103 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOA		*104 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOS		*102 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOSA		*98.4 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C9-PFNA		*103 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: d3-N-MeFOSAA		*102 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: d5-N-EtFOSAA		*142 %*		*50-200*	*03/31/23*	B3C3106	*8327*	

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CORRECTED REPORT

Client ID: VAP-01 (113.0-118.0)

Lab ID: 2303200-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-22-4	PFBA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
375-73-5	PFBS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-85-9	**PFHpA**	**2.2**	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
307-24-4	**PFHxA**	**4.6**	2.0	ng/L	1	03/31/23	B3C3106	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
335-67-1	**PFOA**	**5.6**	2.0	ng/L	1	03/31/23	B3C3106	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
2706-90-3	**PFPeA**	**6.2**	2.0	ng/L	1	03/31/23	B3C3106	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
Surrogate: 13C2-4:2FTS		*99.9 %*	*50-200*			*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-6:2FTS		*102 %*	*50-200*			*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-8:2FTS		*105 %*	*50-200*			*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA		*93.4 %*	*25-250*			*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA		*81.5 %*	*25-250*			*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-PFTeDA		*65.5 %*	*25-250*			*03/31/23*	B3C3106	*8327*	

Lab Work Order # 2303200

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CORRECTED REPORT

Client ID: VAP-01 (113.0-118.0)

Lab ID: 2303200-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
	Surrogate: 13C3-HFPODA		*104 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C3-PFBS		*102 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C3-PFHxS		*98.9 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C4-PFBA		*98.5 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C4-PFHpA		*100 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C5-PFHxA		*102 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C5-PFPeA		*103 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C6-PFDA		*100 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C7-PFUnDA		*97.1 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOA		*101 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOS		*99.8 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOSA		*97.3 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C9-PFNA		*101 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: d3-N-MeFOSAA		*99.7 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: d5-N-EtFOSAA		*136 %*		*50-200*	*03/31/23*	B3C3106	*8327*	

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ENVIRONMENTAL LABORATORY

P.O. Box 30270
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TEL: (517) 335-9800
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CORRECTED REPORT

Client ID: VAP-01 (122.9-127.9)

Lab ID: 2303200-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-22-4	PFBA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
375-73-5	PFBS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
307-24-4	PFHxA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
335-67-1	PFOA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
Surrogate: 13C2-4:2FTS			*99.6 %*	*50-200*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-6:2FTS			*105 %*	*50-200*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-8:2FTS			*118 %*	*50-200*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA			*105 %*	*25-250*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA			*94.9 %*	*25-250*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-PFTeDA			*81.5 %*	*25-250*		*03/31/23*	B3C3106	*8327*	

Lab Work Order # 2303200

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CORRECTED REPORT

Client ID: VAP-01 (122.9-127.9)

Lab ID: 2303200-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
Surrogate: 13C3-HFPODA			*108 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
Surrogate: 13C3-PFBS			*103 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
Surrogate: 13C3-PFHxS			*97.4 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
Surrogate: 13C4-PFBA			*98.4 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
Surrogate: 13C4-PFHpA			*101 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
Surrogate: 13C5-PFHxA			*99.9 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
Surrogate: 13C5-PFPeA			*101 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
Surrogate: 13C6-PFDA			*99.4 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
Surrogate: 13C7-PFUnDA			*103 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
Surrogate: 13C8-PFOA			*102 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
Surrogate: 13C8-PFOS			*100 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
Surrogate: 13C8-PFOSA			*97.5 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
Surrogate: 13C9-PFNA			*100 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
Surrogate: d3-N-MeFOSAA			*103 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
Surrogate: d5-N-EtFOSAA			*143 %*		*50-200*	*03/31/23*	B3C3106	*8327*	

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CORRECTED REPORT

Client ID: VAP-01 (133.2-138.2)

Lab ID: 2303200-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-22-4	PFBA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
375-73-5	PFBS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
307-24-4	PFHxA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
335-67-1	PFOA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	03/31/23	B3C3106	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	03/31/23	B3C3106	8327	
Surrogate: 13C2-4:2FTS			*104 %*	*50-200*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-6:2FTS			*103 %*	*50-200*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-8:2FTS			*102 %*	*50-200*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA			*94.4 %*	*25-250*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA			*84.1 %*	*25-250*		*03/31/23*	B3C3106	*8327*	
Surrogate: 13C2-PFTeDA			*70.3 %*	*25-250*		*03/31/23*	B3C3106	*8327*	

Lab Work Order # 2303200

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CORRECTED REPORT

Client ID: VAP-01 (133.2-138.2)

Lab ID: 2303200-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
	Surrogate: 13C3-HFPODA		*114 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C3-PFBS		*102 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C3-PFHxS		*103 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C4-PFBA		*102 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C4-PFHpA		*105 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C5-PFHxA		*104 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C5-PFPeA		*105 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C6-PFDA		*99.5 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C7-PFUnDA		*98.8 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOA		*102 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOS		*101 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOSA		*99.4 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: 13C9-PFNA		*103 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: d3-N-MeFOSAA		*103 %*		*50-200*	*03/31/23*	B3C3106	*8327*	
	Surrogate: d5-N-EtFOSAA		*137 %*		*50-200*	*03/31/23*	B3C3106	*8327*	

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CORRECTED REPORT

Client ID: VAP-02 (15.2-20.2)

Lab ID: 2303200-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-22-4	**PFBA**	**21**	4.0	ng/L	1	04/01/23	B3C3106	8327	
375-73-5	**PFBS**	**18**	2.0	ng/L	1	04/01/23	B3C3106	8327	
30334-69-1	**PFBSA**	**2.4**	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
307-24-4	**PFHxA**	**2.2**	2.0	ng/L	1	04/01/23	B3C3106	8327	
355-46-4	**PFHxS**	**2.5**	2.0	ng/L	1	04/01/23	B3C3106	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-67-1	**PFOA**	**5.3**	2.0	ng/L	1	04/01/23	B3C3106	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
Surrogate: 13C2-4:2FTS			*97.3 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-6:2FTS			*105 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-8:2FTS			*107 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA			*96.4 %*	*25-250*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA			*86.5 %*	*25-250*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFTeDA			*73.3 %*	*25-250*		*04/01/23*	B3C3106	*8327*	

Lab Work Order # 2303200

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CORRECTED REPORT

Client ID: VAP-02 (15.2-20.2)

Lab ID: 2303200-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
Surrogate: 13C3-HFPODA			*113 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C3-PFBS			*106 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C3-PFHxS			*102 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C4-PFBA			*103 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C4-PFHpA			*105 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C5-PFHxA			*105 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C5-PFPeA			*105 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C6-PFDA			*101 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C7-PFUnDA			*101 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C8-PFOA			*105 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C8-PFOS			*103 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C8-PFOSA			*98.1 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C9-PFNA			*103 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: d3-N-MeFOSAA			*103 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: d5-N-EtFOSAA			*141 %*	*50-200*		*04/01/23*	B3C3106	*8327*	

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ENVIRONMENTAL LABORATORY

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CORRECTED REPORT

Client ID: VAP-02 (15.2-20.2) - DUP

Lab ID: 2303200-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-22-4	**PFBA**	**21**	4.0	ng/L	1	04/01/23	B3C3106	8327	
375-73-5	**PFBS**	**18**	2.0	ng/L	1	04/01/23	B3C3106	8327	
30334-69-1	**PFBSA**	**2.4**	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
307-24-4	**PFHxA**	**2.4**	2.0	ng/L	1	04/01/23	B3C3106	8327	
355-46-4	**PFHxS**	**2.7**	2.0	ng/L	1	04/01/23	B3C3106	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-67-1	**PFOA**	**5.8**	2.0	ng/L	1	04/01/23	B3C3106	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
Surrogate: 13C2-4:2FTS		*99.0 %*	*50-200*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-6:2FTS		*103 %*	*50-200*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-8:2FTS		*101 %*	*50-200*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA		*103 %*	*25-250*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA		*98.8 %*	*25-250*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFTeDA		*93.0 %*	*25-250*			*04/01/23*	B3C3106	*8327*	

Lab Work Order # 2303200

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CORRECTED REPORT

Client ID: VAP-02 (15.2-20.2) - DUP

Lab ID: 2303200-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
	Surrogate: 13C3-HFPODA		*106 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C3-PFBS		*99.0 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C3-PFHxS		*99.1 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C4-PFBA		*98.9 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C4-PFHpA		*99.2 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C5-PFHxA		*101 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C5-PFPeA		*101 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C6-PFDA		*97.7 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C7-PFUnDA		*101 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOA		*101 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOS		*99.1 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOSA		*97.8 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C9-PFNA		*100 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: d3-N-MeFOSAA		*102 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: d5-N-EtFOSAA		*138 %*		*50-200*	*04/01/23*	B3C3106	*8327*	

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CORRECTED REPORT

Client ID: VAP-02 (24.4-29.4)

Lab ID: 2303200-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-22-4	**PFBA**	**6.4**	4.0	ng/L	1	04/01/23	B3C3106	8327	
375-73-5	**PFBS**	**30**	2.0	ng/L	1	04/01/23	B3C3106	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
307-24-4	PFHxA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-67-1	**PFOA**	**2.1**	2.0	ng/L	1	04/01/23	B3C3106	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
Surrogate: 13C2-4:2FTS		*106 %*	*50-200*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-6:2FTS		*107 %*	*50-200*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-8:2FTS		*102 %*	*50-200*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA		*111 %*	*25-250*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA		*104 %*	*25-250*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFTeDA		*94.7 %*	*25-250*			*04/01/23*	B3C3106	*8327*	

Lab Work Order # 2303200

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CORRECTED REPORT

Client ID: VAP-02 (24.4-29.4)

Lab ID: 2303200-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
Surrogate: 13C3-HFPODA			*113 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C3-PFBS			*105 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C3-PFHxS			*106 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C4-PFBA			*104 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C4-PFHpA			*108 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C5-PFHxA			*107 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C5-PFPeA			*107 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C6-PFDA			*103 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C7-PFUnDA			*110 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C8-PFOA			*106 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C8-PFOS			*103 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C8-PFOSA			*101 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C9-PFNA			*105 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: d3-N-MeFOSAA			*108 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: d5-N-EtFOSAA			*146 %*	*50-200*		*04/01/23*	B3C3106	*8327*	

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CORRECTED REPORT

Client ID: VAP-02 (34.5-39.5)

Lab ID: 2303200-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-22-4	**PFBA**	**10**	4.0	ng/L	1	04/01/23	B3C3106	8327	
375-73-5	**PFBS**	**15**	2.0	ng/L	1	04/01/23	B3C3106	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
307-24-4	PFHxA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
355-46-4	**PFHxS**	**2.3**	2.0	ng/L	1	04/01/23	B3C3106	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-67-1	**PFOA**	**2.3**	2.0	ng/L	1	04/01/23	B3C3106	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
Surrogate: 13C2-4:2FTS		*102 %*	*50-200*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-6:2FTS		*102 %*	*50-200*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-8:2FTS		*95.1 %*	*50-200*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA		*87.6 %*	*25-250*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA		*77.2 %*	*25-250*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFTeDA		*63.3 %*	*25-250*			*04/01/23*	B3C3106	*8327*	

Lab Work Order # 2303200

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CORRECTED REPORT

Client ID: VAP-02 (34.5-39.5)

Lab ID: 2303200-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
	Surrogate: 13C3-HFPODA		*116 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C3-PFBS		*104 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C3-PFHxS		*102 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C4-PFBA		*102 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C4-PFHpA		*105 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C5-PFHxA		*102 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C5-PFPeA		*104 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C6-PFDA		*97.1 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C7-PFUnDA		*95.4 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOA		*103 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOS		*99.2 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOSA		*97.9 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C9-PFNA		*102 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: d3-N-MeFOSAA		*103 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: d5-N-EtFOSAA		*141 %*		*50-200*	*04/01/23*	B3C3106	*8327*	

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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

CORRECTED REPORT

Client ID: VAP-02 (45.4-50.4)

Lab ID: 2303200-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-22-4	**PFBA**	**6.7**	4.0	ng/L	1	04/01/23	B3C3106	8327	
375-73-5	**PFBS**	**7.7**	2.0	ng/L	1	04/01/23	B3C3106	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
307-24-4	**PFHxA**	**2.1**	2.0	ng/L	1	04/01/23	B3C3106	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-67-1	**PFOA**	**3.5**	2.0	ng/L	1	04/01/23	B3C3106	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
Surrogate: 13C2-4:2FTS		*107 %*	*50-200*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-6:2FTS		*110 %*	*50-200*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-8:2FTS		*105 %*	*50-200*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA		*103 %*	*25-250*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA		*93.0 %*	*25-250*			*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFTeDA		*79.1 %*	*25-250*			*04/01/23*	B3C3106	*8327*	

Lab Work Order # 2303200

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ENVIRONMENTAL LABORATORY

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TEL: (517) 335-9800
FAX: (517) 335-9600

CORRECTED REPORT

Client ID: VAP-02 (45.4-50.4)

Lab ID: 2303200-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
Surrogate: 13C3-HFPODA			*113 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C3-PFBS			*104 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C3-PFHxS			*102 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C4-PFBA			*103 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C4-PFHpA			*106 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C5-PFHxA			*104 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C5-PFPeA			*107 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C6-PFDA			*103 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C7-PFUnDA			*102 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C8-PFOA			*107 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C8-PFOS			*103 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C8-PFOSA			*100 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C9-PFNA			*105 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: d3-N-MeFOSAA			*106 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: d5-N-EtFOSAA			*147 %*	*50-200*		*04/01/23*	B3C3106	*8327*	

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FAX: (517) 335-9600

CORRECTED REPORT

Client ID: EB2303301500WPS

Lab ID: 2303200-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-22-4	PFBA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
375-73-5	PFBS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
307-24-4	PFHxA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
335-67-1	PFOA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/01/23	B3C3106	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/01/23	B3C3106	8327	
Surrogate: 13C2-4:2FTS			*104 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-6:2FTS			*109 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-8:2FTS			*107 %*	*50-200*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA			*106 %*	*25-250*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA			*104 %*	*25-250*		*04/01/23*	B3C3106	*8327*	
Surrogate: 13C2-PFTeDA			*101 %*	*25-250*		*04/01/23*	B3C3106	*8327*	

Lab Work Order # 2303200

MICHIGAN DEPARTMENT OF
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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

CORRECTED REPORT

Client ID: EB2303301500WPS

Lab ID: 2303200-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
	Surrogate: 13C3-HFPODA		*116 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C3-PFBS		*104 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C3-PFHxS		*104 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C4-PFBA		*105 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C4-PFHpA		*103 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C5-PFHxA		*104 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C5-PFPeA		*105 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C6-PFDA		*102 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C7-PFUnDA		*104 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOA		*104 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOS		*103 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C8-PFOSA		*99.5 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: 13C9-PFNA		*104 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: d3-N-MeFOSAA		*106 %*		*50-200*	*04/01/23*	B3C3106	*8327*	
	Surrogate: d5-N-EtFOSAA		*146 %*		*50-200*	*04/01/23*	B3C3106	*8327*	

EGLE

Department of Environment, Great Lakes, and Energy
Laboratory Services Section

PFAS Analysis Request Sheet

Lab Work Order Number	Project Name	Matrix
2303200	Cedar Springs WWTP	WATER

Location ID: 41000010	Program:	Report CC Email 1: VorceK@Michigan.gov	Project TAT Days*: STD	Sample Collector: Wes Stambaugh
Dept-Division-District: EGLE-RRD-GR	Activity:	Report CC Email 2: James.Buzzell@aecom.com	Report Batch QC: Yes ☐ No ☐	Sample Collector Phone: 567-239-1351
State Project Manager: Kelly Moss	Funding Source:	Report CC Email 3: Wes.Stambaugh@aecom.com	Lab Use Only — Sample Receipt Temperature: 5.5 °C	Contract Firm: AECOM
State Project Manager Email: MossK@Michigan.gov	Location Code: 6G14	Overflow Lab Choice 1:		Contract Firm Primary Contact: James.Buzzell@aecom.com
State Project Manager Phone: 616-215-4588	SUD Location Code:	Overflow Lab Choice 2:	Received On Ice: Yes ☒ No ☐	Primary Contact Phone: 616-206-7528

*** Project Turnaround time (TAT) other than standard 21 days must be pre-approved and scheduled with the laboratory. Surcharges apply.**

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments
1	01	VAP-01 (144.2-149.2)	3/28/2023	12:00	4	;Sample MS/MSD Required For Batch QC
2	02	VAP-01 (113.0-118.0)	3/24/2023	11:00	2	
3	03	VAP-01 (122.9-127.9)	3/24/2023	13:55	2	
4	04	VAP-01 (133.2-138.2)	3/28/2023	16:35	2	
5	05	VAP-03 (15.2-20.2)	3/29/2023	17:40	2	
6	06	VAP-03 (15.2-20.2)-DUP	3/29/2023	17:40	2	Field Duplicate
7	07	VAP-03 (24.4-29.4)	3/30/2023	11:05	2	
8	08	VAP-03 (34.5-39.5)	3/30/2023	14:25	2	
9	09	VAP-03 (45.4-50.4)	3/30/2023	16:25	2	
10	10	EB2303301500WPS	3/30/2023	15:00	2	Equipment Blank - Geosub 2
11				:	2	
12				:	2	
13				:	2	
14				:	2	
15				:	2	
16				:	2	
17				:	2	
18				:	2	
19				:	2	
20				:	2	

PFAS - Semi-Volatile Organic Compounds

PFAS - EPA 8327

Chain of Custody

Relinquished by	Received By	Date / Time
Print Name & Org.: Wes Stambaugh AECOM		03/30/2023 19:20
Signature:		
Print Name & Org.: JAMES JAMESON / AECOM	TONY Novello / EGLE	3/31/2023 10:37
Signature:		
Print Name & Org.:		/ /2023
Signature:		

Shane, Kirby (EGLE)

From: Buzzell, Jim <James.Buzzell@aecom.com>
Sent: Thursday, April 6, 2023 3:42 PM
To: Shane, Kirby (EGLE)
Cc: Stambaugh, Wes; Vorce, Karen (EGLE); Moss, Kelly (EGLE)
Subject: RE: Michigan Department of Environment, Great Lakes, and Energy - Lab Report 2303200
Attachments: 2303200_2 ENVReport 04 04 2023 1540.pdf; 2303200_1 EQUIS 5.x 04 04 2023 1540.zip; EGLE CoC Russell Ridge PFAS 230406 Revised.xlsx

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Good Afternoon Kirby,
We identified a mistake in our sample nomenclature for the samples labels beginning with "VAP-03" in the attached report 2303200.
Lab ID: 2303200-05 through -09 should actually begin with "VAP-02"
Please see the Revised COC attached with the corrected Sample IDs how we'd like these samples to be reported.
Let me know if you have any questions or concerns.
Thank you for your assistance with this, and terribly sorry for the confusion!
Best,
Jim

Jim Buzzell
Geologist, Environment, Midwest
D +1-616-574-8327
M +1-616-206-7528
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aecom.com

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AECOM Grand Rapids

From: The EGLE Environmental Laboratory Team <noreply-EGLELab@michigan.gov>
Sent: Tuesday, April 4, 2023 3:41 PM
To: VorceK@michigan.gov

Department of Environment, Great Lakes, and Energy
Laboratory Services Section

PFAS Analysis Request Sheet

Lab Work Order Number	Project Name	Matrix
Lab Use Only	Cedar Springs WWTP	WATER

Location ID: 41000010	Program:	Report CC Email 1: VorceK@Michigan.gov	Project TAT Days*: STD	Sample Collector: Wes Stambaugh
Dept-Division-District: EGLE-RRD-GR	Activity:	Report CC Email 2: James.Buzzell@aecom.com	Report Batch QC Yes ☐ No ☐	Sample Collector Phone: 567-239-1351
State Project Manager: Kelly Moss	Funding Source:	Report CC Email 3: Wes.Stambaugh@aecom.com	Lab Use Only — Sample Receipt Temperature: °C	Contract Firm: AECOM
State Project Manager Email: MossK@Michigan.gov	Location Code: 6G14	Overflow Lab Choice 1:		Contract Firm Primary Contact: James.Buzzell@aecom.com
State Project Manager Phone: 616-215-4588	SUD Location Code:	Overflow Lab Choice 2:	Received On Ice Yes ☐ No ☐	Primary Contact Phone: 616-206-7528

*** Project Turnaround time (TAT) other than standard 21 days must be pre-approved and scheduled with the laboratory. Surcharges apply.**

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments
1		VAP-01 (144.2-149.2)	3/28/2023	12:00	4	;Sample MS/MSD Required For Batch QC
2		VAP-01 (113.0-118.0)	3/24/2023	11:00	**2**	
3		VAP-01 (122.9-127.9)	3/24/2023	13:55	2	
4		VAP-01 (133.2-138.2)	3/28/2023	16:35	2	
5		VAP-02 (15.2-20.2)	3/29/2023	17:40	2	
6		VAP-02 (15.2-20.2)-DUP	3/29/2023	17:40	2	Field Duplicate
7		VAP-02 (24.4-29.4)	3/30/2023	11:05	2	
8		VAP-02 (34.5-39.5)	3/30/2023	14:25	2	
9		VAP-02 (45.4-50.4)	3/30/2023	16:25	2	
10		EB2303301500WPS	3/30/2023	15:00	2	Equipment Blank - Geosub 2
11				:	2	
12				:	2	
13				:	2	
14				:	2	
15				:	2	
16				:	2	
17				:	2	
18				:	2	
19				:	2	
20				:	2	

PFAS - Semi-Volatile Organic Compounds

PFAS - EPA 8327

Chain of Custody

Relinquished by	Received By	Date / Time
Print Name & Org.: Wes Stambaugh AECOM Signature:		03/30/2023 :
Print Name & Org.: Signature:		/ /2023 :
Print Name & Org.: Signature:		/ /2023 :

MICHIGAN DEPARTMENT OF
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ENVIRONMENTAL LABORATORY

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18 April 2023

Work Order: 2304058

Price: $2,500.00

KELLY MOSS
EGLE-RRD-GRAND RAPIDS
350 Ottawa Ave. NW, Unit 10
Grand Rapids, MI 49503-2341

RE: CEDAR SPRINGS WWTP INVESTIGATION-PFAS

This is the official environmental laboratory report for testing conducted by the Michigan Department of Environment, Great Lakes, and Energy. Analyses performed by the laboratory were conducted using methods published by the U.S. Environmental Protection Agency, Standard Methods for the Examination of Water and Wastewater, ASTM, or other published or approved reference methods.

Kirby Shane
Laboratory Director

MICHIGAN DEPARTMENT OF
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EGLE-RRD-GRAND RAPIDS	Project: CEDAR SPRINGS WWTP INVESTIGATION-PFAS	
350 Ottawa Ave. NW, Unit 10	Site Code: 41000010	**Reported:**
Grand Rapids MI, 49503-2341	Project Manager: KELLY MOSS	04/18/2023

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
VAP-02 (76.8-81.8)	2304058-01	Water	04/03/2023	04/07/2023	
VAP-02 (52.8-57.8)	2304058-02	Water	03/31/2023	04/07/2023	
VAP-02 (66.5-71.5)	2304058-03	Water	03/31/2023	04/07/2023	
VAP-02 (85.3-90.3)	2304058-04	Water	04/03/2023	04/07/2023	
VAP-03 (26.1-31.1)	2304058-05	Water	04/05/2023	04/07/2023	
VAP-03 (26.1-31.1) DUP	2304058-06	Water	04/05/2023	04/07/2023	
VAP-03 (33.9-38.9)	2304058-07	Water	04/06/2023	04/07/2023	
VAP-03 (45.1-50.1)	2304058-08	Water	04/06/2023	04/07/2023	
VAP-03 (54.2-59.2)	2304058-09	Water	04/06/2023	04/07/2023	
TRIP BLANK	2304058-10	Water	11/02/2022	04/07/2023	

Notes and Definitions

ND	Indicates compound analyzed for but not detected at or above the reporting limit (RL).
RL	Reporting Limit
NA	Not Applicable

Case Narrative

Samples were received **4/7/2023 1:00:00PM** for client **EGLE-RRD-GRAND RAPIDS** as a part of project **CEDAR SPRINGS WWTP INVESTIGATION-PFAS**.

Samples were logged and designated as Work Order # **2304058** on **4/7/2023 1:10:00PM**.

This Report was created **4/18/2023 7:45:59AM**.

Additional Notes/Narrative (if applicable):

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Client ID: VAP-02 (76.8-81.8)

Lab ID: 2304058-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-73-5	**PFBS**	**2.7**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-85-9	**PFHpA**	**2.9**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-24-4	**PFHxA**	**4.9**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
355-46-4	**PFHxS**	**2.7**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-90-3	**PFPeA**	**6.8**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*104 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*109 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*120 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*103 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*93.5 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*80.6 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-02 (76.8-81.8)

Lab ID: 2304058-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*101 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*97.9 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*98.8 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*100 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*99.4 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*99.9 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*99.6 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*97.4 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*100 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*99.3 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*96.8 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*97.0 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*145 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-02 (52.8-57.8)

Lab ID: 2304058-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*108 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*111 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*95.5 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*95.0 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*89.0 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*80.9 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*104 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*104 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-02 (52.8-57.8)

Lab ID: 2304058-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*101 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*104 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*97.7 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*94.7 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*101 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*101 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*97.1 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*136 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-02 (66.5-71.5)

Lab ID: 2304058-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-85-9	**PFHpA**	**3.6**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-24-4	**PFHxA**	**7.2**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
355-46-4	**PFHxS**	**2.3**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-90-3	**PFPeA**	**11**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*105 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*107 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*98.5 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*84.8 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*67.1 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*43.6 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*106 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-02 (66.5-71.5)

Lab ID: 2304058-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*100 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*104 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*106 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*105 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*106 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*96.9 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*95.3 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*106 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*100 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*104 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*99.4 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*131 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-02 (85.3-90.3)

Lab ID: 2304058-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-85-9	**PFHpA**	**2.9**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-24-4	**PFHxA**	**6.9**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-67-1	**PFOA**	**6.9**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-90-3	**PFPeA**	**10**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*101 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*99.5 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*86.9 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*72.0 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*52.1 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-02 (85.3-90.3)

Lab ID: 2304058-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*98.9 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*100 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*97.8 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*97.0 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*96.2 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*98.6 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*99.5 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*95.3 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*129 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-03 (26.1-31.1)

Lab ID: 2304058-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-22-4	**PFBA**	**9.4**	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-85-9	**PFHpA**	**10**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-24-4	**PFHxA**	**10**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-95-1	**PFNA**	**2.0**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-67-1	**PFOA**	**14**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
1763-23-1	**PFOS**	**2.1**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-90-3	**PFPeA**	**6.9**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*101 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*96.8 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*93.2 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*82.1 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*67.3 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*108 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-03 (26.1-31.1)

Lab ID: 2304058-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*101 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*104 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*95.1 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*97.7 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*100 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*99.3 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*96.7 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*132 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-03 (26.1-31.1) DUP

Lab ID: 2304058-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-22-4	**PFBA**	**9.8**	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-85-9	**PFHpA**	**10**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-24-4	**PFHxA**	**10**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-95-1	**PFNA**	**2.0**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-67-1	**PFOA**	**14**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
1763-23-1	**PFOS**	**2.5**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-90-3	**PFPeA**	**7.4**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*98.7 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*90.0 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*74.2 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*53.1 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-03 (26.1-31.1) DUP

Lab ID: 2304058-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*99.1 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*97.5 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*96.3 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*101 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*99.5 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*97.3 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*135 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-03 (33.9-38.9)

Lab ID: 2304058-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-22-4	**PFBA**	**4.6**	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-73-5	**PFBS**	**4.2**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-24-4	**PFHxA**	**2.2**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
355-46-4	**PFHxS**	**3.0**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-67-1	**PFOA**	**3.4**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
1763-23-1	**PFOS**	**2.5**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*89.4 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*75.9 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*58.0 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*98.4 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-03 (33.9-38.9)

Lab ID: 2304058-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*104 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*98.3 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*96.7 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*106 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*100 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*98.7 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*99.4 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*136 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-03 (45.1-50.1)

Lab ID: 2304058-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-73-5	**PFBS**	**3.8**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
355-46-4	**PFHxS**	**4.4**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-67-1	**PFOA**	**3.6**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*99.8 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*100 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*114 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*87.5 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*71.0 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*49.0 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*104 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*99.0 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-03 (45.1-50.1)

Lab ID: 2304058-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*97.4 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*97.9 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*98.9 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*99.9 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*99.7 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*96.8 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*94.3 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*99.2 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*94.6 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*97.3 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*97.5 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*95.4 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*133 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-03 (54.2-59.2)

Lab ID: 2304058-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-22-4	**PFBA**	**4.5**	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
355-46-4	**PFHxS**	**2.4**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-67-1	**PFOA**	**3.3**	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*105 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*96.2 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*102 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*93.0 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*80.6 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*98.5 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*100 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: VAP-03 (54.2-59.2)

Lab ID: 2304058-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*97.3 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*99.5 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*99.8 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*100 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*98.2 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*98.7 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*101 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*98.1 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*97.2 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*100 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*98.8 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*134 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Client ID: TRIP BLANK

Lab ID: 2304058-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/12/23	B3D1016	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/12/23	B3D1016	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*100 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*104 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*123 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*107 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*95.1 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*79.1 %*	*25-250*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Lab ID: 2304058-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*99.3 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*103 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*106 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*108 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*104 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*100 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*101 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*102 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*100 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*143 %*	*50-200*		*04/12/23*	B3D1016	*8327*	*BM*	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1016 - Method: 3512				**Prepared: 04/10/2023**							
Blank (B3D1016-BLK1)											
11Cl-PF3OUdS	ND	2.0	ng/L							04/11/2023	
3:3FTCA	ND	4.0	ng/L							04/11/2023	
4:2FTS	ND	2.0	ng/L							04/11/2023	
5:3FTCA	ND	2.0	ng/L							04/11/2023	
6:2FTS	ND	2.0	ng/L							04/11/2023	
7:3FTCA	ND	2.0	ng/L							04/11/2023	
8:2FTS	ND	2.0	ng/L							04/11/2023	
9Cl-PF3ONS	ND	2.0	ng/L							04/11/2023	
ADONA	ND	2.0	ng/L							04/11/2023	
HFPO-DA	ND	4.0	ng/L							04/11/2023	
NEtFOSAA	ND	2.0	ng/L							04/11/2023	
NMeFOSAA	ND	2.0	ng/L							04/11/2023	
PFBA	ND	4.0	ng/L							04/11/2023	
PFBS	ND	2.0	ng/L							04/11/2023	
PFBSA	ND	2.0	ng/L							04/11/2023	
PFDA	ND	2.0	ng/L							04/11/2023	
PFDoDA	ND	2.0	ng/L							04/11/2023	
PFDS	ND	2.0	ng/L							04/11/2023	
PFECHS	ND	2.0	ng/L							04/11/2023	
PFHpA	ND	2.0	ng/L							04/11/2023	
PFHpS	ND	2.0	ng/L							04/11/2023	
PFHxA	ND	2.0	ng/L							04/11/2023	
PFHxS	ND	2.0	ng/L							04/11/2023	
PFHxSA	ND	2.0	ng/L							04/11/2023	
PFNA	ND	2.0	ng/L							04/11/2023	
PFNS	ND	2.0	ng/L							04/11/2023	
PFOA	ND	2.0	ng/L							04/11/2023	
PFOS	ND	2.0	ng/L							04/11/2023	
PFOSA	ND	2.0	ng/L							04/11/2023	
PFPeA	ND	2.0	ng/L							04/11/2023	
PFPeS	ND	2.0	ng/L							04/11/2023	
PFTeDA	ND	4.0	ng/L							04/11/2023	
PFTrDA	ND	4.0	ng/L							04/11/2023	
PFUnDA	ND	2.0	ng/L							04/11/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*150*		ng/L	*150.0*		*99.8*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*155*		ng/L	*152.1*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*158*		ng/L	*153.5*		*103*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*157*		ng/L	*160.0*		*98.2*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*141*		ng/L	*160.0*		*87.9*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*119*		ng/L	*160.0*		*74.2*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C3-HFPODA	*316*		ng/L	*320.0*		*98.9*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C3-PFBS	*150*		ng/L	*149.0*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C3-PFHxS	*150*		ng/L	*151.6*		*98.9*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C4-PFBA	*163*		ng/L	*160.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C4-PFHpA	*161*		ng/L	*160.0*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C5-PFHxA	*160*		ng/L	*160.0*		*100*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C5-PFPeA	*163*		ng/L	*160.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C6-PFDA	*157*		ng/L	*160.0*		*98.1*	*50-200*			04/11/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1016 - Method: 3512				**Prepared: 04/10/2023**							
Blank (B3D1016-BLK1)											
Isotope Dilution Analog: 13C7-PFUnDA	*159*		ng/L	*160.0*		*99.3*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOA	*160*		ng/L	*160.0*		*99.7*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOS	*153*		ng/L	*153.4*		*99.9*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOSA	*159*		ng/L	*160.0*		*99.6*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C9-PFNA	*158*		ng/L	*160.0*		*98.7*	*50-200*			04/11/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*161*		ng/L	*160.0*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*164*		ng/L	*118.4*		*138*	*50-200*			04/11/2023	
LCS (B3D1016-BS1)											
11Cl-PF3OUdS	40.3	2.0	ng/L	37.72		107	70-130			04/11/2023	
3:3FTCA	44.0	4.0	ng/L	40.00		110	70-130			04/11/2023	
4:2FTS	40.5	2.0	ng/L	37.48		108	70-130			04/11/2023	
5:3FTCA	44.1	2.0	ng/L	40.00		110	70-130			04/11/2023	
6:2FTS	41.8	2.0	ng/L	38.04		110	70-130			04/11/2023	
7:3FTCA	47.0	2.0	ng/L	40.00		118	70-130			04/11/2023	
8:2FTS	41.4	2.0	ng/L	38.40		108	70-130			04/11/2023	
9Cl-PF3ONS	40.1	2.0	ng/L	37.32		107	70-130			04/11/2023	
ADONA	40.5	2.0	ng/L	37.80		107	70-130			04/11/2023	
HFPO-DA	41.5	4.0	ng/L	40.00		104	70-130			04/11/2023	
NEtFOSAA	41.5	2.0	ng/L	40.00		104	70-130			04/11/2023	
NMeFOSAA	43.9	2.0	ng/L	40.00		110	70-130			04/11/2023	
PFBA	43.1	4.0	ng/L	40.00		108	70-130			04/11/2023	
PFBS	37.7	2.0	ng/L	35.48		106	70-130			04/11/2023	
PFBSA	45.6	2.0	ng/L	40.00		114	70-130			04/11/2023	
PFDA	45.6	2.0	ng/L	40.00		114	70-130			04/11/2023	
PFDoDA	42.3	2.0	ng/L	40.00		106	70-130			04/11/2023	
PFDS	43.1	2.0	ng/L	38.60		112	70-130			04/11/2023	
PFECHS	40.1	2.0	ng/L	36.96		108	70-130			04/11/2023	
PFHpA	42.7	2.0	ng/L	40.00		107	70-130			04/11/2023	
PFHpS	40.8	2.0	ng/L	38.12		107	70-130			04/11/2023	
PFHxA	43.9	2.0	ng/L	40.00		110	70-130			04/11/2023	
PFHxS	38.3	2.0	ng/L	36.56		105	70-130			04/11/2023	
PFHxSA	44.8	2.0	ng/L	40.00		112	70-130			04/11/2023	
PFNA	43.2	2.0	ng/L	40.00		108	70-130			04/11/2023	
PFNS	43.8	2.0	ng/L	38.48		114	70-130			04/11/2023	
PFOA	44.2	2.0	ng/L	40.00		110	70-130			04/11/2023	
PFOS	40.3	2.0	ng/L	37.12		109	70-130			04/11/2023	
PFOSA	44.1	2.0	ng/L	40.00		110	70-130			04/11/2023	
PFPeA	43.5	2.0	ng/L	40.00		109	70-130			04/11/2023	
PFPeS	40.4	2.0	ng/L	37.64		107	70-130			04/11/2023	
PFTeDA	43.0	4.0	ng/L	40.00		108	70-130			04/11/2023	
PFTrDA	41.9	4.0	ng/L	40.00		105	70-130			04/11/2023	
PFUnDA	43.3	2.0	ng/L	40.00		108	70-130			04/11/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*157*		ng/L	*150.0*		*104*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*160*		ng/L	*152.1*		*105*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*161*		ng/L	*153.5*		*105*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*162*		ng/L	*160.0*		*101*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*147*		ng/L	*160.0*		*91.8*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*127*		ng/L	*160.0*		*79.5*	*25-250*			04/11/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1016 - Method: 3512				**Prepared: 04/10/2023**							
LCS (B3D1016-BS1)											
Isotope Dilution Analog: 13C3-HFPODA	*343*		ng/L	*320.0*		*107*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C3-PFBS	*152*		ng/L	*149.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C3-PFHxS	*156*		ng/L	*151.6*		*103*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C4-PFBA	*165*		ng/L	*160.0*		*103*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C4-PFHpA	*163*		ng/L	*160.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C5-PFHxA	*160*		ng/L	*160.0*		*100*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C5-PFPeA	*164*		ng/L	*160.0*		*103*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C6-PFDA	*158*		ng/L	*160.0*		*98.6*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*159*		ng/L	*160.0*		*99.3*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOA	*161*		ng/L	*160.0*		*100*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOS	*154*		ng/L	*153.4*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOSA	*159*		ng/L	*160.0*		*99.7*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C9-PFNA	*159*		ng/L	*160.0*		*99.1*	*50-200*			04/11/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*161*		ng/L	*160.0*		*100*	*50-200*			04/11/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*162*		ng/L	*118.4*		*137*	*50-200*			04/11/2023	
LCS Dup (B3D1016-BSD1)											
11Cl-PF3OUdS	39.1	2.0	ng/L	37.72		104	70-130	3.02	200	04/11/2023	
3:3FTCA	38.9	4.0	ng/L	40.00		97.4	70-130	12.2	200	04/11/2023	
4:2FTS	41.0	2.0	ng/L	37.48		109	70-130	1.23	200	04/11/2023	
5:3FTCA	41.2	2.0	ng/L	40.00		103	70-130	6.94	200	04/11/2023	
6:2FTS	39.4	2.0	ng/L	38.04		104	70-130	5.71	200	04/11/2023	
7:3FTCA	45.7	2.0	ng/L	40.00		114	70-130	2.89	200	04/11/2023	
8:2FTS	43.2	2.0	ng/L	38.40		112	70-130	4.26	200	04/11/2023	
9Cl-PF3ONS	38.6	2.0	ng/L	37.32		104	70-130	3.71	200	04/11/2023	
ADONA	39.8	2.0	ng/L	37.80		105	70-130	1.94	200	04/11/2023	
HFPO-DA	37.9	4.0	ng/L	40.00		94.8	70-130	8.92	200	04/11/2023	
NEtFOSAA	41.3	2.0	ng/L	40.00		103	70-130	0.483	200	04/11/2023	
NMeFOSAA	42.0	2.0	ng/L	40.00		105	70-130	4.43	200	04/11/2023	
PFBA	41.9	4.0	ng/L	40.00		105	70-130	2.92	200	04/11/2023	
PFBS	36.2	2.0	ng/L	35.48		102	70-130	3.84	200	04/11/2023	
PFBSA	42.6	2.0	ng/L	40.00		107	70-130	6.75	200	04/11/2023	
PFDA	43.0	2.0	ng/L	40.00		107	70-130	5.92	200	04/11/2023	
PFDoDA	43.5	2.0	ng/L	40.00		109	70-130	2.80	200	04/11/2023	
PFDS	40.8	2.0	ng/L	38.60		106	70-130	5.43	200	04/11/2023	
PFECHS	39.4	2.0	ng/L	36.96		107	70-130	1.81	200	04/11/2023	
PFHpA	42.2	2.0	ng/L	40.00		106	70-130	1.04	200	04/11/2023	
PFHpS	40.7	2.0	ng/L	38.12		107	70-130	0.0982	200	04/11/2023	
PFHxA	43.0	2.0	ng/L	40.00		108	70-130	1.98	200	04/11/2023	
PFHxS	38.2	2.0	ng/L	36.56		104	70-130	0.262	200	04/11/2023	
PFHxSA	42.7	2.0	ng/L	40.00		107	70-130	4.75	200	04/11/2023	
PFNA	41.5	2.0	ng/L	40.00		104	70-130	3.92	200	04/11/2023	
PFNS	41.3	2.0	ng/L	38.48		107	70-130	5.78	200	04/11/2023	
PFOA	43.1	2.0	ng/L	40.00		108	70-130	2.61	200	04/11/2023	
PFOS	40.5	2.0	ng/L	37.12		109	70-130	0.396	200	04/11/2023	
PFOSA	43.1	2.0	ng/L	40.00		108	70-130	2.34	200	04/11/2023	
PFPeA	41.8	2.0	ng/L	40.00		104	70-130	4.08	200	04/11/2023	
PFPeS	39.6	2.0	ng/L	37.64		105	70-130	1.95	200	04/11/2023	
PFTeDA	42.5	4.0	ng/L	40.00		106	70-130	1.26	200	04/11/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1016 - Method: 3512				**Prepared: 04/10/2023**							
LCS Dup (B3D1016-BSD1)											
PFTrDA	41.8	4.0	ng/L	40.00		104	70-130	0.239	200	04/11/2023	
PFUnDA	41.7	2.0	ng/L	40.00		104	70-130	3.81	200	04/11/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*151*		ng/L	*150.0*		*100*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*164*		ng/L	*152.1*		*108*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*149*		ng/L	*153.5*		*96.9*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*154*		ng/L	*160.0*		*96.1*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*149*		ng/L	*160.0*		*93.3*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*143*		ng/L	*160.0*		*89.6*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C3-HFPODA	*339*		ng/L	*320.0*		*106*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C3-PFBS	*151*		ng/L	*149.0*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C3-PFHxS	*152*		ng/L	*151.6*		*100*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C4-PFBA	*162*		ng/L	*160.0*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C4-PFHpA	*160*		ng/L	*160.0*		*100*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C5-PFHxA	*159*		ng/L	*160.0*		*99.5*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C5-PFPeA	*163*		ng/L	*160.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C6-PFDA	*155*		ng/L	*160.0*		*96.9*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*155*		ng/L	*160.0*		*97.0*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOA	*160*		ng/L	*160.0*		*100*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOS	*152*		ng/L	*153.4*		*98.8*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOSA	*157*		ng/L	*160.0*		*97.9*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C9-PFNA	*158*		ng/L	*160.0*		*98.7*	*50-200*			04/11/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*157*		ng/L	*160.0*		*98.4*	*50-200*			04/11/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*158*		ng/L	*118.4*		*134*	*50-200*			04/11/2023	
MRL Check (B3D1016-MRL1)											
11Cl-PF3OUdS	3.64	2.0	ng/L	3.772		96.5	50-150			04/11/2023	
3:3FTCA	4.10	4.0	ng/L	4.000		102	50-150			04/11/2023	
4:2FTS	3.84	2.0	ng/L	3.748		102	50-150			04/11/2023	
5:3FTCA	4.10	2.0	ng/L	4.000		102	50-150			04/11/2023	
6:2FTS	4.24	2.0	ng/L	3.804		111	50-150			04/11/2023	
7:3FTCA	4.82	2.0	ng/L	4.000		120	50-150			04/11/2023	
8:2FTS	3.86	2.0	ng/L	3.840		101	50-150			04/11/2023	
9Cl-PF3ONS	4.00	2.0	ng/L	3.732		107	50-150			04/11/2023	
ADONA	4.12	2.0	ng/L	3.780		109	50-150			04/11/2023	
HFPO-DA	4.46	4.0	ng/L	4.000		112	50-150			04/11/2023	
NEtFOSAA	3.68	2.0	ng/L	4.000		92.0	50-150			04/11/2023	
NMeFOSAA	4.00	2.0	ng/L	4.000		100	50-150			04/11/2023	
PFBA	3.86	4.0	ng/L	4.000		96.5	50-150			04/11/2023	
PFBS	3.16	2.0	ng/L	3.548		89.1	50-150			04/11/2023	
PFBSA	4.46	2.0	ng/L	4.000		112	50-150			04/11/2023	
PFDA	4.52	2.0	ng/L	4.000		113	50-150			04/11/2023	
PFDoDA	4.24	2.0	ng/L	4.000		106	50-150			04/11/2023	
PFDS	3.80	2.0	ng/L	3.860		98.4	50-150			04/11/2023	
PFECHS	4.24	2.0	ng/L	3.696		115	50-150			04/11/2023	
PFHpA	4.22	2.0	ng/L	4.000		106	50-150			04/11/2023	
PFHpS	4.50	2.0	ng/L	3.812		118	50-150			04/11/2023	
PFHxA	4.24	2.0	ng/L	4.000		106	50-150			04/11/2023	
PFHxS	4.02	2.0	ng/L	3.656		110	50-150			04/11/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1016 - Method: 3512				**Prepared: 04/10/2023**							
MRL Check (B3D1016-MRL1)											
PFHxSA	3.94	2.0	ng/L	4.000		98.5	50-150			04/11/2023	
PFNA	4.12	2.0	ng/L	4.000		103	50-150			04/11/2023	
PFNS	3.96	2.0	ng/L	3.848		103	50-150			04/11/2023	
PFOA	3.98	2.0	ng/L	4.000		99.5	50-150			04/11/2023	
PFOS	4.10	2.0	ng/L	3.712		110	50-150			04/11/2023	
PFOSA	4.30	2.0	ng/L	4.000		108	50-150			04/11/2023	
PFPeA	4.10	2.0	ng/L	4.000		102	50-150			04/11/2023	
PFPeS	3.96	2.0	ng/L	3.764		105	50-150			04/11/2023	
PFTeDA	4.14	4.0	ng/L	4.000		104	50-150			04/11/2023	
PFTrDA	4.16	4.0	ng/L	4.000		104	50-150			04/11/2023	
PFUnDA	4.02	2.0	ng/L	4.000		100	50-150			04/11/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*149*		ng/L	*150.0*		*99.4*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*157*		ng/L	*152.1*		*103*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*155*		ng/L	*153.5*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*151*		ng/L	*160.0*		*94.4*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*133*		ng/L	*160.0*		*83.0*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*108*		ng/L	*160.0*		*67.7*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C3-HFPODA	*338*		ng/L	*320.0*		*106*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C3-PFBS	*150*		ng/L	*149.0*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C3-PFHxS	*147*		ng/L	*151.6*		*96.9*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C4-PFBA	*159*		ng/L	*160.0*		*99.3*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C4-PFHpA	*158*		ng/L	*160.0*		*98.5*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C5-PFHxA	*160*		ng/L	*160.0*		*100*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C5-PFPeA	*160*		ng/L	*160.0*		*100*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C6-PFDA	*154*		ng/L	*160.0*		*96.0*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*154*		ng/L	*160.0*		*96.1*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOA	*157*		ng/L	*160.0*		*98.3*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOS	*149*		ng/L	*153.4*		*97.0*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOSA	*158*		ng/L	*160.0*		*98.6*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C9-PFNA	*155*		ng/L	*160.0*		*97.0*	*50-200*			04/11/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*160*		ng/L	*160.0*		*99.8*	*50-200*			04/11/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*158*		ng/L	*118.4*		*133*	*50-200*			04/11/2023	
Matrix Spike (B3D1016-MS1)	**Source: 2304034-01**										
11Cl-PF3OUdS	39.4	2.0	ng/L	37.72	ND	104	70-130			04/11/2023	
3:3FTCA	44.3	4.0	ng/L	40.00	ND	111	70-130			04/11/2023	
4:2FTS	40.7	2.0	ng/L	37.48	ND	108	70-130			04/11/2023	
5:3FTCA	44.0	2.0	ng/L	40.00	ND	110	70-130			04/11/2023	
6:2FTS	42.3	2.0	ng/L	38.04	ND	111	70-130			04/11/2023	
7:3FTCA	44.6	2.0	ng/L	40.00	ND	112	70-130			04/11/2023	
8:2FTS	41.9	2.0	ng/L	38.40	ND	109	70-130			04/11/2023	
9Cl-PF3ONS	38.6	2.0	ng/L	37.32	ND	103	70-130			04/11/2023	
ADONA	39.4	2.0	ng/L	37.80	ND	104	70-130			04/11/2023	
HFPO-DA	42.4	4.0	ng/L	40.00	ND	106	70-130			04/11/2023	
NEtFOSAA	40.6	2.0	ng/L	40.00	ND	101	70-130			04/11/2023	
NMeFOSAA	45.0	2.0	ng/L	40.00	ND	113	70-130			04/11/2023	
PFBA	44.2	4.0	ng/L	40.00	0.840	108	70-130			04/11/2023	
PFBS	37.0	2.0	ng/L	35.48	ND	104	70-130			04/11/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1016 - Method: 3512				**Prepared: 04/10/2023**							
Matrix Spike (B3D1016-MS1)	**Source: 2304034-01**										
PFBSA	45.1	2.0	ng/L	40.00	0.440	112	70-130			04/11/2023	
PFDA	43.9	2.0	ng/L	40.00	ND	110	70-130			04/11/2023	
PFDoDA	42.8	2.0	ng/L	40.00	ND	107	70-130			04/11/2023	
PFDS	41.5	2.0	ng/L	38.60	ND	108	70-130			04/11/2023	
PFECHS	38.6	2.0	ng/L	36.96	0.740	102	70-130			04/11/2023	
PFHpA	43.5	2.0	ng/L	40.00	ND	109	70-130			04/11/2023	
PFHpS	42.1	2.0	ng/L	38.12	ND	111	70-130			04/11/2023	
PFHxA	44.8	2.0	ng/L	40.00	0.840	110	70-130			04/11/2023	
PFHxS	40.1	2.0	ng/L	36.56	ND	110	70-130			04/11/2023	
PFHxSA	44.5	2.0	ng/L	40.00	ND	111	70-130			04/11/2023	
PFNA	43.5	2.0	ng/L	40.00	ND	109	70-130			04/11/2023	
PFNS	41.5	2.0	ng/L	38.48	ND	108	70-130			04/11/2023	
PFOA	45.6	2.0	ng/L	40.00	0.900	112	70-130			04/11/2023	
PFOS	41.9	2.0	ng/L	37.12	1.40	109	70-130			04/11/2023	
PFOSA	44.1	2.0	ng/L	40.00	ND	110	70-130			04/11/2023	
PFPeA	44.3	2.0	ng/L	40.00	0.880	109	70-130			04/11/2023	
PFPeS	40.1	2.0	ng/L	37.64	ND	107	70-130			04/11/2023	
PFTeDA	44.3	4.0	ng/L	40.00	ND	111	70-130			04/11/2023	
PFTrDA	42.8	4.0	ng/L	40.00	ND	107	70-130			04/11/2023	
PFUnDA	43.4	2.0	ng/L	40.00	ND	108	70-130			04/11/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*155*		ng/L	*150.0*		*103*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*164*		ng/L	*152.1*		*108*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*156*		ng/L	*153.5*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*162*		ng/L	*160.0*		*101*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*152*		ng/L	*160.0*		*94.8*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*137*		ng/L	*160.0*		*85.9*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C3-HFPODA	*336*		ng/L	*320.0*		*105*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C3-PFBS	*153*		ng/L	*149.0*		*103*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C3-PFHxS	*154*		ng/L	*151.6*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C4-PFBA	*162*		ng/L	*160.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C4-PFHpA	*163*		ng/L	*160.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C5-PFHxA	*160*		ng/L	*160.0*		*100*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C5-PFPeA	*163*		ng/L	*160.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C6-PFDA	*157*		ng/L	*160.0*		*98.4*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*161*		ng/L	*160.0*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOA	*162*		ng/L	*160.0*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOS	*159*		ng/L	*153.4*		*104*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOSA	*161*		ng/L	*160.0*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C9-PFNA	*161*		ng/L	*160.0*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*160*		ng/L	*160.0*		*100*	*50-200*			04/11/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*168*		ng/L	*118.4*		*142*	*50-200*			04/11/2023	
Matrix Spike Dup (B3D1016-MSD1)	**Source: 2304034-01**										
11Cl-PF3OUdS	36.9	2.0	ng/L	37.72	ND	97.8	70-130	6.55	30	04/11/2023	
3:3FTCA	40.8	4.0	ng/L	40.00	ND	102	70-130	8.27	30	04/11/2023	
4:2FTS	39.2	2.0	ng/L	37.48	ND	105	70-130	3.61	30	04/11/2023	
5:3FTCA	39.9	2.0	ng/L	40.00	ND	99.8	70-130	9.68	30	04/11/2023	
6:2FTS	38.0	2.0	ng/L	38.04	ND	99.8	70-130	10.7	30	04/11/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1016 - Method: 3512				**Prepared: 04/10/2023**							
Matrix Spike Dup (B3D1016-MSD1)	**Source: 2304034-01**										
7:3FTCA	38.9	2.0	ng/L	40.00	ND	97.2	70-130	13.8	30	04/11/2023	
8:2FTS	39.5	2.0	ng/L	38.40	ND	103	70-130	5.95	30	04/11/2023	
9Cl-PF3ONS	37.5	2.0	ng/L	37.32	ND	101	70-130	2.73	30	04/11/2023	
ADONA	38.1	2.0	ng/L	37.80	ND	101	70-130	3.25	30	04/11/2023	
HFPO-DA	42.4	4.0	ng/L	40.00	ND	106	70-130	0.0944	30	04/11/2023	
NEtFOSAA	39.5	2.0	ng/L	40.00	ND	98.7	70-130	2.70	30	04/11/2023	
NMeFOSAA	39.3	2.0	ng/L	40.00	ND	98.2	70-130	13.7	30	04/11/2023	
PFBA	41.4	4.0	ng/L	40.00	0.840	102	70-130	6.54	30	04/11/2023	
PFBS	36.7	2.0	ng/L	35.48	ND	103	70-130	0.868	30	04/11/2023	
PFBSA	42.3	2.0	ng/L	40.00	0.440	105	70-130	6.36	30	04/11/2023	
PFDA	43.8	2.0	ng/L	40.00	ND	109	70-130	0.319	30	04/11/2023	
PFDoDA	39.0	2.0	ng/L	40.00	ND	97.4	70-130	9.30	30	04/11/2023	
PFDS	37.9	2.0	ng/L	38.60	ND	98.2	70-130	9.11	30	04/11/2023	
PFECHS	37.7	2.0	ng/L	36.96	0.740	100	70-130	2.36	30	04/11/2023	
PFHpA	41.6	2.0	ng/L	40.00	ND	104	70-130	4.42	30	04/11/2023	
PFHpS	38.8	2.0	ng/L	38.12	ND	102	70-130	8.20	30	04/11/2023	
PFHxA	40.9	2.0	ng/L	40.00	0.840	100	70-130	9.11	30	04/11/2023	
PFHxS	37.7	2.0	ng/L	36.56	ND	103	70-130	6.38	30	04/11/2023	
PFHxSA	41.2	2.0	ng/L	40.00	ND	103	70-130	7.70	30	04/11/2023	
PFNA	40.9	2.0	ng/L	40.00	ND	102	70-130	6.11	30	04/11/2023	
PFNS	38.9	2.0	ng/L	38.48	ND	101	70-130	6.46	30	04/11/2023	
PFOA	41.6	2.0	ng/L	40.00	0.900	102	70-130	9.22	30	04/11/2023	
PFOS	39.2	2.0	ng/L	37.12	1.40	102	70-130	6.61	30	04/11/2023	
PFOSA	41.3	2.0	ng/L	40.00	ND	103	70-130	6.51	30	04/11/2023	
PFPeA	41.7	2.0	ng/L	40.00	0.880	102	70-130	6.00	30	04/11/2023	
PFPeS	38.3	2.0	ng/L	37.64	ND	102	70-130	4.59	30	04/11/2023	
PFTeDA	39.4	4.0	ng/L	40.00	ND	98.5	70-130	11.7	30	04/11/2023	
PFTrDA	37.8	4.0	ng/L	40.00	ND	94.6	70-130	12.4	30	04/11/2023	
PFUnDA	40.9	2.0	ng/L	40.00	ND	102	70-130	5.89	30	04/11/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*152*		ng/L	*150.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*163*		ng/L	*152.1*		*107*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*180*		ng/L	*153.5*		*118*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*166*		ng/L	*160.0*		*104*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*146*		ng/L	*160.0*		*91.3*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*119*		ng/L	*160.0*		*74.7*	*25-250*			04/11/2023	
Isotope Dilution Analog: 13C3-HFPODA	*318*		ng/L	*320.0*		*99.5*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C3-PFBS	*150*		ng/L	*149.0*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C3-PFHxS	*153*		ng/L	*151.6*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C4-PFBA	*162*		ng/L	*160.0*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C4-PFHpA	*162*		ng/L	*160.0*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C5-PFHxA	*163*		ng/L	*160.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C5-PFPeA	*163*		ng/L	*160.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C6-PFDA	*161*		ng/L	*160.0*		*101*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*164*		ng/L	*160.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOA	*163*		ng/L	*160.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOS	*156*		ng/L	*153.4*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C8-PFOSA	*163*		ng/L	*160.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: 13C9-PFNA	*161*		ng/L	*160.0*		*101*	*50-200*			04/11/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1016 - Method: 3512				**Prepared: 04/10/2023**							
Matrix Spike Dup (B3D1016-MSD1)	**Source: 2304034-01**										
Isotope Dilution Analog: d3-N-MeFOSAA	*164*		ng/L	*160.0*		*102*	*50-200*			04/11/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*171*		ng/L	*118.4*		*144*	*50-200*			04/11/2023	

EGLE

PFAS Analysis Request Sheet

Lab Work Order Number	Project Name	Matrix
2304058	Cedar Springs WWTP	WATER

Location ID: 41000010	Program:	Report CC Email 1: VorceK@Michigan.gov	Project TAT Days*: STD	Sample Collector: Wes Stambaugh
Dept-Division-District: EGLE-RRD-GR	Activity:	Report CC Email 2: James.Buzzell@aecom.com	Report Batch QC: Yes [X] No [ ]	Sample Collector Phone: 567-239-1351
State Project Manager: Kelly Moss	Funding Source:	Report CC Email 3: Wes.Stambaugh@aecom.com	Lab Use Only	Contract Firm: AECOM
State Project Manager Email: MossK@Michigan.gov	Location Code: 6G14	Overflow Lab Choice 1:	Sample Receipt Temperature: 1.0 °C	Contract Firm Primary Contact: James.Buzzell@aecom.com
State Project Manager Phone: 616-215-4588	SUD Location Code:	Overflow Lab Choice 2:	Received On Ice: Yes [X] No [ ]	Primary Contact Phone: 616-206-7528

*** Project Turnaround time (TAT) other than standard 21 days must be pre-approved and scheduled with the laboratory. Surcharges apply.**

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments
1		VAP-02 (76.8-81.8)	4/3/2023	12:00	4	;Sample MS/MSD Required For Batch QC
2		VAP-02 (52.8-57.8)	3/31/2023	11:25	2	
3		VAP-02 (66.5-71.5)	3/31/2023	16:40	2	
4		VAP-02 (85.3-90.3)	4/3/2023	15:40	2	
5		VAP-03 (26.1-31.1)	4/5/2023	10:00	2	
6		VAP-03 (26.1-31.1)-Dup	4/5/2023	10:00	2	Field Duplicate
7		VAP-03 (33.9-38.9)	4/6/2023	11:10	2	
8		VAP-03 (45.1-50.1)	4/6/2023	13:45	2	
9		VAP-03 (54.2-59.2)	4/6/2023	16:55	2	
10		Trip Blank	11/2/2022		2	
11				:	2	
12				:	2	
13				:	2	
14				:	2	
15				:	2	
16				:	2	
17				:	2	
18				:	2	
19				:	2	
20				:	2	

PFAS - Semi-Volatile Organic Compounds

PFAS - EPA 8327

Chain of Custody	Relinquished by	Received By	Date / Time
Print Name & Org.	Wes Stambaugh AECOM	Joshua Walker	04/07/2023 20:55
Signature:			
Print Name & Org.	Joshua Walker AECOM	Nicole Hendrigan	04/07/2023 13:00
Signature:			
Print Name			

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CORRECTED REPORT

21 April 2023

Work Order: 2304107

Price: $2,750.00

KELLY MOSS
EGLE-RRD-GRAND RAPIDS
350 Ottawa Ave. NW, Unit 10
Grand Rapids, MI 49503-2341

RE: CEDAR SPRINGS WWTP INVESTIGATION-PFAS

A correction has been made to the original report that was sent to you. A description of the correction should be present in the case narrative section of this report in order to clarify any changes.

This is the official environmental laboratory report for testing conducted by the Michigan Department of Environment, Great Lakes, and Energy. Analyses performed by the laboratory were conducted using methods published by the U.S. Environmental Protection Agency, Standard Methods for the Examination of Water and Wastewater, ASTM, or other published or approved reference methods.

Kirby Shane
Laboratory Director

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CORRECTED REPORT

EGLE-RRD-GRAND RAPIDS	Project: CEDAR SPRINGS WWTP INVESTIGATION-PFAS	
350 Ottawa Ave. NW, Unit 10	Site Code: 41000010	**Reported:**
Grand Rapids MI, 49503-2341	Project Manager: KELLY MOSS	04/21/2023

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
VAP-03 (97.2-102.2)	2304107-01	Water	04/10/2023	04/14/2023	
VAP-03 (64.8-69.8)	2304107-02	Water	04/07/2023	04/14/2023	
VAP-03 (74.3-79.3)	2304107-03	Water	04/07/2023	04/14/2023	
VAP-03 (84.7-89.7)	2304107-04	Water	04/07/2023	04/14/2023	
VAP-03 (105.9-110.9)	2304107-05	Water	04/11/2023	04/14/2023	
VAP-03 (113.8-118.8)	2304107-06	Water	04/11/2023	04/14/2023	
VAP-03 (127.1-132.1)	2304107-07	Water	04/12/2023	04/14/2023	
VAP-03 (127.1-132.1)	2304107-08	Water	04/12/2023	04/14/2023	
VAP-03 (137.0-142.0)	2304107-09	Water	04/13/2023	04/14/2023	
VAP-03 (146.5-151.5)	2304107-10	Water	04/13/2023	04/14/2023	
TRIP BLANK	2304107-11	Water	11/02/2022	04/14/2023	

Notes and Definitions

QIon	Result is estimated/suspect due to qualifier ion ratio outside of QC limits.
ND	Indicates compound analyzed for but not detected at or above the reporting limit (RL).
RL	Reporting Limit
NA	Not Applicable

Case Narrative

Samples were received **4/14/2023 1:30:00PM** for client **EGLE-RRD-GRAND RAPIDS** as a part of project **CEDAR SPRINGS WWTP INVESTIGATION-PFAS**.

Samples were logged and designated as Work Order # **2304107** on **4/14/2023 2:44:00PM**.

This Report was created **4/21/2023 8:35:56AM**.

Additional Notes/Narrative (if applicable):

This is an amended report. This report for laboratory work order 2304107, CEDAR SPRINGS WWTP INVESTIGATION-PFAS, received on 04/14/2023 13:30 has been modified from the original report. The collection times for samples 2304107-02 and 2304107-03 were corrected per request at the end of this report.

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CORRECTED REPORT

Client ID: VAP-03 (97.2-102.2)

Lab ID: 2304107-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/18/23	B3D1718	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/18/23	B3D1718	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
375-22-4	**PFBA**	**12**	4.0	ng/L	1	04/18/23	B3D1718	8327	
375-73-5	PFBS	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
335-76-2	**PFDA**	**3.3**	2.0	ng/L	1	04/18/23	B3D1718	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
375-85-9	**PFHpA**	**4.9**	2.0	ng/L	1	04/18/23	B3D1718	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
307-24-4	**PFHxA**	**5.6**	2.0	ng/L	1	04/18/23	B3D1718	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
375-95-1	**PFNA**	**3.0**	2.0	ng/L	1	04/18/23	B3D1718	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
335-67-1	**PFOA**	**4.9**	2.0	ng/L	1	04/18/23	B3D1718	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
2706-90-3	**PFPeA**	**6.2**	2.0	ng/L	1	04/18/23	B3D1718	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/18/23	B3D1718	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/18/23	B3D1718	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/18/23	B3D1718	8327	
Surrogate: 13C2-4:2FTS			*118 %*	*50-200*		*04/18/23*	B3D1718	*8327*	
Surrogate: 13C2-6:2FTS			*111 %*	*50-200*		*04/18/23*	B3D1718	*8327*	
Surrogate: 13C2-8:2FTS			*107 %*	*50-200*		*04/18/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA			*95.6 %*	*25-250*		*04/18/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA			*80.5 %*	*25-250*		*04/18/23*	B3D1718	*8327*	
Surrogate: 13C2-PFTeDA			*60.5 %*	*25-250*		*04/18/23*	B3D1718	*8327*	

Lab Work Order # 2304107

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CORRECTED REPORT

Client ID: VAP-03 (97.2-102.2)

Lab ID: 2304107-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
Surrogate: 13C3-HFPODA		*99.1 %*	*50-200*			*04/18/23*	B3D1718	*8327*	
Surrogate: 13C3-PFBS		*104 %*	*50-200*			*04/18/23*	B3D1718	*8327*	
Surrogate: 13C3-PFHxS		*103 %*	*50-200*			*04/18/23*	B3D1718	*8327*	
Surrogate: 13C4-PFBA		*99.2 %*	*50-200*			*04/18/23*	B3D1718	*8327*	
Surrogate: 13C4-PFHpA		*105 %*	*50-200*			*04/18/23*	B3D1718	*8327*	
Surrogate: 13C5-PFHxA		*104 %*	*50-200*			*04/18/23*	B3D1718	*8327*	
Surrogate: 13C5-PFPeA		*103 %*	*50-200*			*04/18/23*	B3D1718	*8327*	
Surrogate: 13C6-PFDA		*98.7 %*	*50-200*			*04/18/23*	B3D1718	*8327*	
Surrogate: 13C7-PFUnDA		*99.5 %*	*50-200*			*04/18/23*	B3D1718	*8327*	
Surrogate: 13C8-PFOA		*105 %*	*50-200*			*04/18/23*	B3D1718	*8327*	
Surrogate: 13C8-PFOS		*101 %*	*50-200*			*04/18/23*	B3D1718	*8327*	
Surrogate: 13C8-PFOSA		*97.9 %*	*50-200*			*04/18/23*	B3D1718	*8327*	
Surrogate: 13C9-PFNA		*102 %*	*50-200*			*04/18/23*	B3D1718	*8327*	
Surrogate: d3-N-MeFOSAA		*103 %*	*50-200*			*04/18/23*	B3D1718	*8327*	
Surrogate: d5-N-EtFOSAA		*138 %*	*50-200*			*04/18/23*	B3D1718	*8327*	

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CORRECTED REPORT

Client ID: VAP-03 (64.8-69.8)

Lab ID: 2304107-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-22-4	**PFBA**	**5.1**	4.0	ng/L	1	04/19/23	B3D1718	8327	
375-73-5	PFBS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-24-4	PFHxA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
355-46-4	**PFHxS**	**3.0**	2.0	ng/L	1	04/19/23	B3D1718	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-67-1	PFOA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
Surrogate: 13C2-4:2FTS			*101 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-6:2FTS			*102 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-8:2FTS			*103 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA			*93.7 %*	*25-250*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA			*77.7 %*	*25-250*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFTeDA			*56.4 %*	*25-250*		*04/19/23*	B3D1718	*8327*	

Lab Work Order # 2304107

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CORRECTED REPORT

Client ID: VAP-03 (64.8-69.8)

Lab ID: 2304107-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
	Surrogate: 13C3-HFPODA		*101 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C3-PFBS		*104 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C3-PFHxS		*101 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C4-PFBA		*101 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C4-PFHpA		*104 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C5-PFHxA		*104 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C5-PFPeA		*104 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C6-PFDA		*99.4 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C7-PFUnDA		*98.3 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOA		*105 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOS		*99.1 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOSA		*98.3 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C9-PFNA		*102 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: d3-N-MeFOSAA		*103 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: d5-N-EtFOSAA		*136 %*	*50-200*		*04/19/23*	B3D1718	*8327*	

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CORRECTED REPORT

Client ID: VAP-03 (74.3-79.3)

Lab ID: 2304107-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-22-4	PFBA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
375-73-5	**PFBS**	**2.6**	2.0	ng/L	1	04/19/23	B3D1718	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-24-4	PFHxA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-67-1	PFOA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-91-4	**PFPeS**	**2.0**	2.0	ng/L	1	04/19/23	B3D1718	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
Surrogate: 13C2-4:2FTS		*103 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-6:2FTS		*101 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-8:2FTS		*99.7 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA		*111 %*	*25-250*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA		*107 %*	*25-250*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFTeDA		*102 %*	*25-250*			*04/19/23*	B3D1718	*8327*	

Lab Work Order # 2304107

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CORRECTED REPORT

Client ID: VAP-03 (74.3-79.3)

Lab ID: 2304107-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
	Surrogate: 13C3-HFPODA		*103 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C3-PFBS		*105 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C3-PFHxS		*103 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C4-PFBA		*101 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C4-PFHpA		*107 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C5-PFHxA		*105 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C5-PFPeA		*105 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C6-PFDA		*106 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C7-PFUnDA		*108 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOA		*105 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOS		*101 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOSA		*98.0 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C9-PFNA		*106 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: d3-N-MeFOSAA		*101 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: d5-N-EtFOSAA		*138 %*		*50-200*	*04/19/23*	B3D1718	*8327*	

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CORRECTED REPORT

Client ID: VAP-03 (84.7-89.7)

Lab ID: 2304107-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
914637-49-3	**5:3FTCA**	**3.6**	2.0	ng/L	1	04/19/23	B3D1718	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-22-4	**PFBA**	**9.0**	4.0	ng/L	1	04/19/23	B3D1718	8327	
375-73-5	PFBS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-85-9	**PFHpA**	**2.4**	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-24-4	**PFHxA**	**14**	2.0	ng/L	1	04/19/23	B3D1718	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-67-1	**PFOA**	**2.9**	2.0	ng/L	1	04/19/23	B3D1718	8327	
1763-23-1	**PFOS**	**2.2**	2.0	ng/L	1	04/19/23	B3D1718	8327	QIon
754-91-6	PFOSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-90-3	**PFPeA**	**5.0**	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
Surrogate: 13C2-4:2FTS		*135 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-6:2FTS		*128 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-8:2FTS		*105 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA		*90.7 %*	*25-250*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA		*71.2 %*	*25-250*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFTeDA		*45.5 %*	*25-250*			*04/19/23*	B3D1718	*8327*	

Lab Work Order # 2304107

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P.O. Box 30270
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TEL: (517) 335-9800
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CORRECTED REPORT

Client ID: VAP-03 (84.7-89.7)

Lab ID: 2304107-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
	Surrogate: 13C3-HFPODA		*107 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C3-PFBS		*108 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C3-PFHxS		*108 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C4-PFBA		*105 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C4-PFHpA		*113 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C5-PFHxA		*111 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C5-PFPeA		*108 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C6-PFDA		*103 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C7-PFUnDA		*103 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOA		*113 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOS		*105 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOSA		*101 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C9-PFNA		*112 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: d3-N-MeFOSAA		*106 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: d5-N-EtFOSAA		*141 %*		*50-200*	*04/19/23*	B3D1718	*8327*	

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CORRECTED REPORT

Client ID: VAP-03 (105.9-110.9)

Lab ID: 2304107-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-22-4	PFBA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
375-73-5	**PFBS**	**2.3**	2.0	ng/L	1	04/19/23	B3D1718	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-24-4	PFHxA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-67-1	PFOA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
Surrogate: 13C2-4:2FTS			*110 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-6:2FTS			*111 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-8:2FTS			*99.0 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA			*100 %*	*25-250*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA			*85.7 %*	*25-250*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFTeDA			*66.2 %*	*25-250*		*04/19/23*	B3D1718	*8327*	

Lab Work Order # 2304107

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CORRECTED REPORT

Client ID: VAP-03 (105.9-110.9)

Lab ID: 2304107-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
Surrogate: 13C3-HFPODA			*108 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
Surrogate: 13C3-PFBS			*108 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
Surrogate: 13C3-PFHxS			*105 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
Surrogate: 13C4-PFBA			*103 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
Surrogate: 13C4-PFHpA			*110 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
Surrogate: 13C5-PFHxA			*108 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
Surrogate: 13C5-PFPeA			*108 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
Surrogate: 13C6-PFDA			*104 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
Surrogate: 13C7-PFUnDA			*103 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
Surrogate: 13C8-PFOA			*107 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
Surrogate: 13C8-PFOS			*104 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
Surrogate: 13C8-PFOSA			*100 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
Surrogate: 13C9-PFNA			*107 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
Surrogate: d3-N-MeFOSAA			*103 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
Surrogate: d5-N-EtFOSAA			*138 %*		*50-200*	*04/19/23*	B3D1718	*8327*	

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CORRECTED REPORT

Client ID: VAP-03 (113.8-118.8)

Lab ID: 2304107-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-22-4	PFBA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
375-73-5	**PFBS**	**3.9**	2.0	ng/L	1	04/19/23	B3D1718	8327	
30334-69-1	**PFBSA**	**2.3**	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-85-9	**PFHpA**	**3.7**	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-24-4	**PFHxA**	**7.3**	2.0	ng/L	1	04/19/23	B3D1718	8327	
355-46-4	**PFHxS**	**3.2**	2.0	ng/L	1	04/19/23	B3D1718	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-67-1	**PFOA**	**14**	2.0	ng/L	1	04/19/23	B3D1718	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-90-3	**PFPeA**	**11**	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
Surrogate: 13C2-4:2FTS		*108 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-6:2FTS		*113 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-8:2FTS		*100 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA		*103 %*	*25-250*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA		*88.2 %*	*25-250*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFTeDA		*68.4 %*	*25-250*			*04/19/23*	B3D1718	*8327*	

Lab Work Order # 2304107

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CORRECTED REPORT

Client ID: VAP-03 (113.8-118.8)

Lab ID: 2304107-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
Surrogate: 13C3-HFPODA		*117 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C3-PFBS		*109 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C3-PFHxS		*108 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C4-PFBA		*106 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C4-PFHpA		*111 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C5-PFHxA		*109 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C5-PFPeA		*109 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C6-PFDA		*105 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C7-PFUnDA		*106 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C8-PFOA		*111 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C8-PFOS		*103 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C8-PFOSA		*102 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C9-PFNA		*110 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: d3-N-MeFOSAA		*107 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: d5-N-EtFOSAA		*142 %*	*50-200*			*04/19/23*	B3D1718	*8327*	

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CORRECTED REPORT

Client ID: VAP-03 (127.1-132.1)

Lab ID: 2304107-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-22-4	PFBA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
375-73-5	PFBS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-24-4	PFHxA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-67-1	PFOA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
Surrogate: 13C2-4:2FTS			*106 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-6:2FTS			*105 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-8:2FTS			*114 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA			*109 %*	*25-250*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA			*92.1 %*	*25-250*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFTeDA			*69.5 %*	*25-250*		*04/19/23*	B3D1718	*8327*	

Lab Work Order # 2304107

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CORRECTED REPORT

Client ID: VAP-03 (127.1-132.1)

Lab ID: 2304107-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
	Surrogate: 13C3-HFPODA		*105 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C3-PFBS		*103 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C3-PFHxS		*104 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C4-PFBA		*101 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C4-PFHpA		*107 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C5-PFHxA		*106 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C5-PFPeA		*106 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C6-PFDA		*107 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C7-PFUnDA		*110 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOA		*107 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOS		*101 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOSA		*99.1 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C9-PFNA		*105 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: d3-N-MeFOSAA		*103 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: d5-N-EtFOSAA		*145 %*		*50-200*	*04/19/23*	B3D1718	*8327*	

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CORRECTED REPORT

Client ID: VAP-03 (127.1-132.1)

Lab ID: 2304107-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-22-4	PFBA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
375-73-5	PFBS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-24-4	PFHxA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-67-1	PFOA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
Surrogate: 13C2-4:2FTS			*106 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-6:2FTS			*103 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-8:2FTS			*98.1 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA			*95.0 %*	*25-250*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA			*81.6 %*	*25-250*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFTeDA			*63.9 %*	*25-250*		*04/19/23*	B3D1718	*8327*	

Lab Work Order # 2304107

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CORRECTED REPORT

Client ID: VAP-03 (127.1-132.1)

Lab ID: 2304107-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
	Surrogate: 13C3-HFPODA		*108 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C3-PFBS		*104 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C3-PFHxS		*103 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C4-PFBA		*100 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C4-PFHpA		*105 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C5-PFHxA		*105 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C5-PFPeA		*104 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C6-PFDA		*104 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C7-PFUnDA		*101 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOA		*103 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOS		*101 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOSA		*99.1 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C9-PFNA		*104 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: d3-N-MeFOSAA		*102 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: d5-N-EtFOSAA		*136 %*		*50-200*	*04/19/23*	B3D1718	*8327*	

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CORRECTED REPORT

Client ID: VAP-03 (137.0-142.0)

Lab ID: 2304107-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-22-4	PFBA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
375-73-5	PFBS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-24-4	**PFHxA**	**3.7**	2.0	ng/L	1	04/19/23	B3D1718	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-67-1	**PFOA**	**3.0**	2.0	ng/L	1	04/19/23	B3D1718	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-90-3	**PFPeA**	**6.0**	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
Surrogate: 13C2-4:2FTS		*109 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-6:2FTS		*110 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-8:2FTS		*134 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA		*139 %*	*25-250*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA		*132 %*	*25-250*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFTeDA		*122 %*	*25-250*			*04/19/23*	B3D1718	*8327*	

Lab Work Order # 2304107

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CORRECTED REPORT

Client ID: VAP-03 (137.0-142.0)

Lab ID: 2304107-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
	Surrogate: 13C3-HFPODA		*96.8 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C3-PFBS		*108 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C3-PFHxS		*105 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C4-PFBA		*103 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C4-PFHpA		*108 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C5-PFHxA		*109 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C5-PFPeA		*106 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C6-PFDA		*119 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C7-PFUnDA		*122 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOA		*110 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOS		*106 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOSA		*103 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C9-PFNA		*110 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: d3-N-MeFOSAA		*108 %*		*50-200*	*04/19/23*	B3D1718	*8327*	
	Surrogate: d5-N-EtFOSAA		*161 %*		*50-200*	*04/19/23*	B3D1718	*8327*	

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ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

CORRECTED REPORT

Client ID: VAP-03 (146.5-151.5)

Lab ID: 2304107-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-22-4	PFBA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
375-73-5	PFBS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-24-4	**PFHxA**	**5.7**	2.0	ng/L	1	04/19/23	B3D1718	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-67-1	PFOA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-90-3	**PFPeA**	**11**	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
Surrogate: 13C2-4:2FTS			*105 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-6:2FTS			*105 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-8:2FTS			*102 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA			*111 %*	*25-250*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA			*108 %*	*25-250*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFTeDA			*103 %*	*25-250*		*04/19/23*	B3D1718	*8327*	

Lab Work Order # 2304107

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CORRECTED REPORT

Client ID: VAP-03 (146.5-151.5)

Lab ID: 2304107-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
Surrogate: 13C3-HFPODA		*100 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C3-PFBS		*110 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C3-PFHxS		*106 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C4-PFBA		*104 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C4-PFHpA		*109 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C5-PFHxA		*108 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C5-PFPeA		*108 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C6-PFDA		*104 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C7-PFUnDA		*108 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C8-PFOA		*109 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C8-PFOS		*104 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C8-PFOSA		*101 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: 13C9-PFNA		*108 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: d3-N-MeFOSAA		*106 %*	*50-200*			*04/19/23*	B3D1718	*8327*	
Surrogate: d5-N-EtFOSAA		*143 %*	*50-200*			*04/19/23*	B3D1718	*8327*	

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CORRECTED REPORT

Client ID: TRIP BLANK

Lab ID: 2304107-11

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
919005-14-4	ADONA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-22-4	PFBA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
375-73-5	PFBS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
30334-69-1	PFBSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-76-2	PFDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-55-1	PFDoDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-77-3	PFDS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
646-83-3	PFECHS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-85-9	PFHpA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-92-8	PFHpS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
307-24-4	PFHxA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
355-46-4	PFHxS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
375-95-1	PFNA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
68259-12-1	PFNS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
335-67-1	PFOA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
1763-23-1	PFOS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
754-91-6	PFOSA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-90-3	PFPeA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
2706-91-4	PFPeS	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
376-06-7	PFTeDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	04/19/23	B3D1718	8327	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	04/19/23	B3D1718	8327	
Surrogate: 13C2-4:2FTS			*98.7 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-6:2FTS			*104 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-8:2FTS			*97.0 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA			*107 %*	*25-250*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA			*97.9 %*	*25-250*		*04/19/23*	B3D1718	*8327*	
Surrogate: 13C2-PFTeDA			*86.2 %*	*25-250*		*04/19/23*	B3D1718	*8327*	

Lab Work Order # 2304107

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CORRECTED REPORT

Client ID: TRIP BLANK

Lab ID: 2304107-11

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-PFAS Isotope Dilution									
	Surrogate: 13C3-HFPODA		*97.7 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C3-PFBS		*105 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C3-PFHxS		*103 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C4-PFBA		*101 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C4-PFHpA		*104 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C5-PFHxA		*105 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C5-PFPeA		*104 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C6-PFDA		*101 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C7-PFUnDA		*107 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOA		*106 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOS		*98.7 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C8-PFOSA		*98.5 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: 13C9-PFNA		*104 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: d3-N-MeFOSAA		*103 %*	*50-200*		*04/19/23*	B3D1718	*8327*	
	Surrogate: d5-N-EtFOSAA		*139 %*	*50-200*		*04/19/23*	B3D1718	*8327*	

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CORRECTED REPORT

Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1718 - Method: 3512				**Prepared: 04/17/2023**							
Blank (B3D1718-BLK1)											
11Cl-PF3OUdS	ND	2.0	ng/L							04/18/2023	
3:3FTCA	ND	4.0	ng/L							04/18/2023	
4:2FTS	ND	2.0	ng/L							04/18/2023	
5:3FTCA	ND	2.0	ng/L							04/18/2023	
6:2FTS	ND	2.0	ng/L							04/18/2023	
7:3FTCA	ND	2.0	ng/L							04/18/2023	
8:2FTS	ND	2.0	ng/L							04/18/2023	
9Cl-PF3ONS	ND	2.0	ng/L							04/18/2023	
ADONA	ND	2.0	ng/L							04/18/2023	
HFPO-DA	ND	4.0	ng/L							04/18/2023	
NEtFOSAA	ND	2.0	ng/L							04/18/2023	
NMeFOSAA	ND	2.0	ng/L							04/18/2023	
PFBA	ND	4.0	ng/L							04/18/2023	
PFBS	ND	2.0	ng/L							04/18/2023	
PFBSA	ND	2.0	ng/L							04/18/2023	
PFDA	ND	2.0	ng/L							04/18/2023	
PFDoDA	ND	2.0	ng/L							04/18/2023	
PFDS	ND	2.0	ng/L							04/18/2023	
PFECHS	ND	2.0	ng/L							04/18/2023	
PFHpA	ND	2.0	ng/L							04/18/2023	
PFHpS	ND	2.0	ng/L							04/18/2023	
PFHxA	ND	2.0	ng/L							04/18/2023	
PFHxS	ND	2.0	ng/L							04/18/2023	
PFHxSA	ND	2.0	ng/L							04/18/2023	
PFNA	ND	2.0	ng/L							04/18/2023	
PFNS	ND	2.0	ng/L							04/18/2023	
PFOA	ND	2.0	ng/L							04/18/2023	
PFOS	ND	2.0	ng/L							04/18/2023	
PFOSA	ND	2.0	ng/L							04/18/2023	
PFPeA	ND	2.0	ng/L							04/18/2023	
PFPeS	ND	2.0	ng/L							04/18/2023	
PFTeDA	ND	4.0	ng/L							04/18/2023	
PFTrDA	ND	4.0	ng/L							04/18/2023	
PFUnDA	ND	2.0	ng/L							04/18/2023	
Surrogate: 13C2-4:2FTS	*151*		ng/L	*150.0*		*101*	*50-200*			04/18/2023	
Surrogate: 13C2-6:2FTS	*156*		ng/L	*152.1*		*103*	*50-200*			04/18/2023	
Surrogate: 13C2-8:2FTS	*158*		ng/L	*153.5*		*103*	*50-200*			04/18/2023	
Surrogate: 13C2-PFDoDA	*174*		ng/L	*160.0*		*109*	*25-250*			04/18/2023	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA	*168*		ng/L	*160.0*		*105*	*25-250*			04/18/2023	
Surrogate: 13C2-PFTeDA	*160*		ng/L	*160.0*		*100*	*25-250*			04/18/2023	
Surrogate: 13C3-HFPODA	*314*		ng/L	*320.0*		*98.2*	*50-200*			04/18/2023	
Surrogate: 13C3-PFBS	*150*		ng/L	*149.0*		*100*	*50-200*			04/18/2023	
Surrogate: 13C3-PFHxS	*151*		ng/L	*151.6*		*99.8*	*50-200*			04/18/2023	
Surrogate: 13C4-PFBA	*161*		ng/L	*160.0*		*100*	*50-200*			04/18/2023	
Surrogate: 13C4-PFHpA	*162*		ng/L	*160.0*		*101*	*50-200*			04/18/2023	
Surrogate: 13C5-PFHxA	*162*		ng/L	*160.0*		*101*	*50-200*			04/18/2023	
Surrogate: 13C5-PFPeA	*163*		ng/L	*160.0*		*102*	*50-200*			04/18/2023	

Lab Work Order # 2304107

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CORRECTED REPORT

Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1718 - Method: 3512				**Prepared: 04/17/2023**							
Blank (B3D1718-BLK1)											
Surrogate: 13C6-PFDA	*165*		ng/L	*160.0*		*103*	*50-200*			04/18/2023	
Surrogate: 13C7-PFUnDA	*169*		ng/L	*160.0*		*106*	*50-200*			04/18/2023	
Surrogate: 13C8-PFOA	*165*		ng/L	*160.0*		*103*	*50-200*			04/18/2023	
Surrogate: 13C8-PFOS	*151*		ng/L	*153.4*		*98.8*	*50-200*			04/18/2023	
Surrogate: 13C8-PFOSA	*154*		ng/L	*160.0*		*96.5*	*50-200*			04/18/2023	
Surrogate: 13C9-PFNA	*166*		ng/L	*160.0*		*104*	*50-200*			04/18/2023	
Surrogate: d3-N-MeFOSAA	*166*		ng/L	*160.0*		*104*	*50-200*			04/18/2023	
Surrogate: d5-N-EtFOSAA	*164*		ng/L	*118.4*		*138*	*50-200*			04/18/2023	
LCS (B3D1718-BS1)											
11Cl-PF3OUdS	43.3	2.0	ng/L	37.72		115	70-130			04/18/2023	
3:3FTCA	48.3	4.0	ng/L	40.00		121	70-130			04/18/2023	
4:2FTS	43.5	2.0	ng/L	37.48		116	70-130			04/18/2023	
5:3FTCA	44.1	2.0	ng/L	40.00		110	70-130			04/18/2023	
6:2FTS	45.6	2.0	ng/L	38.04		120	70-130			04/18/2023	
7:3FTCA	48.2	2.0	ng/L	40.00		120	70-130			04/18/2023	
8:2FTS	43.7	2.0	ng/L	38.40		114	70-130			04/18/2023	
9Cl-PF3ONS	41.9	2.0	ng/L	37.32		112	70-130			04/18/2023	
ADONA	43.4	2.0	ng/L	37.80		115	70-130			04/18/2023	
HFPO-DA	41.9	4.0	ng/L	40.00		105	70-130			04/18/2023	
NEtFOSAA	42.9	2.0	ng/L	40.00		107	70-130			04/18/2023	
NMeFOSAA	42.9	2.0	ng/L	40.00		107	70-130			04/18/2023	
PFBA	46.2	4.0	ng/L	40.00		116	70-130			04/18/2023	
PFBS	39.4	2.0	ng/L	35.48		111	70-130			04/18/2023	
PFBSA	45.8	2.0	ng/L	40.00		114	70-130			04/18/2023	
PFDA	46.6	2.0	ng/L	40.00		117	70-130			04/18/2023	
PFDoDA	45.1	2.0	ng/L	40.00		113	70-130			04/18/2023	
PFDS	45.7	2.0	ng/L	38.60		118	70-130			04/18/2023	
PFECHS	42.1	2.0	ng/L	36.96		114	70-130			04/18/2023	
PFHpA	44.0	2.0	ng/L	40.00		110	70-130			04/18/2023	
PFHpS	45.1	2.0	ng/L	38.12		118	70-130			04/18/2023	
PFHxA	47.0	2.0	ng/L	40.00		118	70-130			04/18/2023	
PFHxS	43.4	2.0	ng/L	36.56		119	70-130			04/18/2023	
PFHxSA	46.0	2.0	ng/L	40.00		115	70-130			04/18/2023	
PFNA	45.6	2.0	ng/L	40.00		114	70-130			04/18/2023	
PFNS	44.9	2.0	ng/L	38.48		117	70-130			04/18/2023	
PFOA	45.5	2.0	ng/L	40.00		114	70-130			04/18/2023	
PFOS	43.1	2.0	ng/L	37.12		116	70-130			04/18/2023	
PFOSA	46.2	2.0	ng/L	40.00		116	70-130			04/18/2023	
PFPeA	46.8	2.0	ng/L	40.00		117	70-130			04/18/2023	
PFPeS	43.8	2.0	ng/L	37.64		116	70-130			04/18/2023	
PFTeDA	45.9	4.0	ng/L	40.00		115	70-130			04/18/2023	
PFTrDA	45.4	4.0	ng/L	40.00		113	70-130			04/18/2023	
PFUnDA	47.2	2.0	ng/L	40.00		118	70-130			04/18/2023	
Surrogate: 13C2-4:2FTS	*150*		ng/L	*150.0*		*99.7*	*50-200*			04/18/2023	
Surrogate: 13C2-6:2FTS	*155*		ng/L	*152.1*		*102*	*50-200*			04/18/2023	
Surrogate: 13C2-8:2FTS	*163*		ng/L	*153.5*		*106*	*50-200*			04/18/2023	

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CORRECTED REPORT

Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1718 - Method: 3512				**Prepared: 04/17/2023**							
LCS (B3D1718-BS1)											
Surrogate: 13C2-PFDoDA	*174*		ng/L	*160.0*		*109*	*25-250*			04/18/2023	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA	*163*		ng/L	*160.0*		*102*	*25-250*			04/18/2023	
Surrogate: 13C2-PFTeDA	*150*		ng/L	*160.0*		*93.7*	*25-250*			04/18/2023	
Surrogate: 13C3-HFPODA	*340*		ng/L	*320.0*		*106*	*50-200*			04/18/2023	
Surrogate: 13C3-PFBS	*157*		ng/L	*149.0*		*105*	*50-200*			04/18/2023	
Surrogate: 13C3-PFHxS	*156*		ng/L	*151.6*		*103*	*50-200*			04/18/2023	
Surrogate: 13C4-PFBA	*161*		ng/L	*160.0*		*101*	*50-200*			04/18/2023	
Surrogate: 13C4-PFHpA	*165*		ng/L	*160.0*		*103*	*50-200*			04/18/2023	
Surrogate: 13C5-PFHxA	*163*		ng/L	*160.0*		*102*	*50-200*			04/18/2023	
Surrogate: 13C5-PFPeA	*163*		ng/L	*160.0*		*102*	*50-200*			04/18/2023	
Surrogate: 13C6-PFDA	*163*		ng/L	*160.0*		*102*	*50-200*			04/18/2023	
Surrogate: 13C7-PFUnDA	*168*		ng/L	*160.0*		*105*	*50-200*			04/18/2023	
Surrogate: 13C8-PFOA	*167*		ng/L	*160.0*		*104*	*50-200*			04/18/2023	
Surrogate: 13C8-PFOS	*159*		ng/L	*153.4*		*104*	*50-200*			04/18/2023	
Surrogate: 13C8-PFOSA	*161*		ng/L	*160.0*		*100*	*50-200*			04/18/2023	
Surrogate: 13C9-PFNA	*164*		ng/L	*160.0*		*102*	*50-200*			04/18/2023	
Surrogate: d3-N-MeFOSAA	*169*		ng/L	*160.0*		*106*	*50-200*			04/18/2023	
Surrogate: d5-N-EtFOSAA	*171*		ng/L	*118.4*		*144*	*50-200*			04/18/2023	
LCS Dup (B3D1718-BSD1)											
11Cl-PF3OUdS	42.8	2.0	ng/L	37.72		114	70-130	1.11	200	04/18/2023	
3:3FTCA	46.1	4.0	ng/L	40.00		115	70-130	4.66	200	04/18/2023	
4:2FTS	42.4	2.0	ng/L	37.48		113	70-130	2.52	200	04/18/2023	
5:3FTCA	45.4	2.0	ng/L	40.00		113	70-130	2.77	200	04/18/2023	
6:2FTS	43.9	2.0	ng/L	38.04		115	70-130	3.93	200	04/18/2023	
7:3FTCA	46.2	2.0	ng/L	40.00		116	70-130	4.20	200	04/18/2023	
8:2FTS	47.6	2.0	ng/L	38.40		124	70-130	8.46	200	04/18/2023	
9Cl-PF3ONS	43.4	2.0	ng/L	37.32		116	70-130	3.33	200	04/18/2023	
ADONA	44.3	2.0	ng/L	37.80		117	70-130	2.10	200	04/18/2023	
HFPO-DA	47.6	4.0	ng/L	40.00		119	70-130	12.7	200	04/18/2023	
NEtFOSAA	44.4	2.0	ng/L	40.00		111	70-130	3.48	200	04/18/2023	
NMeFOSAA	43.9	2.0	ng/L	40.00		110	70-130	2.40	200	04/18/2023	
PFBA	46.7	4.0	ng/L	40.00		117	70-130	1.12	200	04/18/2023	
PFBS	39.4	2.0	ng/L	35.48		111	70-130	0.0508	200	04/18/2023	
PFBSA	48.1	2.0	ng/L	40.00		120	70-130	4.90	200	04/18/2023	
PFDA	47.9	2.0	ng/L	40.00		120	70-130	2.58	200	04/18/2023	
PFDoDA	45.8	2.0	ng/L	40.00		115	70-130	1.72	200	04/18/2023	
PFDS	47.2	2.0	ng/L	38.60		122	70-130	3.14	200	04/18/2023	
PFECHS	43.7	2.0	ng/L	36.96		118	70-130	3.73	200	04/18/2023	
PFHpA	46.2	2.0	ng/L	40.00		116	70-130	4.97	200	04/18/2023	
PFHpS	44.4	2.0	ng/L	38.12		116	70-130	1.74	200	04/18/2023	
PFHxA	47.2	2.0	ng/L	40.00		118	70-130	0.382	200	04/18/2023	
PFHxS	42.2	2.0	ng/L	36.56		116	70-130	2.80	200	04/18/2023	
PFHxSA	47.7	2.0	ng/L	40.00		119	70-130	3.71	200	04/18/2023	
PFNA	45.5	2.0	ng/L	40.00		114	70-130	0.0878	200	04/18/2023	
PFNS	45.0	2.0	ng/L	38.48		117	70-130	0.400	200	04/18/2023	
PFOA	45.3	2.0	ng/L	40.00		113	70-130	0.484	200	04/18/2023	

Lab Work Order # 2304107

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CORRECTED REPORT

Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1718 - Method: 3512				**Prepared: 04/17/2023**							
LCS Dup (B3D1718-BSD1)											
PFOS	44.7	2.0	ng/L	37.12		121	70-130	3.69	200	04/18/2023	
PFOSA	47.2	2.0	ng/L	40.00		118	70-130	2.01	200	04/18/2023	
PFPeA	47.1	2.0	ng/L	40.00		118	70-130	0.597	200	04/18/2023	
PFPeS	42.6	2.0	ng/L	37.64		113	70-130	2.78	200	04/18/2023	
PFTeDA	46.9	4.0	ng/L	40.00		117	70-130	2.20	200	04/18/2023	
PFTrDA	45.9	4.0	ng/L	40.00		115	70-130	1.23	200	04/18/2023	
PFUnDA	46.5	2.0	ng/L	40.00		116	70-130	1.45	200	04/18/2023	
Surrogate: 13C2-4:2FTS	*164*		ng/L	*150.0*		*110*	*50-200*			04/18/2023	
Surrogate: 13C2-6:2FTS	*162*		ng/L	*152.1*		*107*	*50-200*			04/18/2023	
Surrogate: 13C2-8:2FTS	*155*		ng/L	*153.5*		*101*	*50-200*			04/18/2023	
Surrogate: 13C2-PFDoDA	*177*		ng/L	*160.0*		*111*	*25-250*			04/18/2023	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA	*163*		ng/L	*160.0*		*102*	*25-250*			04/18/2023	
Surrogate: 13C2-PFTeDA	*143*		ng/L	*160.0*		*89.2*	*25-250*			04/18/2023	
Surrogate: 13C3-HFPODA	*356*		ng/L	*320.0*		*111*	*50-200*			04/18/2023	
Surrogate: 13C3-PFBS	*164*		ng/L	*149.0*		*110*	*50-200*			04/18/2023	
Surrogate: 13C3-PFHxS	*160*		ng/L	*151.6*		*105*	*50-200*			04/18/2023	
Surrogate: 13C4-PFBA	*171*		ng/L	*160.0*		*107*	*50-200*			04/18/2023	
Surrogate: 13C4-PFHpA	*172*		ng/L	*160.0*		*108*	*50-200*			04/18/2023	
Surrogate: 13C5-PFHxA	*170*		ng/L	*160.0*		*106*	*50-200*			04/18/2023	
Surrogate: 13C5-PFPeA	*171*		ng/L	*160.0*		*107*	*50-200*			04/18/2023	
Surrogate: 13C6-PFDA	*170*		ng/L	*160.0*		*106*	*50-200*			04/18/2023	
Surrogate: 13C7-PFUnDA	*174*		ng/L	*160.0*		*109*	*50-200*			04/18/2023	
Surrogate: 13C8-PFOA	*172*		ng/L	*160.0*		*107*	*50-200*			04/18/2023	
Surrogate: 13C8-PFOS	*161*		ng/L	*153.4*		*105*	*50-200*			04/18/2023	
Surrogate: 13C8-PFOSA	*162*		ng/L	*160.0*		*101*	*50-200*			04/18/2023	
Surrogate: 13C9-PFNA	*173*		ng/L	*160.0*		*108*	*50-200*			04/18/2023	
Surrogate: d3-N-MeFOSAA	*176*		ng/L	*160.0*		*110*	*50-200*			04/18/2023	
Surrogate: d5-N-EtFOSAA	*166*		ng/L	*118.4*		*140*	*50-200*			04/18/2023	
Matrix Spike (B3D1718-MS1)	**Source: 2304107-01**										
11Cl-PF3OUdS	42.9	2.0	ng/L	37.72	ND	114	70-130			04/18/2023	
3:3FTCA	45.9	4.0	ng/L	40.00	ND	115	70-130			04/18/2023	
4:2FTS	43.5	2.0	ng/L	37.48	ND	116	70-130			04/18/2023	
5:3FTCA	45.5	2.0	ng/L	40.00	ND	114	70-130			04/18/2023	
6:2FTS	45.5	2.0	ng/L	38.04	ND	120	70-130			04/18/2023	
7:3FTCA	46.6	2.0	ng/L	40.00	ND	117	70-130			04/18/2023	
8:2FTS	45.5	2.0	ng/L	38.40	ND	118	70-130			04/18/2023	
9Cl-PF3ONS	42.8	2.0	ng/L	37.32	ND	115	70-130			04/18/2023	
ADONA	44.5	2.0	ng/L	37.80	ND	118	70-130			04/18/2023	
HFPO-DA	46.0	4.0	ng/L	40.00	ND	115	70-130			04/18/2023	
NEtFOSAA	42.6	2.0	ng/L	40.00	ND	107	70-130			04/18/2023	
NMeFOSAA	44.1	2.0	ng/L	40.00	ND	110	70-130			04/18/2023	
PFBA	58.9	4.0	ng/L	40.00	12.3	117	70-130			04/18/2023	
PFBS	41.8	2.0	ng/L	35.48	1.52	114	70-130			04/18/2023	
PFBSA	46.5	2.0	ng/L	40.00	ND	116	70-130			04/18/2023	
PFDA	51.7	2.0	ng/L	40.00	3.28	121	70-130			04/18/2023	
PFDoDA	46.1	2.0	ng/L	40.00	1.34	112	70-130			04/18/2023	

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CORRECTED REPORT

Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1718 - Method: 3512				**Prepared: 04/17/2023**							
Matrix Spike (B3D1718-MS1)	**Source: 2304107-01**										
PFDS	43.5	2.0	ng/L	38.60	ND	113	70-130			04/18/2023	
PFECHS	43.8	2.0	ng/L	36.96	ND	119	70-130			04/18/2023	
PFHpA	52.2	2.0	ng/L	40.00	4.88	118	70-130			04/18/2023	
PFHpS	45.6	2.0	ng/L	38.12	ND	120	70-130			04/18/2023	
PFHxA	51.4	2.0	ng/L	40.00	5.64	114	70-130			04/18/2023	
PFHxS	42.3	2.0	ng/L	36.56	0.780	114	70-130			04/18/2023	
PFHxSA	46.5	2.0	ng/L	40.00	ND	116	70-130			04/18/2023	
PFNA	49.9	2.0	ng/L	40.00	2.98	117	70-130			04/18/2023	
PFNS	47.7	2.0	ng/L	38.48	ND	124	70-130			04/18/2023	
PFOA	51.1	2.0	ng/L	40.00	4.90	115	70-130			04/18/2023	
PFOS	43.9	2.0	ng/L	37.12	ND	118	70-130			04/18/2023	
PFOSA	46.6	2.0	ng/L	40.00	ND	117	70-130			04/18/2023	
PFPeA	52.9	2.0	ng/L	40.00	6.18	117	70-130			04/18/2023	
PFPeS	44.1	2.0	ng/L	37.64	0.560	116	70-130			04/18/2023	
PFTeDA	49.4	4.0	ng/L	40.00	ND	124	70-130			04/18/2023	
PFTrDA	42.8	4.0	ng/L	40.00	1.10	104	70-130			04/18/2023	
PFUnDA	49.7	2.0	ng/L	40.00	1.84	120	70-130			04/18/2023	
Surrogate: 13C2-4:2FTS	*184*		ng/L	*150.0*		*123*	*50-200*			04/18/2023	
Surrogate: 13C2-6:2FTS	*175*		ng/L	*152.1*		*115*	*50-200*			04/18/2023	
Surrogate: 13C2-8:2FTS	*201*		ng/L	*153.5*		*131*	*50-200*			04/18/2023	
Surrogate: 13C2-PFDoDA	*170*		ng/L	*160.0*		*106*	*25-250*			04/18/2023	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA	*143*		ng/L	*160.0*		*89.5*	*25-250*			04/18/2023	
Surrogate: 13C2-PFTeDA	*108*		ng/L	*160.0*		*67.5*	*25-250*			04/18/2023	
Surrogate: 13C3-HFPODA	*328*		ng/L	*320.0*		*102*	*50-200*			04/18/2023	
Surrogate: 13C3-PFBS	*159*		ng/L	*149.0*		*107*	*50-200*			04/18/2023	
Surrogate: 13C3-PFHxS	*159*		ng/L	*151.6*		*105*	*50-200*			04/18/2023	
Surrogate: 13C4-PFBA	*161*		ng/L	*160.0*		*101*	*50-200*			04/18/2023	
Surrogate: 13C4-PFHpA	*168*		ng/L	*160.0*		*105*	*50-200*			04/18/2023	
Surrogate: 13C5-PFHxA	*171*		ng/L	*160.0*		*107*	*50-200*			04/18/2023	
Surrogate: 13C5-PFPeA	*169*		ng/L	*160.0*		*105*	*50-200*			04/18/2023	
Surrogate: 13C6-PFDA	*169*		ng/L	*160.0*		*106*	*50-200*			04/18/2023	
Surrogate: 13C7-PFUnDA	*173*		ng/L	*160.0*		*108*	*50-200*			04/18/2023	
Surrogate: 13C8-PFOA	*171*		ng/L	*160.0*		*107*	*50-200*			04/18/2023	
Surrogate: 13C8-PFOS	*156*		ng/L	*153.4*		*102*	*50-200*			04/18/2023	
Surrogate: 13C8-PFOSA	*164*		ng/L	*160.0*		*102*	*50-200*			04/18/2023	
Surrogate: 13C9-PFNA	*165*		ng/L	*160.0*		*103*	*50-200*			04/18/2023	
Surrogate: d3-N-MeFOSAA	*165*		ng/L	*160.0*		*103*	*50-200*			04/18/2023	
Surrogate: d5-N-EtFOSAA	*178*		ng/L	*118.4*		*150*	*50-200*			04/18/2023	
Matrix Spike Dup (B3D1718-MSD1)	**Source: 2304107-01**										
11Cl-PF3OUdS	39.8	2.0	ng/L	37.72	ND	105	70-130	7.50	30	04/19/2023	
3:3FTCA	43.3	4.0	ng/L	40.00	ND	108	70-130	5.92	30	04/19/2023	
4:2FTS	39.5	2.0	ng/L	37.48	ND	105	70-130	9.55	30	04/19/2023	
5:3FTCA	43.0	2.0	ng/L	40.00	ND	107	70-130	5.70	30	04/19/2023	
6:2FTS	41.7	2.0	ng/L	38.04	ND	110	70-130	8.76	30	04/19/2023	
7:3FTCA	40.8	2.0	ng/L	40.00	ND	102	70-130	13.3	30	04/19/2023	
8:2FTS	42.4	2.0	ng/L	38.40	ND	110	70-130	7.10	30	04/19/2023	

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CORRECTED REPORT

Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1718 - Method: 3512				**Prepared: 04/17/2023**							
Matrix Spike Dup (B3D1718-MSD1)	**Source: 2304107-01**										
9Cl-PF3ONS	40.2	2.0	ng/L	37.32	ND	108	70-130	6.12	30	04/19/2023	
ADONA	40.9	2.0	ng/L	37.80	ND	108	70-130	8.39	30	04/19/2023	
HFPO-DA	43.6	4.0	ng/L	40.00	ND	109	70-130	5.40	30	04/19/2023	
NEtFOSAA	41.2	2.0	ng/L	40.00	ND	103	70-130	3.44	30	04/19/2023	
NMeFOSAA	44.3	2.0	ng/L	40.00	ND	111	70-130	0.633	30	04/19/2023	
PFBA	55.9	4.0	ng/L	40.00	12.3	109	70-130	5.22	30	04/19/2023	
PFBS	37.9	2.0	ng/L	35.48	1.52	102	70-130	9.93	30	04/19/2023	
PFBSA	45.2	2.0	ng/L	40.00	ND	113	70-130	3.01	30	04/19/2023	
PFDA	48.1	2.0	ng/L	40.00	3.28	112	70-130	7.05	30	04/19/2023	
PFDoDA	43.5	2.0	ng/L	40.00	1.34	105	70-130	5.76	30	04/19/2023	
PFDS	41.1	2.0	ng/L	38.60	ND	107	70-130	5.67	30	04/19/2023	
PFECHS	40.0	2.0	ng/L	36.96	ND	108	70-130	9.26	30	04/19/2023	
PFHpA	49.3	2.0	ng/L	40.00	4.88	111	70-130	5.75	30	04/19/2023	
PFHpS	41.6	2.0	ng/L	38.12	ND	109	70-130	9.36	30	04/19/2023	
PFHxA	48.9	2.0	ng/L	40.00	5.64	108	70-130	4.95	30	04/19/2023	
PFHxS	41.1	2.0	ng/L	36.56	0.780	110	70-130	2.88	30	04/19/2023	
PFHxSA	45.3	2.0	ng/L	40.00	ND	113	70-130	2.57	30	04/19/2023	
PFNA	46.5	2.0	ng/L	40.00	2.98	109	70-130	6.97	30	04/19/2023	
PFNS	42.7	2.0	ng/L	38.48	ND	111	70-130	11.1	30	04/19/2023	
PFOA	48.8	2.0	ng/L	40.00	4.90	110	70-130	4.48	30	04/19/2023	
PFOS	40.7	2.0	ng/L	37.12	ND	110	70-130	7.61	30	04/19/2023	
PFOSA	44.6	2.0	ng/L	40.00	ND	111	70-130	4.52	30	04/19/2023	
PFPeA	48.6	2.0	ng/L	40.00	6.18	106	70-130	8.39	30	04/19/2023	
PFPeS	42.6	2.0	ng/L	37.64	0.560	112	70-130	3.41	30	04/19/2023	
PFTeDA	42.2	4.0	ng/L	40.00	ND	106	70-130	15.8	30	04/19/2023	
PFTrDA	42.0	4.0	ng/L	40.00	1.10	102	70-130	1.89	30	04/19/2023	
PFUnDA	44.2	2.0	ng/L	40.00	1.84	106	70-130	11.7	30	04/19/2023	
Surrogate: 13C2-4:2FTS	*193*		ng/L	*150.0*		*129*	*50-200*			04/19/2023	
Surrogate: 13C2-6:2FTS	*179*		ng/L	*152.1*		*117*	*50-200*			04/19/2023	
Surrogate: 13C2-8:2FTS	*174*		ng/L	*153.5*		*113*	*50-200*			04/19/2023	
Surrogate: 13C2-PFDoDA	*180*		ng/L	*160.0*		*112*	*25-250*			04/19/2023	
Surrogate: 13C2-PFDoDA+13C2-PFTeDA	*170*		ng/L	*160.0*		*106*	*25-250*			04/19/2023	
Surrogate: 13C2-PFTeDA	*156*		ng/L	*160.0*		*97.8*	*25-250*			04/19/2023	
Surrogate: 13C3-HFPODA	*333*		ng/L	*320.0*		*104*	*50-200*			04/19/2023	
Surrogate: 13C3-PFBS	*167*		ng/L	*149.0*		*112*	*50-200*			04/19/2023	
Surrogate: 13C3-PFHxS	*164*		ng/L	*151.6*		*108*	*50-200*			04/19/2023	
Surrogate: 13C4-PFBA	*167*		ng/L	*160.0*		*104*	*50-200*			04/19/2023	
Surrogate: 13C4-PFHpA	*174*		ng/L	*160.0*		*109*	*50-200*			04/19/2023	
Surrogate: 13C5-PFHxA	*175*		ng/L	*160.0*		*109*	*50-200*			04/19/2023	
Surrogate: 13C5-PFPeA	*175*		ng/L	*160.0*		*110*	*50-200*			04/19/2023	
Surrogate: 13C6-PFDA	*170*		ng/L	*160.0*		*106*	*50-200*			04/19/2023	
Surrogate: 13C7-PFUnDA	*180*		ng/L	*160.0*		*112*	*50-200*			04/19/2023	
Surrogate: 13C8-PFOA	*177*		ng/L	*160.0*		*110*	*50-200*			04/19/2023	
Surrogate: 13C8-PFOS	*164*		ng/L	*153.4*		*107*	*50-200*			04/19/2023	
Surrogate: 13C8-PFOSA	*165*		ng/L	*160.0*		*103*	*50-200*			04/19/2023	
Surrogate: 13C9-PFNA	*175*		ng/L	*160.0*		*109*	*50-200*			04/19/2023	
Surrogate: d3-N-MeFOSAA	*171*		ng/L	*160.0*		*107*	*50-200*			04/19/2023	

Lab Work Order # 2304107

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CORRECTED REPORT

Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3D1718 - Method: 3512				**Prepared: 04/17/2023**							
Matrix Spike Dup (B3D1718-MSD1)	**Source: 2304107-01**										
Surrogate: d5-N-EtFOSAA	*170*		ng/L	*118.4*		*143*	*50-200*			04/19/2023	

Department of Environment, Great Lakes, and Energy
Laboratory Services Section

PFAS Analysis Request Sheet

EGLE

Lab Work Order Number	Project Name	Matrix
2304107	Cedar Springs WWTP	WATER

Location ID: 41000010	Program:	Report CC Email 1: VorceK@Michigan.gov	Project TAT Days*: STD	Sample Collector: Wes Stambaugh
Dept-Division-District: EGLE-RRD-GR	Activity:	Report CC Email 2: James.Buzzell@aecom.com	Report Batch QC: Yes [X] No [ ]	Sample Collector Phone: 567-239-1351
State Project Manager: Kelly Moss	Funding Source:	Report CC Email 3: Wes.Stambaugh@aecom.com	Lab Use Only	Contract Firm: AECOM
State Project Manager Email: MossK@Michigan.gov	Location Code: 6G14	Overflow Lab Choice 1:	Sample Receipt Temperature: 3.6 °C	Contract Firm Primary Contact: James.Buzzell@aecom.com
State Project Manager Phone: 616-215-4588	SUD Location Code:	Overflow Lab Choice 2:	Received On Ice: Yes [X] No [ ]	Primary Contact Phone: 616-206-7528

*** Project Turnaround time (TAT) other than standard 21 days must be pre-approved and scheduled with the laboratory. Surcharges apply.**

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments
1		VAP-03 (97.2-102.2)	4/10/2023	12:35	4	;Sample MS/MSD Required For Batch QC
2		VAP-03 (64.8-69.8)	4/7/2023	~~13:45~~	2	Collection time 11:10 per Wes, AECOM
3		VAP-03 (74.3-79.3)	4/7/2023	~~11:10~~	2	Collection time 13:45 per Wes, AECOM
4		VAP-03 (84.7-89.7)	4/7/2023	16:25	2	ks 4/21/2023
5		VAP-03 (105.9-110.9)	4/11/2023	12:35	2	
6		VAP-03 (113.8-118.8)	4/11/2023	17:35	2	
7		VAP-03 (127.1-132.1)	4/12/2023	13:15	2	
8		VAP-03 (127.1-132.1)	4/12/2023	13:15	2	Field Duplicate
9		VAP-03 (137.0-142.0)	4/13/2023	15:00	2	
10		VAP-03 (146.5-151.5)	4/13/2023	19:50	2	
11		Trip Blank	11/2/2022	:	2	
12				:	2	
13				:	2	
14				:	2	
15				:	2	
16				:	2	
17				:	2	
18				:	2	
19				:	2	
20				:	2	

PFAS - Semi-Volatile Organic Compounds

PFAS - EPA 8327

Chain of Custody

Relinquished by	Received By	Date / Time
Print Name & Org.: Wes Stambaugh AECOM Signature:		4/14/23 13:30 ~~04/13/2023 21:46~~
Print Name & Org.: Signature:		/ /2023 :
Print Name & Org.: Signature:		/ /2023 :

Shane, Kirby (EGLE)

From: Stambaugh, Wes <Wes.Stambaugh@aecom.com>
Sent: Thursday, April 20, 2023 10:02 AM
To: Shane, Kirby (EGLE)
Cc: Buzzell, James; Moss, Kelly (EGLE)
Subject: Cedar Springs WWTP - Environmental 8327 PFAS samples
Attachments: EGLE CoC Russell Ridge PFAS 230413 Revised.xlsx

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Hi Shane,

Recently, I delivered environmental PFAS samples to the state lab on Friday the 14th. The sample time was switched between VAP-03 (64.8-69.8) and VAP-03 (74.3-79.3). The revised CoC is attached. Please let me know if you have any questions or concerns. Apologies for the mistake.

Thank You,

Wes Stambaugh

Wes Stambaugh
Geologist I
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Appendix D

MICHIGAN DEPARTMENT OF
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ENVIRONMENTAL LABORATORY

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FAX: (517) 335-9600

07 August 2023

Work Order: 2308001

Price: $5,000.00

KELLY MOSS
EGLE-RRD-GRAND RAPIDS
350 Ottawa Ave. NW, Unit 10
Grand Rapids, MI 49503-2341

RE: CEDAR SPRINGS WWTP INVESTIGATION-PFAS

This is the official environmental laboratory report for testing conducted by the Michigan Department of Environment, Great Lakes, and Energy. Analyses performed by the laboratory were conducted using methods published by the U.S. Environmental Protection Agency, Standard Methods for the Examination of Water and Wastewater, ASTM, or other published or approved reference methods.

Kirby Shane
Laboratory Director

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EGLE-RRD-GRAND RAPIDS	Project: CEDAR SPRINGS WWTP INVESTIGATION-PFAS	
350 Ottawa Ave. NW, Unit 10	Site Code: 41000010	**Reported:**
Grand Rapids MI, 49503-2341	Project Manager: KELLY MOSS	08/07/2023

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
MW-01A-2307241355WPS	2308001-01	Water	07/24/2023	08/01/2023	
MW-01B-2307241455WPS	2308001-02	Water	07/24/2023	08/01/2023	
MW-03A-2307251045TLO	2308001-03	Water	07/25/2023	08/01/2023	
MW-01C-2307241535WPS	2308001-04	Water	07/24/2023	08/01/2023	
EB-2307251110TLO	2308001-05	Water	07/25/2023	08/01/2023	
MW-03B-2307251155TLO	2308001-06	Water	07/25/2023	08/01/2023	
MW-03C-2307251345TLO	2308001-07	Water	07/25/2023	08/01/2023	
MW-02A-2307251515TLO	2308001-08	Water	07/25/2023	08/01/2023	
MW-02C-2307260920TLO	2308001-09	Water	07/26/2023	08/01/2023	
MW-05C-2307261115TLO	2308001-10	Water	07/26/2023	08/01/2023	
MW-05B-2307261150TLO	2308001-11	Water	07/26/2023	08/01/2023	
MW-04A-2307270835TLO	2308001-12	Water	07/27/2023	08/01/2023	
MW-04B-2307270905TLO	2308001-13	Water	07/27/2023	08/01/2023	
MW-04B-2307270905TLO-DUP	2308001-14	Water	07/27/2023	08/01/2023	
MW-04C-2307270950TLO	2308001-15	Water	07/27/2023	08/01/2023	
MW-07C-2307271110TLO	2308001-16	Water	07/27/2023	08/01/2023	
MW-07B-2307310900TLO	2308001-17	Water	07/31/2023	08/01/2023	
MW-07A-2307310950TLO	2308001-18	Water	07/31/2023	08/01/2023	
MW-05A-2307311055TLO	2308001-19	Water	07/31/2023	08/01/2023	
MW-05A-2307311055TLO-DUP	2308001-20	Water	07/31/2023	08/01/2023	

Notes and Definitions

IDA01	Result is estimated/suspect due to isotope dilution analog recovery in the sample outside of QC limits.
ND	Indicates the analyte was not detected at or above the method reporting limit (RL)
RL	Reporting Limit
NA	Not Applicable

Case Narrative

Samples were received **8/1/2023 9:00:00AM** for client **EGLE-RRD-GRAND RAPIDS** as a part of project **CEDAR SPRINGS WWTP INVESTIGATION-PFAS**.

Samples were logged and designated as Work Order # **2308001** on **8/1/2023 9:43:00AM**.

This Report was created **8/7/2023 3:12:07PM**.

Additional Notes/Narrative (if applicable):

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Client ID: MW-01A-2307241355WPS

Lab ID: 2308001-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-73-5	**PFBS**	**2.8**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
307-24-4	**PFHxA**	**3.1**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-95-1	**PFNA**	**3.2**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
335-67-1	**PFOA**	**6.3**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
1763-23-1	**PFOS**	**13**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2706-90-3	**PFPeA**	**3.6**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*111 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*116 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*108 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*103 %*	*25-250*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*88.1 %*	*25-250*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*64.4 %*	*25-250*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*108 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-01A-2307241355WPS

Lab ID: 2308001-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*109 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*109 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*110 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*110 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*113 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*111 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*106 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*105 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*113 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*113 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*113 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*109 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*108 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*110 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-01B-2307241455WPS

Lab ID: 2308001-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-73-5	**PFBS**	**3.7**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
30334-69-1	**PFBSA**	**2.4**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-85-9	**PFHpA**	**2.1**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
307-24-4	**PFHxA**	**7.7**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-95-1	**PFNA**	**2.4**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
335-67-1	**PFOA**	**7.1**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
1763-23-1	**PFOS**	**3.3**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2706-90-3	**PFPeA**	**10**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*117 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*125 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*121 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*124 %*	*25-250*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*104 %*	*25-250*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*73.5 %*	*25-250*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*113 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-01B-2307241455WPS

Lab ID: 2308001-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*114 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*117 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*115 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*116 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*118 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*116 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*114 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*111 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*116 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*117 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*118 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*121 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*117 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*117 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-03A-2307251045TLO

Lab ID: 2308001-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-73-5	**PFBS**	**5.8**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
355-46-4	**PFHxS**	**2.4**	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/01/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/01/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*112 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*116 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*108 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*92.1 %*	*25-250*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*67.8 %*	*25-250*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*29.7 %*	*25-250*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*110 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*111 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-03A-2307251045TLO

Lab ID: 2308001-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*114 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*113 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*114 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*114 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*113 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*111 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*105 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*114 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*117 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*114 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*115 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*111 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*112 %*	*50-200*		*08/01/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-01C-2307241535WPS

Lab ID: 2308001-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*113 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*107 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*119 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*104 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*81.6 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-01C-2307241535WPS

Lab ID: 2308001-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*111 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*109 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

MICHIGAN DEPARTMENT OF
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Client ID: EB-2307251110TLO

Lab ID: 2308001-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*110 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*109 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*125 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*118 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*108 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*112 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*112 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: EB-2307251110TLO

Lab ID: 2308001-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*113 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*113 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*112 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*113 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*113 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*110 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*112 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*113 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-03B-2307251155TLO

Lab ID: 2308001-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-73-5	**PFBS**	**2.8**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-24-4	**PFHxA**	**2.2**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
355-46-4	**PFHxS**	**2.0**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-67-1	**PFOA**	**2.4**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-90-3	**PFPeA**	**3.5**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*123 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*108 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*104 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*87.9 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*63.5 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*111 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-03B-2307251155TLO

Lab ID: 2308001-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*108 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*104 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*111 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-03C-2307251345TLO

Lab ID: 2308001-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-24-4	**PFHxA**	**4.1**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-90-3	**PFPeA**	**9.8**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*113 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*121 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*116 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*102 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*80.5 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*108 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*112 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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ENVIRONMENTAL LABORATORY

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Client ID: MW-03C-2307251345TLO

Lab ID: 2308001-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*113 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*113 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-02A-2307251515TLO

Lab ID: 2308001-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-22-4	**PFBA**	**5.8**	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-73-5	**PFBS**	**9.9**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-67-1	**PFOA**	**3.9**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
1763-23-1	**PFOS**	**5.9**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*137 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*144 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*151 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*116 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*103 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*81.3 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*113 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*113 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-02A-2307251515TLO

Lab ID: 2308001-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*121 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*121 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*121 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*123 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*127 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*135 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-02C-2307260920TLO

Lab ID: 2308001-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-22-4	**PFBA**	**7.9**	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-73-5	**PFBS**	**3.7**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-85-9	**PFHpA**	**2.3**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-24-4	**PFHxA**	**6.1**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
355-46-4	**PFHxS**	**3.5**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-90-3	**PFPeA**	**18**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*112 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*121 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*113 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*95.0 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*66.6 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*111 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-02C-2307260920TLO

Lab ID: 2308001-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*111 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*109 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-05C-2307261115TLO

Lab ID: 2308001-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-24-4	**PFHxA**	**4.0**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-90-3	**PFPeA**	**7.8**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*125 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*120 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*103 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*75.1 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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ENVIRONMENTAL LABORATORY

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Client ID: MW-05C-2307261115TLO

Lab ID: 2308001-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-05B-2307261150TLO

Lab ID: 2308001-11

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-24-4	**PFHxA**	**3.5**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-90-3	**PFPeA**	**7.2**	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*120 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*116 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*97.3 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*68.1 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*108 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-05B-2307261150TLO

Lab ID: 2308001-11

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*108 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*120 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-04A-2307270835TLO

Lab ID: 2308001-12

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*133 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*129 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*126 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*106 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*74.3 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*124 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-04A-2307270835TLO

Lab ID: 2308001-12

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*121 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*121 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*122 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*126 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-04B-2307270905TLO

Lab ID: 2308001-13

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*124 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*129 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*110 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*79.3 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*107 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-04B-2307270905TLO

Lab ID: 2308001-13

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*121 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-04B-2307270905TLO-DUP

Lab ID: 2308001-14

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*123 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*112 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*121 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*106 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*81.8 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*120 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-04B-2307270905TLO-DUP

Lab ID: 2308001-14

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*121 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*122 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*120 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-04C-2307270950TLO

Lab ID: 2308001-15

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*125 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*120 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*126 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*112 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*89.6 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*116 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-04C-2307270950TLO

Lab ID: 2308001-15

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*121 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*120 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*114 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*112 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*120 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*115 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*117 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-07C-2307271110TLO

Lab ID: 2308001-16

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0143	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0143	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*119 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*128 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*123 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*131 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*110 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*77.2 %*	*25-250*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*120 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*122 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-07C-2307271110TLO

Lab ID: 2308001-16

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*122 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*123 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*124 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*123 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*122 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*120 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*118 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*122 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*124 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*124 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*122 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*120 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*122 %*	*50-200*		*08/02/23*	B3H0143	*8327*	*BM*	

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Client ID: MW-07B-2307310900TLO

Lab ID: 2308001-17

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*125 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*133 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*128 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*146 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*125 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*91.5 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*128 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*122 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: MW-07B-2307310900TLO

Lab ID: 2308001-17

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*125 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*123 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*126 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*129 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*126 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*127 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*125 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*128 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*123 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*129 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: MW-07A-2307310950TLO

Lab ID: 2308001-18

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	IDA01
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-73-5	**PFBS**	**3.3**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*150 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*182 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*211 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	*IDA01*
Isotope Dilution Analog: 13C2-PFDoDA			*143 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*123 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*91.8 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*118 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*121 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: MW-07A-2307310950TLO

Lab ID: 2308001-18

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*125 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*125 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*127 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*126 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*135 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*137 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*131 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*127 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*128 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*138 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*139 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*154 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: MW-05A-2307311055TLO

Lab ID: 2308001-19

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-73-5	**PFBS**	**3.1**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
355-46-4	**PFHxS**	**2.0**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-67-1	**PFOA**	**5.7**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
1763-23-1	**PFOS**	**8.7**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*127 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*125 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*112 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*123 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*106 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*78.9 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*123 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*122 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: MW-05A-2307311055TLO

Lab ID: 2308001-19

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*126 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*126 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*127 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*126 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*121 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*118 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*128 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*127 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*126 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*126 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*123 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*121 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: MW-05A-2307311055TLO-DUP

Lab ID: 2308001-20

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-73-5	**PFBS**	**2.8**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-67-1	**PFOA**	**6.5**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
1763-23-1	**PFOS**	**9.3**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*148 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*166 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*171 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*121 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*102 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*72.6 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*125 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: MW-05A-2307311055TLO-DUP

Lab ID: 2308001-20

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*123 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*125 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*125 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*123 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*125 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*128 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*123 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*127 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*126 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*128 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*134 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*134 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*139 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0143 - Method: 3512				**Prepared: 08/01/2023**							
Blank (B3H0143-BLK1)											
11Cl-PF3OUdS	ND	2.0	ng/L							08/01/2023	
3:3FTCA	ND	4.0	ng/L							08/01/2023	
4:2FTS	ND	2.0	ng/L							08/01/2023	
5:3FTCA	ND	2.0	ng/L							08/01/2023	
6:2FTS	ND	2.0	ng/L							08/01/2023	
7:3FTCA	ND	2.0	ng/L							08/01/2023	
8:2FTS	ND	2.0	ng/L							08/01/2023	
9Cl-PF3ONS	ND	2.0	ng/L							08/01/2023	
ADONA	ND	2.0	ng/L							08/01/2023	
HFPO-DA	ND	4.0	ng/L							08/01/2023	
NEtFOSAA	ND	2.0	ng/L							08/01/2023	
NMeFOSAA	ND	2.0	ng/L							08/01/2023	
PFBA	ND	4.0	ng/L							08/01/2023	
PFBS	ND	2.0	ng/L							08/01/2023	
PFBSA	ND	2.0	ng/L							08/01/2023	
PFDA	ND	2.0	ng/L							08/01/2023	
PFDoDA	ND	2.0	ng/L							08/01/2023	
PFDS	ND	2.0	ng/L							08/01/2023	
PFECHS	ND	2.0	ng/L							08/01/2023	
PFHpA	ND	2.0	ng/L							08/01/2023	
PFHpS	ND	2.0	ng/L							08/01/2023	
PFHxA	ND	2.0	ng/L							08/01/2023	
PFHxS	ND	2.0	ng/L							08/01/2023	
PFHxSA	ND	2.0	ng/L							08/01/2023	
PFNA	ND	2.0	ng/L							08/01/2023	
PFNS	ND	2.0	ng/L							08/01/2023	
PFOA	ND	2.0	ng/L							08/01/2023	
PFOS	ND	2.0	ng/L							08/01/2023	
PFOSA	ND	2.0	ng/L							08/01/2023	
PFPeA	ND	2.0	ng/L							08/01/2023	
PFPeS	ND	2.0	ng/L							08/01/2023	
PFTeDA	ND	4.0	ng/L							08/01/2023	
PFTrDA	ND	4.0	ng/L							08/01/2023	
PFUnDA	ND	2.0	ng/L							08/01/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*160*		ng/L	*149.9*		*106*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*173*		ng/L	*152.0*		*114*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*163*		ng/L	*153.5*		*106*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*203*		ng/L	*160.0*		*127*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*190*		ng/L	*160.0*		*119*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*169*		ng/L	*160.0*		*105*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C3-HFPODA	*353*		ng/L	*320.0*		*110*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C3-PFBS	*157*		ng/L	*149.0*		*106*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C3-PFHxS	*164*		ng/L	*151.6*		*108*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C4-PFBA	*175*		ng/L	*160.0*		*110*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C4-PFHpA	*171*		ng/L	*160.0*		*107*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C5-PFHxA	*175*		ng/L	*160.0*		*109*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C5-PFPeA	*172*		ng/L	*160.0*		*108*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C6-PFDA	*175*		ng/L	*160.0*		*110*	*50-200*			08/01/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0143 - Method: 3512				**Prepared: 08/01/2023**							
Blank (B3H0143-BLK1)											
Isotope Dilution Analog: 13C7-PFUnDA	*176*		ng/L	*160.0*		*110*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOA	*178*		ng/L	*160.0*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOS	*172*		ng/L	*153.3*		*112*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOSA	*174*		ng/L	*160.0*		*109*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C9-PFNA	*177*		ng/L	*160.0*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*179*		ng/L	*160.0*		*112*	*50-200*			08/01/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*182*		ng/L	*160.0*		*113*	*50-200*			08/01/2023	
LCS (B3H0143-BS1)											
11Cl-PF3OUdS	35.7	2.0	ng/L	37.72		94.5	70-130			08/01/2023	
3:3FTCA	36.9	4.0	ng/L	40.00		92.2	70-130			08/01/2023	
4:2FTS	36.1	2.0	ng/L	37.48		96.3	70-130			08/01/2023	
5:3FTCA	36.1	2.0	ng/L	40.00		90.4	70-130			08/01/2023	
6:2FTS	34.4	2.0	ng/L	38.04		90.5	70-130			08/01/2023	
7:3FTCA	34.3	2.0	ng/L	40.00		85.7	70-130			08/01/2023	
8:2FTS	36.3	2.0	ng/L	38.40		94.5	70-130			08/01/2023	
9Cl-PF3ONS	35.5	2.0	ng/L	37.32		95.1	70-130			08/01/2023	
ADONA	35.5	2.0	ng/L	37.80		94.0	70-130			08/01/2023	
HFPO-DA	37.6	4.0	ng/L	40.00		94.1	70-130			08/01/2023	
NEtFOSAA	36.8	2.0	ng/L	40.00		92.0	70-130			08/01/2023	
NMeFOSAA	37.8	2.0	ng/L	40.00		94.4	70-130			08/01/2023	
PFBA	37.5	4.0	ng/L	40.00		93.6	70-130			08/01/2023	
PFBS	34.1	2.0	ng/L	35.48		96.1	70-130			08/01/2023	
PFBSA	36.1	2.0	ng/L	40.00		90.2	70-130			08/01/2023	
PFDA	41.0	2.0	ng/L	40.00		102	70-130			08/01/2023	
PFDoDA	38.0	2.0	ng/L	40.00		94.9	70-130			08/01/2023	
PFDS	37.9	2.0	ng/L	38.60		98.3	70-130			08/01/2023	
PFECHS	34.9	2.0	ng/L	36.96		94.5	70-130			08/01/2023	
PFHpA	37.8	2.0	ng/L	40.00		94.4	70-130			08/01/2023	
PFHpS	38.2	2.0	ng/L	38.12		100	70-130			08/01/2023	
PFHxA	37.3	2.0	ng/L	40.00		93.3	70-130			08/01/2023	
PFHxS	36.4	2.0	ng/L	36.56		99.6	70-130			08/01/2023	
PFHxSA	36.0	2.0	ng/L	40.00		90.0	70-130			08/01/2023	
PFNA	37.3	2.0	ng/L	40.00		93.4	70-130			08/01/2023	
PFNS	39.2	2.0	ng/L	38.48		102	70-130			08/01/2023	
PFOA	38.3	2.0	ng/L	40.00		95.8	70-130			08/01/2023	
PFOS	36.6	2.0	ng/L	37.12		98.5	70-130			08/01/2023	
PFOSA	37.6	2.0	ng/L	40.00		93.9	70-130			08/01/2023	
PFPeA	37.9	2.0	ng/L	40.00		94.6	70-130			08/01/2023	
PFPeS	35.6	2.0	ng/L	37.64		94.5	70-130			08/01/2023	
PFTeDA	39.2	4.0	ng/L	40.00		98.0	70-130			08/01/2023	
PFTrDA	34.4	4.0	ng/L	40.00		86.0	70-130			08/01/2023	
PFUnDA	39.9	2.0	ng/L	40.00		99.6	70-130			08/01/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*153*		ng/L	*149.9*		*102*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*171*		ng/L	*152.0*		*112*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*164*		ng/L	*153.5*		*107*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*205*		ng/L	*160.0*		*128*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*199*		ng/L	*160.0*		*124*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*188*		ng/L	*160.0*		*118*	*25-250*			08/01/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0143 - Method: 3512				**Prepared: 08/01/2023**							
LCS (B3H0143-BS1)											
Isotope Dilution Analog: 13C3-HFPODA	*345*		ng/L	*320.0*		*108*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C3-PFBS	*160*		ng/L	*149.0*		*107*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C3-PFHxS	*168*		ng/L	*151.6*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C4-PFBA	*178*		ng/L	*160.0*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C4-PFHpA	*177*		ng/L	*160.0*		*110*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C5-PFHxA	*176*		ng/L	*160.0*		*110*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C5-PFPeA	*173*		ng/L	*160.0*		*108*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C6-PFDA	*174*		ng/L	*160.0*		*109*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*174*		ng/L	*160.0*		*109*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOA	*175*		ng/L	*160.0*		*109*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOS	*170*		ng/L	*153.3*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOSA	*179*		ng/L	*160.0*		*112*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C9-PFNA	*179*		ng/L	*160.0*		*112*	*50-200*			08/01/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*178*		ng/L	*160.0*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*183*		ng/L	*160.0*		*114*	*50-200*			08/01/2023	
LCS Dup (B3H0143-BSD1)											
11Cl-PF3OUdS	35.9	2.0	ng/L	37.72		95.2	70-130	0.726	200	08/01/2023	
3:3FTCA	36.7	4.0	ng/L	40.00		91.6	70-130	0.598	200	08/01/2023	
4:2FTS	35.7	2.0	ng/L	37.48		95.4	70-130	1.00	200	08/01/2023	
5:3FTCA	36.9	2.0	ng/L	40.00		92.3	70-130	2.14	200	08/01/2023	
6:2FTS	36.8	2.0	ng/L	38.04		96.7	70-130	6.63	200	08/01/2023	
7:3FTCA	32.5	2.0	ng/L	40.00		81.3	70-130	5.27	200	08/01/2023	
8:2FTS	36.9	2.0	ng/L	38.40		96.0	70-130	1.53	200	08/01/2023	
9Cl-PF3ONS	35.0	2.0	ng/L	37.32		93.7	70-130	1.42	200	08/01/2023	
ADONA	35.5	2.0	ng/L	37.80		93.8	70-130	0.169	200	08/01/2023	
HFPO-DA	40.0	4.0	ng/L	40.00		100	70-130	6.08	200	08/01/2023	
NEtFOSAA	38.6	2.0	ng/L	40.00		96.4	70-130	4.78	200	08/01/2023	
NMeFOSAA	38.1	2.0	ng/L	40.00		95.2	70-130	0.791	200	08/01/2023	
PFBA	37.6	4.0	ng/L	40.00		94.0	70-130	0.373	200	08/01/2023	
PFBS	34.2	2.0	ng/L	35.48		96.5	70-130	0.410	200	08/01/2023	
PFBSA	36.2	2.0	ng/L	40.00		90.4	70-130	0.277	200	08/01/2023	
PFDA	38.5	2.0	ng/L	40.00		96.4	70-130	6.09	200	08/01/2023	
PFDoDA	40.0	2.0	ng/L	40.00		100	70-130	5.28	200	08/01/2023	
PFDS	36.7	2.0	ng/L	38.60		95.1	70-130	3.27	200	08/01/2023	
PFECHS	35.0	2.0	ng/L	36.96		94.6	70-130	0.172	200	08/01/2023	
PFHpA	39.8	2.0	ng/L	40.00		99.4	70-130	5.16	200	08/01/2023	
PFHpS	38.8	2.0	ng/L	38.12		102	70-130	1.66	200	08/01/2023	
PFHxA	37.8	2.0	ng/L	40.00		94.6	70-130	1.38	200	08/01/2023	
PFHxS	36.4	2.0	ng/L	36.56		99.5	70-130	0.110	200	08/01/2023	
PFHxSA	36.3	2.0	ng/L	40.00		90.7	70-130	0.719	200	08/01/2023	
PFNA	37.9	2.0	ng/L	40.00		94.7	70-130	1.44	200	08/01/2023	
PFNS	35.8	2.0	ng/L	38.48		93.0	70-130	9.02	200	08/01/2023	
PFOA	37.9	2.0	ng/L	40.00		94.8	70-130	1.15	200	08/01/2023	
PFOS	36.5	2.0	ng/L	37.12		98.3	70-130	0.274	200	08/01/2023	
PFOSA	37.7	2.0	ng/L	40.00		94.4	70-130	0.478	200	08/01/2023	
PFPeA	38.5	2.0	ng/L	40.00		96.3	70-130	1.73	200	08/01/2023	
PFPeS	37.2	2.0	ng/L	37.64		98.7	70-130	4.34	200	08/01/2023	
PFTeDA	38.4	4.0	ng/L	40.00		96.1	70-130	1.96	200	08/01/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0143 - Method: 3512				**Prepared: 08/01/2023**							
LCS Dup (B3H0143-BSD1)											
PFTrDA	36.2	4.0	ng/L	40.00		90.4	70-130	5.05	200	08/01/2023	
PFUnDA	39.3	2.0	ng/L	40.00		98.4	70-130	1.31	200	08/01/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*156*		ng/L	*149.9*		*104*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*170*		ng/L	*152.0*		*112*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*170*		ng/L	*153.5*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*201*		ng/L	*160.0*		*126*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*186*		ng/L	*160.0*		*116*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*161*		ng/L	*160.0*		*101*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C3-HFPODA	*354*		ng/L	*320.0*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C3-PFBS	*162*		ng/L	*149.0*		*109*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C3-PFHxS	*164*		ng/L	*151.6*		*108*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C4-PFBA	*179*		ng/L	*160.0*		*112*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C4-PFHpA	*176*		ng/L	*160.0*		*110*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C5-PFHxA	*178*		ng/L	*160.0*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C5-PFPeA	*176*		ng/L	*160.0*		*110*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C6-PFDA	*170*		ng/L	*160.0*		*107*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*178*		ng/L	*160.0*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOA	*179*		ng/L	*160.0*		*112*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOS	*177*		ng/L	*153.3*		*115*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOSA	*180*		ng/L	*160.0*		*113*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C9-PFNA	*181*		ng/L	*160.0*		*113*	*50-200*			08/01/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*182*		ng/L	*160.0*		*114*	*50-200*			08/01/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*184*		ng/L	*160.0*		*115*	*50-200*			08/01/2023	
MRL Check (B3H0143-MRL1)											
11Cl-PF3OUdS	3.44	2.0	ng/L	3.772		91.2	50-150			08/01/2023	
3:3FTCA	3.60	4.0	ng/L	4.000		90.0	50-150			08/01/2023	
4:2FTS	3.48	2.0	ng/L	3.748		92.8	50-150			08/01/2023	
5:3FTCA	3.32	2.0	ng/L	4.000		83.0	50-150			08/01/2023	
6:2FTS	2.96	2.0	ng/L	3.804		77.8	50-150			08/01/2023	
7:3FTCA	3.28	2.0	ng/L	4.000		82.0	50-150			08/01/2023	
8:2FTS	3.40	2.0	ng/L	3.840		88.5	50-150			08/01/2023	
9Cl-PF3ONS	3.36	2.0	ng/L	3.732		90.0	50-150			08/01/2023	
ADONA	3.38	2.0	ng/L	3.780		89.4	50-150			08/01/2023	
HFPO-DA	3.62	4.0	ng/L	4.000		90.5	50-150			08/01/2023	
NEtFOSAA	4.06	2.0	ng/L	4.000		102	50-150			08/01/2023	
NMeFOSAA	3.60	2.0	ng/L	4.000		90.0	50-150			08/01/2023	
PFBA	2.62	4.0	ng/L	4.000		65.5	50-150			08/01/2023	
PFBS	2.86	2.0	ng/L	3.548		80.6	50-150			08/01/2023	
PFBSA	3.64	2.0	ng/L	4.000		91.0	50-150			08/01/2023	
PFDA	3.46	2.0	ng/L	4.000		86.5	50-150			08/01/2023	
PFDoDA	3.58	2.0	ng/L	4.000		89.5	50-150			08/01/2023	
PFDS	3.16	2.0	ng/L	3.860		81.9	50-150			08/01/2023	
PFECHS	3.18	2.0	ng/L	3.696		86.0	50-150			08/01/2023	
PFHpA	3.40	2.0	ng/L	4.000		85.0	50-150			08/01/2023	
PFHpS	3.78	2.0	ng/L	3.812		99.2	50-150			08/01/2023	
PFHxA	3.04	2.0	ng/L	4.000		76.0	50-150			08/01/2023	
PFHxS	3.42	2.0	ng/L	3.656		93.5	50-150			08/01/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0143 - Method: 3512				**Prepared: 08/01/2023**							
MRL Check (B3H0143-MRL1)											
PFHxSA	3.58	2.0	ng/L	4.000		89.5	50-150			08/01/2023	
PFNA	3.22	2.0	ng/L	4.000		80.5	50-150			08/01/2023	
PFNS	3.52	2.0	ng/L	3.848		91.5	50-150			08/01/2023	
PFOA	3.68	2.0	ng/L	4.000		92.0	50-150			08/01/2023	
PFOS	3.18	2.0	ng/L	3.712		85.7	50-150			08/01/2023	
PFOSA	3.78	2.0	ng/L	4.000		94.5	50-150			08/01/2023	
PFPeA	3.34	2.0	ng/L	4.000		83.5	50-150			08/01/2023	
PFPeS	3.42	2.0	ng/L	3.764		90.9	50-150			08/01/2023	
PFTeDA	3.54	4.0	ng/L	4.000		88.5	50-150			08/01/2023	
PFTrDA	3.30	4.0	ng/L	4.000		82.5	50-150			08/01/2023	
PFUnDA	3.54	2.0	ng/L	4.000		88.5	50-150			08/01/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*162*		ng/L	*149.9*		*108*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*176*		ng/L	*152.0*		*116*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*179*		ng/L	*153.5*		*116*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*209*		ng/L	*160.0*		*131*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*194*		ng/L	*160.0*		*121*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*170*		ng/L	*160.0*		*106*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C3-HFPODA	*340*		ng/L	*320.0*		*106*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C3-PFBS	*158*		ng/L	*149.0*		*106*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C3-PFHxS	*164*		ng/L	*151.6*		*108*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C4-PFBA	*174*		ng/L	*160.0*		*108*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C4-PFHpA	*177*		ng/L	*160.0*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C5-PFHxA	*175*		ng/L	*160.0*		*109*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C5-PFPeA	*172*		ng/L	*160.0*		*108*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C6-PFDA	*177*		ng/L	*160.0*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*178*		ng/L	*160.0*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOA	*176*		ng/L	*160.0*		*110*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOS	*170*		ng/L	*153.3*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOSA	*180*		ng/L	*160.0*		*113*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C9-PFNA	*181*		ng/L	*160.0*		*113*	*50-200*			08/01/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*178*		ng/L	*160.0*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*183*		ng/L	*160.0*		*115*	*50-200*			08/01/2023	
Matrix Spike (B3H0143-MS1)	**Source: 2307329-01**										
11Cl-PF3OUdS	33.9	2.0	ng/L	37.72	ND	89.8	70-130			08/01/2023	
3:3FTCA	39.3	4.0	ng/L	40.00	ND	98.3	70-130			08/01/2023	
4:2FTS	35.1	2.0	ng/L	37.48	ND	93.5	70-130			08/01/2023	
5:3FTCA	38.6	2.0	ng/L	40.00	ND	96.4	70-130			08/01/2023	
6:2FTS	36.2	2.0	ng/L	38.04	ND	95.2	70-130			08/01/2023	
7:3FTCA	32.6	2.0	ng/L	40.00	ND	81.4	70-130			08/01/2023	
8:2FTS	38.8	2.0	ng/L	38.40	ND	101	70-130			08/01/2023	
9Cl-PF3ONS	35.6	2.0	ng/L	37.32	ND	95.3	70-130			08/01/2023	
ADONA	36.6	2.0	ng/L	37.80	ND	96.7	70-130			08/01/2023	
HFPO-DA	39.1	4.0	ng/L	40.00	ND	97.8	70-130			08/01/2023	
NEtFOSAA	39.1	2.0	ng/L	40.00	ND	97.6	70-130			08/01/2023	
NMeFOSAA	38.5	2.0	ng/L	40.00	ND	96.2	70-130			08/01/2023	
PFBA	47.3	4.0	ng/L	40.00	8.68	96.5	70-130			08/01/2023	
PFBS	39.2	2.0	ng/L	35.48	2.58	103	70-130			08/01/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0143 - Method: 3512				**Prepared: 08/01/2023**							
Matrix Spike (B3H0143-MS1)	**Source: 2307329-01**										
PFBSA	36.5	2.0	ng/L	40.00	0.840	89.0	70-130			08/01/2023	
PFDA	38.9	2.0	ng/L	40.00	ND	97.4	70-130			08/01/2023	
PFDoDA	39.6	2.0	ng/L	40.00	ND	99.1	70-130			08/01/2023	
PFDS	34.7	2.0	ng/L	38.60	ND	89.8	70-130			08/01/2023	
PFECHS	34.8	2.0	ng/L	36.96	0.860	91.9	70-130			08/01/2023	
PFHpA	43.6	2.0	ng/L	40.00	4.16	98.6	70-130			08/01/2023	
PFHpS	38.7	2.0	ng/L	38.12	ND	101	70-130			08/01/2023	
PFHxA	52.5	2.0	ng/L	40.00	13.3	97.9	70-130			08/01/2023	
PFHxS	38.7	2.0	ng/L	36.56	2.34	99.5	70-130			08/01/2023	
PFHxSA	37.2	2.0	ng/L	40.00	ND	93.0	70-130			08/01/2023	
PFNA	39.7	2.0	ng/L	40.00	ND	99.2	70-130			08/01/2023	
PFNS	35.7	2.0	ng/L	38.48	ND	92.7	70-130			08/01/2023	
PFOA	49.0	2.0	ng/L	40.00	8.90	100	70-130			08/01/2023	
PFOS	36.1	2.0	ng/L	37.12	ND	97.1	70-130			08/01/2023	
PFOSA	38.6	2.0	ng/L	40.00	ND	96.4	70-130			08/01/2023	
PFPeA	47.3	2.0	ng/L	40.00	7.62	99.2	70-130			08/01/2023	
PFPeS	36.5	2.0	ng/L	37.64	1.24	93.6	70-130			08/01/2023	
PFTeDA	39.5	4.0	ng/L	40.00	ND	98.8	70-130			08/01/2023	
PFTrDA	34.2	4.0	ng/L	40.00	ND	85.4	70-130			08/01/2023	
PFUnDA	39.6	2.0	ng/L	40.00	ND	99.0	70-130			08/01/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*210*		ng/L	*149.9*		*140*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*257*		ng/L	*152.0*		*169*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*259*		ng/L	*153.5*		*169*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*182*		ng/L	*160.0*		*114*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*161*		ng/L	*160.0*		*100*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*127*		ng/L	*160.0*		*79.3*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C3-HFPODA	*323*		ng/L	*320.0*		*101*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C3-PFBS	*157*		ng/L	*149.0*		*105*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C3-PFHxS	*167*		ng/L	*151.6*		*110*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C4-PFBA	*162*		ng/L	*160.0*		*101*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C4-PFHpA	*179*		ng/L	*160.0*		*112*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C5-PFHxA	*178*		ng/L	*160.0*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C5-PFPeA	*173*		ng/L	*160.0*		*108*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C6-PFDA	*186*		ng/L	*160.0*		*116*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*180*		ng/L	*160.0*		*113*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOA	*186*		ng/L	*160.0*		*116*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOS	*173*		ng/L	*153.3*		*113*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOSA	*182*		ng/L	*160.0*		*114*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C9-PFNA	*190*		ng/L	*160.0*		*119*	*50-200*			08/01/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*192*		ng/L	*160.0*		*120*	*50-200*			08/01/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*206*		ng/L	*160.0*		*128*	*50-200*			08/01/2023	
Matrix Spike Dup (B3H0143-MSD1)	**Source: 2307329-01**										
11Cl-PF3OUdS	31.8	2.0	ng/L	37.72	ND	84.4	70-130	6.27	30	08/01/2023	
3:3FTCA	35.4	4.0	ng/L	40.00	ND	88.5	70-130	10.5	30	08/01/2023	
4:2FTS	35.5	2.0	ng/L	37.48	ND	94.8	70-130	1.36	30	08/01/2023	
5:3FTCA	36.5	2.0	ng/L	40.00	ND	91.2	70-130	5.65	30	08/01/2023	
6:2FTS	34.6	2.0	ng/L	38.04	ND	91.0	70-130	4.57	30	08/01/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0143 - Method: 3512				**Prepared: 08/01/2023**							
Matrix Spike Dup (B3H0143-MSD1)	**Source: 2307329-01**										
7:3FTCA	32.1	2.0	ng/L	40.00	ND	80.4	70-130	1.36	30	08/01/2023	
8:2FTS	36.0	2.0	ng/L	38.40	ND	93.8	70-130	7.38	30	08/01/2023	
9Cl-PF3ONS	33.7	2.0	ng/L	37.32	ND	90.3	70-130	5.43	30	08/01/2023	
ADONA	34.8	2.0	ng/L	37.80	ND	92.0	70-130	5.05	30	08/01/2023	
HFPO-DA	37.6	4.0	ng/L	40.00	ND	94.1	70-130	3.91	30	08/01/2023	
NEtFOSAA	37.0	2.0	ng/L	40.00	ND	92.6	70-130	5.31	30	08/01/2023	
NMeFOSAA	36.9	2.0	ng/L	40.00	ND	92.4	70-130	4.14	30	08/01/2023	
PFBA	45.9	4.0	ng/L	40.00	8.68	93.0	70-130	2.96	30	08/01/2023	
PFBS	36.9	2.0	ng/L	35.48	2.58	96.7	70-130	5.94	30	08/01/2023	
PFBSA	36.3	2.0	ng/L	40.00	0.840	88.6	70-130	0.495	30	08/01/2023	
PFDA	38.9	2.0	ng/L	40.00	ND	97.2	70-130	0.154	30	08/01/2023	
PFDoDA	38.0	2.0	ng/L	40.00	ND	95.0	70-130	4.17	30	08/01/2023	
PFDS	32.1	2.0	ng/L	38.60	ND	83.3	70-130	7.60	30	08/01/2023	
PFECHS	34.4	2.0	ng/L	36.96	0.860	90.7	70-130	1.27	30	08/01/2023	
PFHpA	40.9	2.0	ng/L	40.00	4.16	91.8	70-130	6.39	30	08/01/2023	
PFHpS	37.9	2.0	ng/L	38.12	ND	99.3	70-130	2.09	30	08/01/2023	
PFHxA	50.3	2.0	ng/L	40.00	13.3	92.3	70-130	4.36	30	08/01/2023	
PFHxS	36.9	2.0	ng/L	36.56	2.34	94.5	70-130	4.76	30	08/01/2023	
PFHxSA	35.8	2.0	ng/L	40.00	ND	89.5	70-130	3.78	30	08/01/2023	
PFNA	37.4	2.0	ng/L	40.00	ND	93.4	70-130	6.02	30	08/01/2023	
PFNS	33.6	2.0	ng/L	38.48	ND	87.4	70-130	5.95	30	08/01/2023	
PFOA	45.3	2.0	ng/L	40.00	8.90	91.1	70-130	7.72	30	08/01/2023	
PFOS	35.3	2.0	ng/L	37.12	ND	95.1	70-130	2.13	30	08/01/2023	
PFOSA	37.7	2.0	ng/L	40.00	ND	94.2	70-130	2.36	30	08/01/2023	
PFPeA	44.4	2.0	ng/L	40.00	7.62	92.0	70-130	6.28	30	08/01/2023	
PFPeS	36.0	2.0	ng/L	37.64	1.24	92.5	70-130	1.16	30	08/01/2023	
PFTeDA	37.5	4.0	ng/L	40.00	ND	93.6	70-130	5.40	30	08/01/2023	
PFTrDA	32.9	4.0	ng/L	40.00	ND	82.3	70-130	3.70	30	08/01/2023	
PFUnDA	37.8	2.0	ng/L	40.00	ND	94.5	70-130	4.65	30	08/01/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*171*		ng/L	*149.9*		*114*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*184*		ng/L	*152.0*		*121*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*162*		ng/L	*153.5*		*105*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*168*		ng/L	*160.0*		*105*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*145*		ng/L	*160.0*		*90.9*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*110*		ng/L	*160.0*		*68.6*	*25-250*			08/01/2023	
Isotope Dilution Analog: 13C3-HFPODA	*347*		ng/L	*320.0*		*108*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C3-PFBS	*159*		ng/L	*149.0*		*107*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C3-PFHxS	*165*		ng/L	*151.6*		*109*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C4-PFBA	*162*		ng/L	*160.0*		*101*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C4-PFHpA	*176*		ng/L	*160.0*		*110*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C5-PFHxA	*177*		ng/L	*160.0*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C5-PFPeA	*172*		ng/L	*160.0*		*108*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C6-PFDA	*168*		ng/L	*160.0*		*105*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*168*		ng/L	*160.0*		*105*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOA	*179*		ng/L	*160.0*		*112*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOS	*170*		ng/L	*153.3*		*111*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C8-PFOSA	*176*		ng/L	*160.0*		*110*	*50-200*			08/01/2023	
Isotope Dilution Analog: 13C9-PFNA	*177*		ng/L	*160.0*		*111*	*50-200*			08/01/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0143 - Method: 3512				**Prepared: 08/01/2023**							
Matrix Spike Dup (B3H0143-MSD1)	**Source: 2307329-01**										
Isotope Dilution Analog: d3-N-MeFOSAA	*174*		ng/L	*160.0*		*108*	*50-200*			08/01/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*176*		ng/L	*160.0*		*110*	*50-200*			08/01/2023	
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
Blank (B3H0144-BLK1)											
11Cl-PF3OUdS	ND	2.0	ng/L							08/02/2023	
3:3FTCA	ND	4.0	ng/L							08/02/2023	
4:2FTS	ND	2.0	ng/L							08/02/2023	
5:3FTCA	ND	2.0	ng/L							08/02/2023	
6:2FTS	ND	2.0	ng/L							08/02/2023	
7:3FTCA	ND	2.0	ng/L							08/02/2023	
8:2FTS	ND	2.0	ng/L							08/02/2023	
9Cl-PF3ONS	ND	2.0	ng/L							08/02/2023	
ADONA	ND	2.0	ng/L							08/02/2023	
HFPO-DA	ND	4.0	ng/L							08/02/2023	
NEtFOSAA	ND	2.0	ng/L							08/02/2023	
NMeFOSAA	ND	2.0	ng/L							08/02/2023	
PFBA	ND	4.0	ng/L							08/02/2023	
PFBS	ND	2.0	ng/L							08/02/2023	
PFBSA	ND	2.0	ng/L							08/02/2023	
PFDA	ND	2.0	ng/L							08/02/2023	
PFDoDA	ND	2.0	ng/L							08/02/2023	
PFDS	ND	2.0	ng/L							08/02/2023	
PFECHS	ND	2.0	ng/L							08/02/2023	
PFHpA	ND	2.0	ng/L							08/02/2023	
PFHpS	ND	2.0	ng/L							08/02/2023	
PFHxA	ND	2.0	ng/L							08/02/2023	
PFHxS	ND	2.0	ng/L							08/02/2023	
PFHxSA	ND	2.0	ng/L							08/02/2023	
PFNA	ND	2.0	ng/L							08/02/2023	
PFNS	ND	2.0	ng/L							08/02/2023	
PFOA	ND	2.0	ng/L							08/02/2023	
PFOS	ND	2.0	ng/L							08/02/2023	
PFOSA	ND	2.0	ng/L							08/02/2023	
PFPeA	ND	2.0	ng/L							08/02/2023	
PFPeS	ND	2.0	ng/L							08/02/2023	
PFTeDA	ND	4.0	ng/L							08/02/2023	
PFTrDA	ND	4.0	ng/L							08/02/2023	
PFUnDA	ND	2.0	ng/L							08/02/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*216*		ng/L	*149.9*		*144*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*262*		ng/L	*152.0*		*173*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*284*		ng/L	*153.5*		*185*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*240*		ng/L	*160.0*		*150*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*232*		ng/L	*160.0*		*145*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*219*		ng/L	*160.0*		*137*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C3-HFPODA	*368*		ng/L	*320.0*		*115*	*50-200*			08/02/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
Blank (B3H0144-BLK1)											
Isotope Dilution Analog: 13C3-PFBS	*181*		ng/L	*149.0*		*121*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFHxS	*185*		ng/L	*151.6*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFBA	*197*		ng/L	*160.0*		*123*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFHpA	*196*		ng/L	*160.0*		*123*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFHxA	*193*		ng/L	*160.0*		*121*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFPeA	*195*		ng/L	*160.0*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C6-PFDA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*211*		ng/L	*160.0*		*132*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOA	*198*		ng/L	*160.0*		*124*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOS	*190*		ng/L	*153.3*		*124*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOSA	*202*		ng/L	*160.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C9-PFNA	*210*		ng/L	*160.0*		*131*	*50-200*			08/02/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*221*		ng/L	*160.0*		*138*	*50-200*			08/02/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*233*		ng/L	*160.0*		*146*	*50-200*			08/02/2023	
LCS (B3H0144-BS1)											
11Cl-PF3OUdS	33.9	2.0	ng/L	37.72		89.9	70-130			08/02/2023	
3:3FTCA	35.8	4.0	ng/L	40.00		89.4	70-130			08/02/2023	
4:2FTS	33.1	2.0	ng/L	37.48		88.4	70-130			08/02/2023	
5:3FTCA	37.5	2.0	ng/L	40.00		93.7	70-130			08/02/2023	
6:2FTS	33.4	2.0	ng/L	38.04		87.7	70-130			08/02/2023	
7:3FTCA	32.4	2.0	ng/L	40.00		81.0	70-130			08/02/2023	
8:2FTS	36.2	2.0	ng/L	38.40		94.4	70-130			08/02/2023	
9Cl-PF3ONS	34.5	2.0	ng/L	37.32		92.4	70-130			08/02/2023	
ADONA	34.9	2.0	ng/L	37.80		92.2	70-130			08/02/2023	
HFPO-DA	40.8	4.0	ng/L	40.00		102	70-130			08/02/2023	
NEtFOSAA	38.3	2.0	ng/L	40.00		95.8	70-130			08/02/2023	
NMeFOSAA	38.0	2.0	ng/L	40.00		95.0	70-130			08/02/2023	
PFBA	37.6	4.0	ng/L	40.00		94.0	70-130			08/02/2023	
PFBS	33.4	2.0	ng/L	35.48		94.3	70-130			08/02/2023	
PFBSA	35.0	2.0	ng/L	40.00		87.6	70-130			08/02/2023	
PFDA	37.3	2.0	ng/L	40.00		93.4	70-130			08/02/2023	
PFDoDA	38.0	2.0	ng/L	40.00		95.0	70-130			08/02/2023	
PFDS	34.4	2.0	ng/L	38.60		89.0	70-130			08/02/2023	
PFECHS	32.8	2.0	ng/L	36.96		88.7	70-130			08/02/2023	
PFHpA	38.6	2.0	ng/L	40.00		96.5	70-130			08/02/2023	
PFHpS	38.5	2.0	ng/L	38.12		101	70-130			08/02/2023	
PFHxA	38.1	2.0	ng/L	40.00		95.3	70-130			08/02/2023	
PFHxS	35.3	2.0	ng/L	36.56		96.5	70-130			08/02/2023	
PFHxSA	34.8	2.0	ng/L	40.00		87.1	70-130			08/02/2023	
PFNA	37.8	2.0	ng/L	40.00		94.5	70-130			08/02/2023	
PFNS	36.1	2.0	ng/L	38.48		93.7	70-130			08/02/2023	
PFOA	39.2	2.0	ng/L	40.00		97.9	70-130			08/02/2023	
PFOS	35.8	2.0	ng/L	37.12		96.3	70-130			08/02/2023	
PFOSA	37.0	2.0	ng/L	40.00		92.4	70-130			08/02/2023	
PFPeA	38.3	2.0	ng/L	40.00		95.8	70-130			08/02/2023	
PFPeS	34.3	2.0	ng/L	37.64		91.1	70-130			08/02/2023	
PFTeDA	38.2	4.0	ng/L	40.00		95.4	70-130			08/02/2023	
PFTrDA	36.8	4.0	ng/L	40.00		92.0	70-130			08/02/2023	
PFUnDA	39.1	2.0	ng/L	40.00		97.8	70-130			08/02/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
LCS (B3H0144-BS1)											
Isotope Dilution Analog: 13C2-4:2FTS	*186*		ng/L	*149.9*		*124*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*201*		ng/L	*152.0*		*132*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*182*		ng/L	*153.5*		*118*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*219*		ng/L	*160.0*		*137*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*203*		ng/L	*160.0*		*127*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*179*		ng/L	*160.0*		*112*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C3-HFPODA	*391*		ng/L	*320.0*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFBS	*187*		ng/L	*149.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFHxS	*191*		ng/L	*151.6*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFBA	*207*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFHpA	*199*		ng/L	*160.0*		*124*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFHxA	*200*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFPeA	*201*		ng/L	*160.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C6-PFDA	*195*		ng/L	*160.0*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*199*		ng/L	*160.0*		*124*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOA	*201*		ng/L	*160.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOS	*200*		ng/L	*153.3*		*131*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOSA	*206*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C9-PFNA	*203*		ng/L	*160.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*204*		ng/L	*160.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
LCS Dup (B3H0144-BSD1)											
11Cl-PF3OUdS	33.7	2.0	ng/L	37.72		89.3	70-130	0.651	200	08/02/2023	
3:3FTCA	36.8	4.0	ng/L	40.00		92.1	70-130	2.92	200	08/02/2023	
4:2FTS	34.0	2.0	ng/L	37.48		90.8	70-130	2.62	200	08/02/2023	
5:3FTCA	37.6	2.0	ng/L	40.00		94.0	70-130	0.320	200	08/02/2023	
6:2FTS	32.5	2.0	ng/L	38.04		85.4	70-130	2.61	200	08/02/2023	
7:3FTCA	32.2	2.0	ng/L	40.00		80.6	70-130	0.619	200	08/02/2023	
8:2FTS	33.9	2.0	ng/L	38.40		88.3	70-130	6.61	200	08/02/2023	
9Cl-PF3ONS	34.4	2.0	ng/L	37.32		92.2	70-130	0.232	200	08/02/2023	
ADONA	35.2	2.0	ng/L	37.80		93.2	70-130	1.03	200	08/02/2023	
HFPO-DA	39.2	4.0	ng/L	40.00		98.1	70-130	3.95	200	08/02/2023	
NEtFOSAA	37.0	2.0	ng/L	40.00		92.4	70-130	3.56	200	08/02/2023	
NMeFOSAA	37.8	2.0	ng/L	40.00		94.6	70-130	0.475	200	08/02/2023	
PFBA	36.7	4.0	ng/L	40.00		91.8	70-130	2.37	200	08/02/2023	
PFBS	33.6	2.0	ng/L	35.48		94.6	70-130	0.358	200	08/02/2023	
PFBSA	35.3	2.0	ng/L	40.00		88.2	70-130	0.796	200	08/02/2023	
PFDA	37.4	2.0	ng/L	40.00		93.4	70-130	0.0535	200	08/02/2023	
PFDoDA	38.6	2.0	ng/L	40.00		96.6	70-130	1.67	200	08/02/2023	
PFDS	35.2	2.0	ng/L	38.60		91.1	70-130	2.30	200	08/02/2023	
PFECHS	34.1	2.0	ng/L	36.96		92.2	70-130	3.83	200	08/02/2023	
PFHpA	38.4	2.0	ng/L	40.00		96.0	70-130	0.467	200	08/02/2023	
PFHpS	38.7	2.0	ng/L	38.12		101	70-130	0.415	200	08/02/2023	
PFHxA	37.3	2.0	ng/L	40.00		93.2	70-130	2.17	200	08/02/2023	
PFHxS	36.2	2.0	ng/L	36.56		99.1	70-130	2.68	200	08/02/2023	
PFHxSA	35.7	2.0	ng/L	40.00		89.2	70-130	2.44	200	08/02/2023	
PFNA	38.4	2.0	ng/L	40.00		96.0	70-130	1.52	200	08/02/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
LCS Dup (B3H0144-BSD1)											
PFNS	36.9	2.0	ng/L	38.48		95.8	70-130	2.19	200	08/02/2023	
PFOA	38.6	2.0	ng/L	40.00		96.4	70-130	1.54	200	08/02/2023	
PFOS	34.8	2.0	ng/L	37.12		93.9	70-130	2.61	200	08/02/2023	
PFOSA	37.7	2.0	ng/L	40.00		94.2	70-130	1.93	200	08/02/2023	
PFPeA	37.7	2.0	ng/L	40.00		94.4	70-130	1.47	200	08/02/2023	
PFPeS	35.6	2.0	ng/L	37.64		94.7	70-130	3.89	200	08/02/2023	
PFTeDA	38.1	4.0	ng/L	40.00		95.4	70-130	0.105	200	08/02/2023	
PFTrDA	36.6	4.0	ng/L	40.00		91.4	70-130	0.654	200	08/02/2023	
PFUnDA	38.8	2.0	ng/L	40.00		97.0	70-130	0.873	200	08/02/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*192*		ng/L	*149.9*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*206*		ng/L	*152.0*		*136*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*187*		ng/L	*153.5*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*220*		ng/L	*160.0*		*138*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*204*		ng/L	*160.0*		*127*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*178*		ng/L	*160.0*		*111*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C3-HFPODA	*401*		ng/L	*320.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFBS	*190*		ng/L	*149.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFHxS	*193*		ng/L	*151.6*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFBA	*214*		ng/L	*160.0*		*133*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFHpA	*204*		ng/L	*160.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFHxA	*207*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFPeA	*206*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C6-PFDA	*198*		ng/L	*160.0*		*124*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*200*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOA	*208*		ng/L	*160.0*		*130*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOS	*201*		ng/L	*153.3*		*131*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOSA	*209*		ng/L	*160.0*		*131*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C9-PFNA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*207*		ng/L	*160.0*		*130*	*50-200*			08/02/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*212*		ng/L	*160.0*		*132*	*50-200*			08/02/2023	
MRL Check (B3H0144-MRL1)											
11Cl-PF3OUdS	3.16	2.0	ng/L	3.772		83.8	50-150			08/02/2023	
3:3FTCA	4.12	4.0	ng/L	4.000		103	50-150			08/02/2023	
4:2FTS	3.18	2.0	ng/L	3.748		84.8	50-150			08/02/2023	
5:3FTCA	3.46	2.0	ng/L	4.000		86.5	50-150			08/02/2023	
6:2FTS	3.00	2.0	ng/L	3.804		78.9	50-150			08/02/2023	
7:3FTCA	3.06	2.0	ng/L	4.000		76.5	50-150			08/02/2023	
8:2FTS	3.96	2.0	ng/L	3.840		103	50-150			08/02/2023	
9Cl-PF3ONS	3.10	2.0	ng/L	3.732		83.1	50-150			08/02/2023	
ADONA	3.28	2.0	ng/L	3.780		86.8	50-150			08/02/2023	
HFPO-DA	3.46	4.0	ng/L	4.000		86.5	50-150			08/02/2023	
NEtFOSAA	3.48	2.0	ng/L	4.000		87.0	50-150			08/02/2023	
NMeFOSAA	3.70	2.0	ng/L	4.000		92.5	50-150			08/02/2023	
PFBA	2.84	4.0	ng/L	4.000		71.0	50-150			08/02/2023	
PFBS	2.70	2.0	ng/L	3.548		76.1	50-150			08/02/2023	
PFBSA	3.68	2.0	ng/L	4.000		92.0	50-150			08/02/2023	
PFDA	3.54	2.0	ng/L	4.000		88.5	50-150			08/02/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
MRL Check (B3H0144-MRL1)											
PFDoDA	3.54	2.0	ng/L	4.000		88.5	50-150			08/02/2023	
PFDS	3.28	2.0	ng/L	3.860		85.0	50-150			08/02/2023	
PFECHS	3.34	2.0	ng/L	3.696		90.4	50-150			08/02/2023	
PFHpA	3.74	2.0	ng/L	4.000		93.5	50-150			08/02/2023	
PFHpS	3.92	2.0	ng/L	3.812		103	50-150			08/02/2023	
PFHxA	3.24	2.0	ng/L	4.000		81.0	50-150			08/02/2023	
PFHxS	3.28	2.0	ng/L	3.656		89.7	50-150			08/02/2023	
PFHxSA	3.60	2.0	ng/L	4.000		90.0	50-150			08/02/2023	
PFNA	3.40	2.0	ng/L	4.000		85.0	50-150			08/02/2023	
PFNS	3.50	2.0	ng/L	3.848		91.0	50-150			08/02/2023	
PFOA	3.80	2.0	ng/L	4.000		95.0	50-150			08/02/2023	
PFOS	3.68	2.0	ng/L	3.712		99.1	50-150			08/02/2023	
PFOSA	3.52	2.0	ng/L	4.000		88.0	50-150			08/02/2023	
PFPeA	3.42	2.0	ng/L	4.000		85.5	50-150			08/02/2023	
PFPeS	3.54	2.0	ng/L	3.764		94.0	50-150			08/02/2023	
PFTeDA	3.66	4.0	ng/L	4.000		91.5	50-150			08/02/2023	
PFTrDA	3.64	4.0	ng/L	4.000		91.0	50-150			08/02/2023	
PFUnDA	3.60	2.0	ng/L	4.000		90.0	50-150			08/02/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*213*		ng/L	*149.9*		*142*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*197*		ng/L	*152.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*187*		ng/L	*153.5*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*218*		ng/L	*160.0*		*137*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*201*		ng/L	*160.0*		*125*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*173*		ng/L	*160.0*		*108*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C3-HFPODA	*408*		ng/L	*320.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFBS	*190*		ng/L	*149.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFHxS	*195*		ng/L	*151.6*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFBA	*211*		ng/L	*160.0*		*132*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFHpA	*204*		ng/L	*160.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFHxA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFPeA	*203*		ng/L	*160.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C6-PFDA	*195*		ng/L	*160.0*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*198*		ng/L	*160.0*		*124*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOA	*202*		ng/L	*160.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOS	*205*		ng/L	*153.3*		*134*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOSA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C9-PFNA	*206*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*206*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*208*		ng/L	*160.0*		*130*	*50-200*			08/02/2023	
Matrix Spike (B3H0144-MS1)	**Source: 2308002-01**										
11Cl-PF3OUdS	31.4	2.0	ng/L	37.72	ND	83.3	70-130			08/02/2023	
3:3FTCA	36.0	4.0	ng/L	40.00	ND	90.1	70-130			08/02/2023	
4:2FTS	35.9	2.0	ng/L	37.48	ND	95.8	70-130			08/02/2023	
5:3FTCA	37.8	2.0	ng/L	40.00	ND	94.6	70-130			08/02/2023	
6:2FTS	36.1	2.0	ng/L	38.04	ND	94.8	70-130			08/02/2023	
7:3FTCA	33.5	2.0	ng/L	40.00	ND	83.8	70-130			08/02/2023	
8:2FTS	36.2	2.0	ng/L	38.40	ND	94.4	70-130			08/02/2023	

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FAX: (517) 335-9600

Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
Matrix Spike (B3H0144-MS1)	**Source: 2308002-01**										
9Cl-PF3ONS	35.7	2.0	ng/L	37.32	ND	95.6	70-130			08/02/2023	
ADONA	36.4	2.0	ng/L	37.80	ND	96.3	70-130			08/02/2023	
HFPO-DA	37.4	4.0	ng/L	40.00	ND	93.5	70-130			08/02/2023	
NEtFOSAA	39.7	2.0	ng/L	40.00	ND	99.2	70-130			08/02/2023	
NMeFOSAA	38.1	2.0	ng/L	40.00	ND	95.2	70-130			08/02/2023	
PFBA	45.9	4.0	ng/L	40.00	6.66	98.0	70-130			08/02/2023	
PFBS	40.2	2.0	ng/L	35.48	6.58	94.8	70-130			08/02/2023	
PFBSA	38.2	2.0	ng/L	40.00	1.44	92.0	70-130			08/02/2023	
PFDA	39.9	2.0	ng/L	40.00	ND	99.8	70-130			08/02/2023	
PFDoDA	39.9	2.0	ng/L	40.00	ND	99.8	70-130			08/02/2023	
PFDS	34.8	2.0	ng/L	38.60	ND	90.2	70-130			08/02/2023	
PFECHS	34.6	2.0	ng/L	36.96	ND	93.6	70-130			08/02/2023	
PFHpA	39.4	2.0	ng/L	40.00	ND	98.4	70-130			08/02/2023	
PFHpS	37.7	2.0	ng/L	38.12	ND	98.8	70-130			08/02/2023	
PFHxA	38.0	2.0	ng/L	40.00	ND	95.1	70-130			08/02/2023	
PFHxS	39.6	2.0	ng/L	36.56	3.62	98.3	70-130			08/02/2023	
PFHxSA	37.4	2.0	ng/L	40.00	ND	93.4	70-130			08/02/2023	
PFNA	38.7	2.0	ng/L	40.00	ND	96.8	70-130			08/02/2023	
PFNS	35.2	2.0	ng/L	38.48	ND	91.4	70-130			08/02/2023	
PFOA	41.8	2.0	ng/L	40.00	2.02	99.4	70-130			08/02/2023	
PFOS	36.2	2.0	ng/L	37.12	ND	97.6	70-130			08/02/2023	
PFOSA	39.1	2.0	ng/L	40.00	ND	97.8	70-130			08/02/2023	
PFPeA	38.8	2.0	ng/L	40.00	ND	97.0	70-130			08/02/2023	
PFPeS	37.3	2.0	ng/L	37.64	0.880	96.7	70-130			08/02/2023	
PFTeDA	41.8	4.0	ng/L	40.00	ND	104	70-130			08/02/2023	
PFTrDA	36.2	4.0	ng/L	40.00	ND	90.6	70-130			08/02/2023	
PFUnDA	40.1	2.0	ng/L	40.00	ND	100	70-130			08/02/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*188*		ng/L	*149.9*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*199*		ng/L	*152.0*		*131*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*173*		ng/L	*153.5*		*113*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*180*		ng/L	*160.0*		*112*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*142*		ng/L	*160.0*		*88.4*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*81.8*		ng/L	*160.0*		*51.1*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C3-HFPODA	*416*		ng/L	*320.0*		*130*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFBS	*187*		ng/L	*149.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFHxS	*192*		ng/L	*151.6*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFBA	*204*		ng/L	*160.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFHpA	*200*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFHxA	*201*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFPeA	*201*		ng/L	*160.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C6-PFDA	*189*		ng/L	*160.0*		*118*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*182*		ng/L	*160.0*		*114*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOA	*200*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOS	*196*		ng/L	*153.3*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOSA	*200*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C9-PFNA	*199*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*200*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*199*		ng/L	*160.0*		*124*	*50-200*			08/02/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
Matrix Spike Dup (B3H0144-MSD1)	**Source: 2308002-01**										
11Cl-PF3OUdS	33.1	2.0	ng/L	37.72	ND	87.8	70-130	5.21	30	08/02/2023	
3:3FTCA	39.3	4.0	ng/L	40.00	ND	98.2	70-130	8.65	30	08/02/2023	
4:2FTS	37.0	2.0	ng/L	37.48	ND	98.6	70-130	2.85	30	08/02/2023	
5:3FTCA	37.1	2.0	ng/L	40.00	ND	92.8	70-130	1.92	30	08/02/2023	
6:2FTS	34.5	2.0	ng/L	38.04	ND	90.8	70-130	4.31	30	08/02/2023	
7:3FTCA	33.4	2.0	ng/L	40.00	ND	83.6	70-130	0.299	30	08/02/2023	
8:2FTS	39.3	2.0	ng/L	38.40	ND	102	70-130	8.15	30	08/02/2023	
9Cl-PF3ONS	35.9	2.0	ng/L	37.32	ND	96.2	70-130	0.726	30	08/02/2023	
ADONA	35.6	2.0	ng/L	37.80	ND	94.3	70-130	2.11	30	08/02/2023	
HFPO-DA	39.4	4.0	ng/L	40.00	ND	98.6	70-130	5.31	30	08/02/2023	
NEtFOSAA	38.6	2.0	ng/L	40.00	ND	96.4	70-130	2.81	30	08/02/2023	
NMeFOSAA	37.7	2.0	ng/L	40.00	ND	94.2	70-130	0.950	30	08/02/2023	
PFBA	46.1	4.0	ng/L	40.00	6.66	98.5	70-130	0.392	30	08/02/2023	
PFBS	40.5	2.0	ng/L	35.48	6.58	95.5	70-130	0.645	30	08/02/2023	
PFBSA	38.4	2.0	ng/L	40.00	1.44	92.4	70-130	0.365	30	08/02/2023	
PFDA	40.3	2.0	ng/L	40.00	ND	101	70-130	0.948	30	08/02/2023	
PFDoDA	40.3	2.0	ng/L	40.00	ND	101	70-130	0.848	30	08/02/2023	
PFDS	34.8	2.0	ng/L	38.60	ND	90.1	70-130	0.115	30	08/02/2023	
PFECHS	34.7	2.0	ng/L	36.96	ND	93.9	70-130	0.346	30	08/02/2023	
PFHpA	40.7	2.0	ng/L	40.00	ND	102	70-130	3.39	30	08/02/2023	
PFHpS	38.8	2.0	ng/L	38.12	ND	102	70-130	3.03	30	08/02/2023	
PFHxA	38.4	2.0	ng/L	40.00	ND	96.0	70-130	0.890	30	08/02/2023	
PFHxS	41.1	2.0	ng/L	36.56	3.62	103	70-130	3.87	30	08/02/2023	
PFHxSA	37.7	2.0	ng/L	40.00	ND	94.3	70-130	0.905	30	08/02/2023	
PFNA	40.2	2.0	ng/L	40.00	ND	101	70-130	3.90	30	08/02/2023	
PFNS	36.6	2.0	ng/L	38.48	ND	95.1	70-130	4.01	30	08/02/2023	
PFOA	40.9	2.0	ng/L	40.00	2.02	97.2	70-130	2.08	30	08/02/2023	
PFOS	37.0	2.0	ng/L	37.12	ND	99.7	70-130	2.13	30	08/02/2023	
PFOSA	38.2	2.0	ng/L	40.00	ND	95.5	70-130	2.43	30	08/02/2023	
PFPeA	39.5	2.0	ng/L	40.00	ND	98.6	70-130	1.64	30	08/02/2023	
PFPeS	36.2	2.0	ng/L	37.64	0.880	93.9	70-130	2.88	30	08/02/2023	
PFTeDA	39.1	4.0	ng/L	40.00	ND	97.7	70-130	6.73	30	08/02/2023	
PFTrDA	37.0	4.0	ng/L	40.00	ND	92.4	70-130	1.97	30	08/02/2023	
PFUnDA	40.6	2.0	ng/L	40.00	ND	101	70-130	1.09	30	08/02/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*189*		ng/L	*149.9*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*192*		ng/L	*152.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*177*		ng/L	*153.5*		*116*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*203*		ng/L	*160.0*		*127*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*175*		ng/L	*160.0*		*110*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*133*		ng/L	*160.0*		*83.1*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C3-HFPODA	*406*		ng/L	*320.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFBS	*190*		ng/L	*149.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFHxS	*191*		ng/L	*151.6*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFBA	*204*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFHpA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFHxA	*206*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFPeA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C6-PFDA	*195*		ng/L	*160.0*		*122*	*50-200*			08/02/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
Matrix Spike Dup (B3H0144-MSD1)	**Source: 2308002-01**										
Isotope Dilution Analog: 13C7-PFUnDA	*196*		ng/L	*160.0*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOA	*207*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOS	*199*		ng/L	*153.3*		*130*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOSA	*204*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C9-PFNA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*200*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*199*		ng/L	*160.0*		*124*	*50-200*			08/02/2023	

EGLE

Department of Environment, Great Lakes, and Energy
Laboratory Services Section

PFAS Analysis Request Sheet

Lab Work Order Number	Project Name	Matrix
2308001	Cedar Springs WWTP	WATER

Location ID	Program	Report CC Email 1	Project TAT Days*	Sample Collector
41000010		VorceK@Michigan.gov	STD	Traci McWhorter-Ott
Dept-Division-District	**Activity**	**Report CC Email 2**	**Report Batch QC**	**Sample Collector Phone**
EGLE-RRD-GR		James.Buzzell@aecom.com	Yes ☐ No ☐	319-382-9333
	Funding Source	**Report CC Email 3**		
State Project Manager		Wes.Stambaugh@aecom.com	**Lab Use Only**	**Contract Firm**
Kelly Moss			Sample Receipt Temperature	AECOM
State Project Manager Email	**Location Code**	**Overflow Lab Choice 1**	2.8°C	**Contract Firm Primary Contact**
MossK@Michigan.gov	6G14			James.Buzzell@aecom.com
State Project Manager Phone	**SUD Location Code**	**Overflow Lab Choice 2**	Received On Ice	**Primary Contact Phone**
616-215-4588			Yes ☒ No ☐	616-206-7528

*** Project Turnaround time (TAT) other than standard 21 days must be pre-approved and scheduled with the laboratory. Surcharges apply.**

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments
1	01	MW-01A-230724 1355 WPS	7/24/23	1355	4	MW-01A ;Sample MS/MSD Required For Batch QC
2	02	MW-01B-230724 1455 WPS	7/24/23	1455	2	MW-01B
3	03	MW-03A-230725 1045 TLO	7/25/23	10:45	2	MW-03A
4	04	MW-01C-230724 1535 WPS	7/24/23	15:35	2	MW-01C
5	05	EB-230725 1110 TLO	7/25/23	11:10	2	Equip. Blank
6	06	MW-03B-230725 1155 TLO	7/25/23	11:55	2	MW-03B
7	07	MW-03C-230725 1345 TLO	7/25/23	13:45	2	MW-03C
8	08	MW-02A-230725 1515 TLO	7/25/23	15:15	2	~~Field Duplicate~~ MW-02A
9	09	MW-02~~B~~C-230726 0920 TLO	7/26/23	9:20	2	~~MW-02B~~ MW-02C
10	10	MW-05C-230726 1115 TLO	7/26/23	11:15	2	MW-05C
11	11	MW-05B-230726 1150 TLO	7/26/23	11:50	2	MW-05B
12	12	MW-04A-230727 835 TLO	7/27/23	8:35	2	MW-04A
13	13	MW-04B-230727 0905 TLO	7/27/23	09:05	2	MW-04B
14	14	MW-04B-230727 0905 TLO-DUP	7/27/23	9:05	2	Field Duplicate; MW-04B
15	15	MW-04C-230727 0950 TLO	7/27/23	9:50	2	MW-04C
16	16	MW-07C-230727 1110 TLO	7/27/23	11:10	2	MW-07C
17	17	MW-07B-230731 0900 TLO	7/31/23	9:00	2	MW-07B
18	18	MW-07A-230731 0950 TLO	7/31/23	9:50	2	MW-07A
19	19	MW-05A-230731 1055 TLO	7/31/23	10:55	2	MW-05A
20	20	MW-05A-230731 1055 TLO-DUP	7/31/23	10:55	2	Field Duplicate; MW-05A

PFAS - Semi-Volatile Organic Compounds

PFAS - EPA 8327 41

Chain of Custody	Relinquished by	Received By	Date / Time
	Print Name & Org. Traci McWhorter-Ott AECOM	Joshua Walker AECOM	7/31/2023 16:00
	Signature: Traci McWhorter-Ott		
	Print Name & Org. Joshua Walker AECOM	Melissa Smith	8/01/2023 08:35 8/1/23 900
	Signature:		
	Print Name & Org.		/ /2023 :
	Signature:		

MICHIGAN DEPARTMENT OF
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07 August 2023

Work Order: 2308002

Price: $1,250.00

KELLY MOSS
EGLE-RRD-GRAND RAPIDS
350 Ottawa Ave. NW, Unit 10
Grand Rapids, MI 49503-2341

RE: CEDAR SPRINGS WWTP INVESTIGATION-PFAS

This is the official environmental laboratory report for testing conducted by the Michigan Department of Environment, Great Lakes, and Energy. Analyses performed by the laboratory were conducted using methods published by the U.S. Environmental Protection Agency, Standard Methods for the Examination of Water and Wastewater, ASTM, or other published or approved reference methods.

Kirby Shane
Laboratory Director

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EGLE-RRD-GRAND RAPIDS	Project: CEDAR SPRINGS WWTP INVESTIGATION-PFAS	
350 Ottawa Ave. NW, Unit 10	Site Code: 41000010	**Reported:**
Grand Rapids MI, 49503-2341	Project Manager: KELLY MOSS	08/07/2023

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
MW-02B-2307260835TLO	2308002-01	Water	07/26/2023	08/01/2023	
MW-06C-2307311220TLO	2308002-02	Water	07/31/2023	08/01/2023	
MW-06B-2307311300TLO	2308002-03	Water	07/31/2023	08/01/2023	
MW-06A-2307311330TLO	2308002-04	Water	07/31/2023	08/01/2023	
Trip Blank	2308002-05	Water	03/22/2023	08/01/2023	

Notes and Definitions

ND

RL Reporting Limit

NA Not Applicable

Case Narrative

Samples were received **8/1/2023 9:01:00AM** for client **EGLE-RRD-GRAND RAPIDS** as a part of project **CEDAR SPRINGS WWTP INVESTIGATION-PFAS**.

Samples were logged and designated as Work Order # **2308002** on **8/1/2023 10:07:00AM**.

This Report was created **8/7/2023 3:09:14PM**.

Additional Notes/Narrative (if applicable):

MICHIGAN DEPARTMENT OF
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P.O. Box 30270
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TEL: (517) 335-9800
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Client ID: MW-02B-2307260835TLO

Lab ID: 2308002-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-22-4	**PFBA**	**6.7**	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-73-5	**PFBS**	**6.6**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
355-46-4	**PFHxS**	**3.6**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-67-1	**PFOA**	**2.0**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*121 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*128 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*116 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*125 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*103 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*68.2 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*117 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: MW-02B-2307260835TLO

Lab ID: 2308002-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*123 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*121 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*121 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*119 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*126 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*126 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*122 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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TEL: (517) 335-9800
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Client ID: MW-06C-2307311220TLO

Lab ID: 2308002-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*134 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*139 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*134 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*113 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*79.8 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*122 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*131 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: MW-06C-2307311220TLO

Lab ID: 2308002-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*135 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*135 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*133 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*132 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*133 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*129 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*127 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*131 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*134 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*134 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*133 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*134 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*131 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: MW-06B-2307311300TLO

Lab ID: 2308002-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-22-4	**PFBA**	**7.9**	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-73-5	**PFBS**	**5.7**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
30334-69-1	**PFBSA**	**2.5**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-85-9	**PFHpA**	**2.0**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-24-4	**PFHxA**	**3.6**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-67-1	**PFOA**	**7.1**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-90-3	**PFPeA**	**5.7**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*133 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*141 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*124 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*123 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*102 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*69.8 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*120 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: MW-06B-2307311300TLO

Lab ID: 2308002-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFBS		*130 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C3-PFHxS		*126 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*129 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*128 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*128 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*128 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*123 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*118 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*127 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*129 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*128 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*128 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*126 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*129 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: MW-06A-2307311330TLO

Lab ID: 2308002-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-73-5	**PFBS**	**2.2**	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*134 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*136 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*118 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*126 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*97.7 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*52.5 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*129 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*130 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: MW-06A-2307311330TLO

Lab ID: 2308002-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*135 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*135 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*132 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*133 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*131 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*122 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*123 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*129 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*132 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*132 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*131 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*129 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*127 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: Trip Blank

Lab ID: 2308002-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
763051-92-9	11Cl-PF3OUdS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
356-02-5	3:3FTCA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
757124-72-4	4:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
914637-49-3	5:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
27619-97-2	6:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
812-70-4	7:3FTCA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
39108-34-4	8:2FTS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
756426-58-1	9Cl-PF3ONS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
919005-14-4	ADONA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
13252-13-6	HFPO-DA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2991-50-6	NEtFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2355-31-9	NMeFOSAA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-22-4	PFBA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-73-5	PFBS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
30334-69-1	PFBSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-76-2	PFDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-55-1	PFDoDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-77-3	PFDS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
646-83-3	PFECHS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-85-9	PFHpA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-92-8	PFHpS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
307-24-4	PFHxA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
355-46-4	PFHxS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
41997-13-1	PFHxSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
375-95-1	PFNA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
68259-12-1	PFNS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
335-67-1	PFOA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
1763-23-1	PFOS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
754-91-6	PFOSA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-90-3	PFPeA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2706-91-4	PFPeS	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
376-06-7	PFTeDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
72629-94-8	PFTrDA	ND	4.0	ng/L	1	08/02/23	B3H0144	8327	BM	
2058-94-8	PFUnDA	ND	2.0	ng/L	1	08/02/23	B3H0144	8327	BM	
Isotope Dilution Analog: 13C2-4:2FTS			*144 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-6:2FTS			*138 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-8:2FTS			*134 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA			*147 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA			*134 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C2-PFTeDA			*114 %*	*25-250*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-HFPODA			*128 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
Isotope Dilution Analog: 13C3-PFBS			*132 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Client ID: Trip Blank

Lab ID: 2308002-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Analyst	Qualifier
Organics-PFAS Isotope Dilution										
	Isotope Dilution Analog: 13C3-PFHxS		*132 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFBA		*134 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C4-PFHpA		*130 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFHxA		*130 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C5-PFPeA		*133 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C6-PFDA		*127 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C7-PFUnDA		*127 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOA		*132 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOS		*134 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C8-PFOSA		*132 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: 13C9-PFNA		*132 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d3-N-MeFOSAA		*132 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	
	Isotope Dilution Analog: d5-N-EtFOSAA		*131 %*	*50-200*		*08/02/23*	B3H0144	*8327*	*BM*	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
Blank (B3H0144-BLK1)											
11Cl-PF3OUdS	ND	2.0	ng/L							08/02/2023	
3:3FTCA	ND	4.0	ng/L							08/02/2023	
4:2FTS	ND	2.0	ng/L							08/02/2023	
5:3FTCA	ND	2.0	ng/L							08/02/2023	
6:2FTS	ND	2.0	ng/L							08/02/2023	
7:3FTCA	ND	2.0	ng/L							08/02/2023	
8:2FTS	ND	2.0	ng/L							08/02/2023	
9Cl-PF3ONS	ND	2.0	ng/L							08/02/2023	
ADONA	ND	2.0	ng/L							08/02/2023	
HFPO-DA	ND	4.0	ng/L							08/02/2023	
NEtFOSAA	ND	2.0	ng/L							08/02/2023	
NMeFOSAA	ND	2.0	ng/L							08/02/2023	
PFBA	ND	4.0	ng/L							08/02/2023	
PFBS	ND	2.0	ng/L							08/02/2023	
PFBSA	ND	2.0	ng/L							08/02/2023	
PFDA	ND	2.0	ng/L							08/02/2023	
PFDoDA	ND	2.0	ng/L							08/02/2023	
PFDS	ND	2.0	ng/L							08/02/2023	
PFECHS	ND	2.0	ng/L							08/02/2023	
PFHpA	ND	2.0	ng/L							08/02/2023	
PFHpS	ND	2.0	ng/L							08/02/2023	
PFHxA	ND	2.0	ng/L							08/02/2023	
PFHxS	ND	2.0	ng/L							08/02/2023	
PFHxSA	ND	2.0	ng/L							08/02/2023	
PFNA	ND	2.0	ng/L							08/02/2023	
PFNS	ND	2.0	ng/L							08/02/2023	
PFOA	ND	2.0	ng/L							08/02/2023	
PFOS	ND	2.0	ng/L							08/02/2023	
PFOSA	ND	2.0	ng/L							08/02/2023	
PFPeA	ND	2.0	ng/L							08/02/2023	
PFPeS	ND	2.0	ng/L							08/02/2023	
PFTeDA	ND	4.0	ng/L							08/02/2023	
PFTrDA	ND	4.0	ng/L							08/02/2023	
PFUnDA	ND	2.0	ng/L							08/02/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*216*		ng/L	*149.9*		*144*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*262*		ng/L	*152.0*		*173*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*284*		ng/L	*153.5*		*185*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*240*		ng/L	*160.0*		*150*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*232*		ng/L	*160.0*		*145*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*219*		ng/L	*160.0*		*137*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C3-HFPODA	*368*		ng/L	*320.0*		*115*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFBS	*181*		ng/L	*149.0*		*121*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFHxS	*185*		ng/L	*151.6*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFBA	*197*		ng/L	*160.0*		*123*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFHpA	*196*		ng/L	*160.0*		*123*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFHxA	*193*		ng/L	*160.0*		*121*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFPeA	*195*		ng/L	*160.0*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C6-PFDA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
Blank (B3H0144-BLK1)											
Isotope Dilution Analog: 13C7-PFUnDA	*211*		ng/L	*160.0*		*132*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOA	*198*		ng/L	*160.0*		*124*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOS	*190*		ng/L	*153.3*		*124*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOSA	*202*		ng/L	*160.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C9-PFNA	*210*		ng/L	*160.0*		*131*	*50-200*			08/02/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*221*		ng/L	*160.0*		*138*	*50-200*			08/02/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*233*		ng/L	*160.0*		*146*	*50-200*			08/02/2023	
LCS (B3H0144-BS1)											
11Cl-PF3OUdS	33.9	2.0	ng/L	37.72		89.9	70-130			08/02/2023	
3:3FTCA	35.8	4.0	ng/L	40.00		89.4	70-130			08/02/2023	
4:2FTS	33.1	2.0	ng/L	37.48		88.4	70-130			08/02/2023	
5:3FTCA	37.5	2.0	ng/L	40.00		93.7	70-130			08/02/2023	
6:2FTS	33.4	2.0	ng/L	38.04		87.7	70-130			08/02/2023	
7:3FTCA	32.4	2.0	ng/L	40.00		81.0	70-130			08/02/2023	
8:2FTS	36.2	2.0	ng/L	38.40		94.4	70-130			08/02/2023	
9Cl-PF3ONS	34.5	2.0	ng/L	37.32		92.4	70-130			08/02/2023	
ADONA	34.9	2.0	ng/L	37.80		92.2	70-130			08/02/2023	
HFPO-DA	40.8	4.0	ng/L	40.00		102	70-130			08/02/2023	
NEtFOSAA	38.3	2.0	ng/L	40.00		95.8	70-130			08/02/2023	
NMeFOSAA	38.0	2.0	ng/L	40.00		95.0	70-130			08/02/2023	
PFBA	37.6	4.0	ng/L	40.00		94.0	70-130			08/02/2023	
PFBS	33.4	2.0	ng/L	35.48		94.3	70-130			08/02/2023	
PFBSA	35.0	2.0	ng/L	40.00		87.6	70-130			08/02/2023	
PFDA	37.3	2.0	ng/L	40.00		93.4	70-130			08/02/2023	
PFDoDA	38.0	2.0	ng/L	40.00		95.0	70-130			08/02/2023	
PFDS	34.4	2.0	ng/L	38.60		89.0	70-130			08/02/2023	
PFECHS	32.8	2.0	ng/L	36.96		88.7	70-130			08/02/2023	
PFHpA	38.6	2.0	ng/L	40.00		96.5	70-130			08/02/2023	
PFHpS	38.5	2.0	ng/L	38.12		101	70-130			08/02/2023	
PFHxA	38.1	2.0	ng/L	40.00		95.3	70-130			08/02/2023	
PFHxS	35.3	2.0	ng/L	36.56		96.5	70-130			08/02/2023	
PFHxSA	34.8	2.0	ng/L	40.00		87.1	70-130			08/02/2023	
PFNA	37.8	2.0	ng/L	40.00		94.5	70-130			08/02/2023	
PFNS	36.1	2.0	ng/L	38.48		93.7	70-130			08/02/2023	
PFOA	39.2	2.0	ng/L	40.00		97.9	70-130			08/02/2023	
PFOS	35.8	2.0	ng/L	37.12		96.3	70-130			08/02/2023	
PFOSA	37.0	2.0	ng/L	40.00		92.4	70-130			08/02/2023	
PFPeA	38.3	2.0	ng/L	40.00		95.8	70-130			08/02/2023	
PFPeS	34.3	2.0	ng/L	37.64		91.1	70-130			08/02/2023	
PFTeDA	38.2	4.0	ng/L	40.00		95.4	70-130			08/02/2023	
PFTrDA	36.8	4.0	ng/L	40.00		92.0	70-130			08/02/2023	
PFUnDA	39.1	2.0	ng/L	40.00		97.8	70-130			08/02/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*186*		ng/L	*149.9*		*124*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*201*		ng/L	*152.0*		*132*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*182*		ng/L	*153.5*		*118*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*219*		ng/L	*160.0*		*137*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*203*		ng/L	*160.0*		*127*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*179*		ng/L	*160.0*		*112*	*25-250*			08/02/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
LCS (B3H0144-BS1)											
Isotope Dilution Analog: 13C3-HFPODA	*391*		ng/L	*320.0*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFBS	*187*		ng/L	*149.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFHxS	*191*		ng/L	*151.6*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFBA	*207*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFHpA	*199*		ng/L	*160.0*		*124*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFHxA	*200*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFPeA	*201*		ng/L	*160.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C6-PFDA	*195*		ng/L	*160.0*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*199*		ng/L	*160.0*		*124*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOA	*201*		ng/L	*160.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOS	*200*		ng/L	*153.3*		*131*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOSA	*206*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C9-PFNA	*203*		ng/L	*160.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*204*		ng/L	*160.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
LCS Dup (B3H0144-BSD1)											
11Cl-PF3OUdS	33.7	2.0	ng/L	37.72		89.3	70-130	0.651	200	08/02/2023	
3:3FTCA	36.8	4.0	ng/L	40.00		92.1	70-130	2.92	200	08/02/2023	
4:2FTS	34.0	2.0	ng/L	37.48		90.8	70-130	2.62	200	08/02/2023	
5:3FTCA	37.6	2.0	ng/L	40.00		94.0	70-130	0.320	200	08/02/2023	
6:2FTS	32.5	2.0	ng/L	38.04		85.4	70-130	2.61	200	08/02/2023	
7:3FTCA	32.2	2.0	ng/L	40.00		80.6	70-130	0.619	200	08/02/2023	
8:2FTS	33.9	2.0	ng/L	38.40		88.3	70-130	6.61	200	08/02/2023	
9Cl-PF3ONS	34.4	2.0	ng/L	37.32		92.2	70-130	0.232	200	08/02/2023	
ADONA	35.2	2.0	ng/L	37.80		93.2	70-130	1.03	200	08/02/2023	
HFPO-DA	39.2	4.0	ng/L	40.00		98.1	70-130	3.95	200	08/02/2023	
NEtFOSAA	37.0	2.0	ng/L	40.00		92.4	70-130	3.56	200	08/02/2023	
NMeFOSAA	37.8	2.0	ng/L	40.00		94.6	70-130	0.475	200	08/02/2023	
PFBA	36.7	4.0	ng/L	40.00		91.8	70-130	2.37	200	08/02/2023	
PFBS	33.6	2.0	ng/L	35.48		94.6	70-130	0.358	200	08/02/2023	
PFBSA	35.3	2.0	ng/L	40.00		88.2	70-130	0.796	200	08/02/2023	
PFDA	37.4	2.0	ng/L	40.00		93.4	70-130	0.0535	200	08/02/2023	
PFDoDA	38.6	2.0	ng/L	40.00		96.6	70-130	1.67	200	08/02/2023	
PFDS	35.2	2.0	ng/L	38.60		91.1	70-130	2.30	200	08/02/2023	
PFECHS	34.1	2.0	ng/L	36.96		92.2	70-130	3.83	200	08/02/2023	
PFHpA	38.4	2.0	ng/L	40.00		96.0	70-130	0.467	200	08/02/2023	
PFHpS	38.7	2.0	ng/L	38.12		101	70-130	0.415	200	08/02/2023	
PFHxA	37.3	2.0	ng/L	40.00		93.2	70-130	2.17	200	08/02/2023	
PFHxS	36.2	2.0	ng/L	36.56		99.1	70-130	2.68	200	08/02/2023	
PFHxSA	35.7	2.0	ng/L	40.00		89.2	70-130	2.44	200	08/02/2023	
PFNA	38.4	2.0	ng/L	40.00		96.0	70-130	1.52	200	08/02/2023	
PFNS	36.9	2.0	ng/L	38.48		95.8	70-130	2.19	200	08/02/2023	
PFOA	38.6	2.0	ng/L	40.00		96.4	70-130	1.54	200	08/02/2023	
PFOS	34.8	2.0	ng/L	37.12		93.9	70-130	2.61	200	08/02/2023	
PFOSA	37.7	2.0	ng/L	40.00		94.2	70-130	1.93	200	08/02/2023	
PFPeA	37.7	2.0	ng/L	40.00		94.4	70-130	1.47	200	08/02/2023	
PFPeS	35.6	2.0	ng/L	37.64		94.7	70-130	3.89	200	08/02/2023	
PFTeDA	38.1	4.0	ng/L	40.00		95.4	70-130	0.105	200	08/02/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
LCS Dup (B3H0144-BSD1)											
PFTrDA	36.6	4.0	ng/L	40.00		91.4	70-130	0.654	200	08/02/2023	
PFUnDA	38.8	2.0	ng/L	40.00		97.0	70-130	0.873	200	08/02/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*192*		ng/L	*149.9*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*206*		ng/L	*152.0*		*136*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*187*		ng/L	*153.5*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*220*		ng/L	*160.0*		*138*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*204*		ng/L	*160.0*		*127*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*178*		ng/L	*160.0*		*111*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C3-HFPODA	*401*		ng/L	*320.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFBS	*190*		ng/L	*149.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFHxS	*193*		ng/L	*151.6*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFBA	*214*		ng/L	*160.0*		*133*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFHpA	*204*		ng/L	*160.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFHxA	*207*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFPeA	*206*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C6-PFDA	*198*		ng/L	*160.0*		*124*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*200*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOA	*208*		ng/L	*160.0*		*130*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOS	*201*		ng/L	*153.3*		*131*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOSA	*209*		ng/L	*160.0*		*131*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C9-PFNA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*207*		ng/L	*160.0*		*130*	*50-200*			08/02/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*212*		ng/L	*160.0*		*132*	*50-200*			08/02/2023	
MRL Check (B3H0144-MRL1)											
11Cl-PF3OUdS	3.16	2.0	ng/L	3.772		83.8	50-150			08/02/2023	
3:3FTCA	4.12	4.0	ng/L	4.000		103	50-150			08/02/2023	
4:2FTS	3.18	2.0	ng/L	3.748		84.8	50-150			08/02/2023	
5:3FTCA	3.46	2.0	ng/L	4.000		86.5	50-150			08/02/2023	
6:2FTS	3.00	2.0	ng/L	3.804		78.9	50-150			08/02/2023	
7:3FTCA	3.06	2.0	ng/L	4.000		76.5	50-150			08/02/2023	
8:2FTS	3.96	2.0	ng/L	3.840		103	50-150			08/02/2023	
9Cl-PF3ONS	3.10	2.0	ng/L	3.732		83.1	50-150			08/02/2023	
ADONA	3.28	2.0	ng/L	3.780		86.8	50-150			08/02/2023	
HFPO-DA	3.46	4.0	ng/L	4.000		86.5	50-150			08/02/2023	
NEtFOSAA	3.48	2.0	ng/L	4.000		87.0	50-150			08/02/2023	
NMeFOSAA	3.70	2.0	ng/L	4.000		92.5	50-150			08/02/2023	
PFBA	2.84	4.0	ng/L	4.000		71.0	50-150			08/02/2023	
PFBS	2.70	2.0	ng/L	3.548		76.1	50-150			08/02/2023	
PFBSA	3.68	2.0	ng/L	4.000		92.0	50-150			08/02/2023	
PFDA	3.54	2.0	ng/L	4.000		88.5	50-150			08/02/2023	
PFDoDA	3.54	2.0	ng/L	4.000		88.5	50-150			08/02/2023	
PFDS	3.28	2.0	ng/L	3.860		85.0	50-150			08/02/2023	
PFECHS	3.34	2.0	ng/L	3.696		90.4	50-150			08/02/2023	
PFHpA	3.74	2.0	ng/L	4.000		93.5	50-150			08/02/2023	
PFHpS	3.92	2.0	ng/L	3.812		103	50-150			08/02/2023	
PFHxA	3.24	2.0	ng/L	4.000		81.0	50-150			08/02/2023	
PFHxS	3.28	2.0	ng/L	3.656		89.7	50-150			08/02/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
MRL Check (B3H0144-MRL1)											
PFHxSA	3.60	2.0	ng/L	4.000		90.0	50-150			08/02/2023	
PFNA	3.40	2.0	ng/L	4.000		85.0	50-150			08/02/2023	
PFNS	3.50	2.0	ng/L	3.848		91.0	50-150			08/02/2023	
PFOA	3.80	2.0	ng/L	4.000		95.0	50-150			08/02/2023	
PFOS	3.68	2.0	ng/L	3.712		99.1	50-150			08/02/2023	
PFOSA	3.52	2.0	ng/L	4.000		88.0	50-150			08/02/2023	
PFPeA	3.42	2.0	ng/L	4.000		85.5	50-150			08/02/2023	
PFPeS	3.54	2.0	ng/L	3.764		94.0	50-150			08/02/2023	
PFTeDA	3.66	4.0	ng/L	4.000		91.5	50-150			08/02/2023	
PFTrDA	3.64	4.0	ng/L	4.000		91.0	50-150			08/02/2023	
PFUnDA	3.60	2.0	ng/L	4.000		90.0	50-150			08/02/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*213*		ng/L	*149.9*		*142*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*197*		ng/L	*152.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*187*		ng/L	*153.5*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*218*		ng/L	*160.0*		*137*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*201*		ng/L	*160.0*		*125*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*173*		ng/L	*160.0*		*108*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C3-HFPODA	*408*		ng/L	*320.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFBS	*190*		ng/L	*149.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFHxS	*195*		ng/L	*151.6*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFBA	*211*		ng/L	*160.0*		*132*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFHpA	*204*		ng/L	*160.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFHxA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFPeA	*203*		ng/L	*160.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C6-PFDA	*195*		ng/L	*160.0*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*198*		ng/L	*160.0*		*124*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOA	*202*		ng/L	*160.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOS	*205*		ng/L	*153.3*		*134*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOSA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C9-PFNA	*206*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*206*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*208*		ng/L	*160.0*		*130*	*50-200*			08/02/2023	
Matrix Spike (B3H0144-MS1)	**Source: 2308002-01**										
11Cl-PF3OUdS	31.4	2.0	ng/L	37.72	ND	83.3	70-130			08/02/2023	
3:3FTCA	36.0	4.0	ng/L	40.00	ND	90.1	70-130			08/02/2023	
4:2FTS	35.9	2.0	ng/L	37.48	ND	95.8	70-130			08/02/2023	
5:3FTCA	37.8	2.0	ng/L	40.00	ND	94.6	70-130			08/02/2023	
6:2FTS	36.1	2.0	ng/L	38.04	ND	94.8	70-130			08/02/2023	
7:3FTCA	33.5	2.0	ng/L	40.00	ND	83.8	70-130			08/02/2023	
8:2FTS	36.2	2.0	ng/L	38.40	ND	94.4	70-130			08/02/2023	
9Cl-PF3ONS	35.7	2.0	ng/L	37.32	ND	95.6	70-130			08/02/2023	
ADONA	36.4	2.0	ng/L	37.80	ND	96.3	70-130			08/02/2023	
HFPO-DA	37.4	4.0	ng/L	40.00	ND	93.5	70-130			08/02/2023	
NEtFOSAA	39.7	2.0	ng/L	40.00	ND	99.2	70-130			08/02/2023	
NMeFOSAA	38.1	2.0	ng/L	40.00	ND	95.2	70-130			08/02/2023	
PFBA	45.9	4.0	ng/L	40.00	6.66	98.0	70-130			08/02/2023	
PFBS	40.2	2.0	ng/L	35.48	6.58	94.8	70-130			08/02/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
Matrix Spike (B3H0144-MS1)	**Source: 2308002-01**										
PFBSA	38.2	2.0	ng/L	40.00	1.44	92.0	70-130			08/02/2023	
PFDA	39.9	2.0	ng/L	40.00	ND	99.8	70-130			08/02/2023	
PFDoDA	39.9	2.0	ng/L	40.00	ND	99.8	70-130			08/02/2023	
PFDS	34.8	2.0	ng/L	38.60	ND	90.2	70-130			08/02/2023	
PFECHS	34.6	2.0	ng/L	36.96	ND	93.6	70-130			08/02/2023	
PFHpA	39.4	2.0	ng/L	40.00	ND	98.4	70-130			08/02/2023	
PFHpS	37.7	2.0	ng/L	38.12	ND	98.8	70-130			08/02/2023	
PFHxA	38.0	2.0	ng/L	40.00	ND	95.1	70-130			08/02/2023	
PFHxS	39.6	2.0	ng/L	36.56	3.62	98.3	70-130			08/02/2023	
PFHxSA	37.4	2.0	ng/L	40.00	ND	93.4	70-130			08/02/2023	
PFNA	38.7	2.0	ng/L	40.00	ND	96.8	70-130			08/02/2023	
PFNS	35.2	2.0	ng/L	38.48	ND	91.4	70-130			08/02/2023	
PFOA	41.8	2.0	ng/L	40.00	2.02	99.4	70-130			08/02/2023	
PFOS	36.2	2.0	ng/L	37.12	ND	97.6	70-130			08/02/2023	
PFOSA	39.1	2.0	ng/L	40.00	ND	97.8	70-130			08/02/2023	
PFPeA	38.8	2.0	ng/L	40.00	ND	97.0	70-130			08/02/2023	
PFPeS	37.3	2.0	ng/L	37.64	0.880	96.7	70-130			08/02/2023	
PFTeDA	41.8	4.0	ng/L	40.00	ND	104	70-130			08/02/2023	
PFTrDA	36.2	4.0	ng/L	40.00	ND	90.6	70-130			08/02/2023	
PFUnDA	40.1	2.0	ng/L	40.00	ND	100	70-130			08/02/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*188*		ng/L	*149.9*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*199*		ng/L	*152.0*		*131*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*173*		ng/L	*153.5*		*113*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*180*		ng/L	*160.0*		*112*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*142*		ng/L	*160.0*		*88.4*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*81.8*		ng/L	*160.0*		*51.1*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C3-HFPODA	*416*		ng/L	*320.0*		*130*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFBS	*187*		ng/L	*149.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFHxS	*192*		ng/L	*151.6*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFBA	*204*		ng/L	*160.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFHpA	*200*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFHxA	*201*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFPeA	*201*		ng/L	*160.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C6-PFDA	*189*		ng/L	*160.0*		*118*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*182*		ng/L	*160.0*		*114*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOA	*200*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOS	*196*		ng/L	*153.3*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOSA	*200*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C9-PFNA	*199*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: d3-N-MeFOSAA	*200*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*199*		ng/L	*160.0*		*124*	*50-200*			08/02/2023	
Matrix Spike Dup (B3H0144-MSD1)	**Source: 2308002-01**										
11Cl-PF3OUdS	33.1	2.0	ng/L	37.72	ND	87.8	70-130	5.21	30	08/02/2023	
3:3FTCA	39.3	4.0	ng/L	40.00	ND	98.2	70-130	8.65	30	08/02/2023	
4:2FTS	37.0	2.0	ng/L	37.48	ND	98.6	70-130	2.85	30	08/02/2023	
5:3FTCA	37.1	2.0	ng/L	40.00	ND	92.8	70-130	1.92	30	08/02/2023	
6:2FTS	34.5	2.0	ng/L	38.04	ND	90.8	70-130	4.31	30	08/02/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
Matrix Spike Dup (B3H0144-MSD1)	**Source: 2308002-01**										
7:3FTCA	33.4	2.0	ng/L	40.00	ND	83.6	70-130	0.299	30	08/02/2023	
8:2FTS	39.3	2.0	ng/L	38.40	ND	102	70-130	8.15	30	08/02/2023	
9Cl-PF3ONS	35.9	2.0	ng/L	37.32	ND	96.2	70-130	0.726	30	08/02/2023	
ADONA	35.6	2.0	ng/L	37.80	ND	94.3	70-130	2.11	30	08/02/2023	
HFPO-DA	39.4	4.0	ng/L	40.00	ND	98.6	70-130	5.31	30	08/02/2023	
NEtFOSAA	38.6	2.0	ng/L	40.00	ND	96.4	70-130	2.81	30	08/02/2023	
NMeFOSAA	37.7	2.0	ng/L	40.00	ND	94.2	70-130	0.950	30	08/02/2023	
PFBA	46.1	4.0	ng/L	40.00	6.66	98.5	70-130	0.392	30	08/02/2023	
PFBS	40.5	2.0	ng/L	35.48	6.58	95.5	70-130	0.645	30	08/02/2023	
PFBSA	38.4	2.0	ng/L	40.00	1.44	92.4	70-130	0.365	30	08/02/2023	
PFDA	40.3	2.0	ng/L	40.00	ND	101	70-130	0.948	30	08/02/2023	
PFDoDA	40.3	2.0	ng/L	40.00	ND	101	70-130	0.848	30	08/02/2023	
PFDS	34.8	2.0	ng/L	38.60	ND	90.1	70-130	0.115	30	08/02/2023	
PFECHS	34.7	2.0	ng/L	36.96	ND	93.9	70-130	0.346	30	08/02/2023	
PFHpA	40.7	2.0	ng/L	40.00	ND	102	70-130	3.39	30	08/02/2023	
PFHpS	38.8	2.0	ng/L	38.12	ND	102	70-130	3.03	30	08/02/2023	
PFHxA	38.4	2.0	ng/L	40.00	ND	96.0	70-130	0.890	30	08/02/2023	
PFHxS	41.1	2.0	ng/L	36.56	3.62	103	70-130	3.87	30	08/02/2023	
PFHxSA	37.7	2.0	ng/L	40.00	ND	94.3	70-130	0.905	30	08/02/2023	
PFNA	40.2	2.0	ng/L	40.00	ND	101	70-130	3.90	30	08/02/2023	
PFNS	36.6	2.0	ng/L	38.48	ND	95.1	70-130	4.01	30	08/02/2023	
PFOA	40.9	2.0	ng/L	40.00	2.02	97.2	70-130	2.08	30	08/02/2023	
PFOS	37.0	2.0	ng/L	37.12	ND	99.7	70-130	2.13	30	08/02/2023	
PFOSA	38.2	2.0	ng/L	40.00	ND	95.5	70-130	2.43	30	08/02/2023	
PFPeA	39.5	2.0	ng/L	40.00	ND	98.6	70-130	1.64	30	08/02/2023	
PFPeS	36.2	2.0	ng/L	37.64	0.880	93.9	70-130	2.88	30	08/02/2023	
PFTeDA	39.1	4.0	ng/L	40.00	ND	97.7	70-130	6.73	30	08/02/2023	
PFTrDA	37.0	4.0	ng/L	40.00	ND	92.4	70-130	1.97	30	08/02/2023	
PFUnDA	40.6	2.0	ng/L	40.00	ND	101	70-130	1.09	30	08/02/2023	
Isotope Dilution Analog: 13C2-4:2FTS	*189*		ng/L	*149.9*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-6:2FTS	*192*		ng/L	*152.0*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-8:2FTS	*177*		ng/L	*153.5*		*116*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA	*203*		ng/L	*160.0*		*127*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFDoDA+13C2-PFTeDA	*175*		ng/L	*160.0*		*110*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C2-PFTeDA	*133*		ng/L	*160.0*		*83.1*	*25-250*			08/02/2023	
Isotope Dilution Analog: 13C3-HFPODA	*406*		ng/L	*320.0*		*127*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFBS	*190*		ng/L	*149.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C3-PFHxS	*191*		ng/L	*151.6*		*126*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFBA	*204*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C4-PFHpA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFHxA	*206*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C5-PFPeA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C6-PFDA	*195*		ng/L	*160.0*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C7-PFUnDA	*196*		ng/L	*160.0*		*122*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOA	*207*		ng/L	*160.0*		*129*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOS	*199*		ng/L	*153.3*		*130*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C8-PFOSA	*204*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	
Isotope Dilution Analog: 13C9-PFNA	*205*		ng/L	*160.0*		*128*	*50-200*			08/02/2023	

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Organics-PFAS Isotope Dilution - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B3H0144 - Method: 3512				**Prepared: 08/01/2023**							
Matrix Spike Dup (B3H0144-MSD1)	**Source: 2308002-01**										
Isotope Dilution Analog: d3-N-MeFOSAA	*200*		ng/L	*160.0*		*125*	*50-200*			08/02/2023	
Isotope Dilution Analog: d5-N-EtFOSAA	*199*		ng/L	*160.0*		*124*	*50-200*			08/02/2023	

EGLE

Department of Environment, Great Lakes, and Energy
Laboratory Services Section

PFAS Analysis Request Sheet

Lab Work Order Number	Project Name	Matrix
2308002	Cedar Springs WWTP	WATER

Location ID: 41000010	Program:	Report CC Email 1: VorceK@Michigan.gov	Project TAT Days*: STD	Sample Collector: Traci McWhorter-Ott
Dept-Division-District: EGLE-RRD-GR	Activity:	Report CC Email 2: James.Buzzell@aecom.com	Report Batch QC: Yes ☐ No ☐	Sample Collector Phone: 319-382-9333
State Project Manager: Kelly Moss	Funding Source:	Report CC Email 3: Wes.Stambaugh@aecom.com	Lab Use Only — Sample Receipt Temperature: 2.8°C	Contract Firm: AECOM
State Project Manager Email: MossK@Michigan.gov	Location Code: 6G14	Overflow Lab Choice 1:		Contract Firm Primary Contact: James.Buzzell@aecom.com
State Project Manager Phone: 616-215-4588	SUD Location Code:	Overflow Lab Choice 2:	Received On Ice: Yes ☒ No ☐	Primary Contact Phone: 616-206-7528

* Project Turnaround time (TAT) other than standard 21 days must be pre-approved and scheduled with the laboratory. Surcharges apply.

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments
1	01	MW-02B-230726083STO	7/26/23	8:35	4	MW-02B ;Sample MS/MSD Required For Batch QC
2	02	MW-06C-230731220TO	7/31/23	1220	2	MW-06C
3	03	MW-06B-230731300TO	7/31/23	13:00	2	MW-06B
4	04	MW-06A-230731330TO	7/31/23	13:30	2	MW-06A
5	05	Trip Blank	3/22/23		2	Trip Blank
6					2	
7					2	
8					2	Field Duplicate
9					2	
10					2	
11				:	2	
12				:	2	
13				:	2	
14				:	2	
15				:	2	
16				:	2	
17				:	2	
18				:	2	
19				:	2	
20				:	2	

PFAS - Semi-Volatile Organic Compounds

PFAS - EPA 8327

Chain of Custody

Relinquished by	Received By	Date / Time
Print Name & Org.: Traci McWhorter-Ott AECOM Signature: Traci McWhorter-Ott	Joshua Walker AECOM	7/31/2023 16:00
Print Name & Org.: Joshua Walker AECOM Signature:	Melissa Smith	8/01/2023 08:35 8/1/23 901
Print Name & Org.: Signature:		/ /2023 :