

Environmental Engineers, Geologists and Scientists

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October 18, 2021

Mr. Riley Neumann Wisconsin Department of Natural Resources 2300 North Dr. Martin Luther King, Jr. Drive Milwaukee, Wisconsin 53212-3128

Re: Emerging Contaminant Evaluation Report Amendment BRRTS #: 02-41-576336 & 02-41-579429 FID #: 241828620 Sunrise Shopping Center 2410-2424 10th Avenue & 1009 Marquette Avenue South Milwaukee, Wisconsin 53172

Mr. Neumann:

As directed by the Wisconsin Department of Natural Resources (WDNR) in a letter dated November 23, 2020, an evaluation of potential subsurface impact of the Sunrise Shopping Center facility (Site) resulting from emerging contaminants was performed in March 2021. The results of the sampling were submitted to WDNR in the *Emerging Contaminant Evaluation Report* dated April 15, 2021. In a response letter dated May 19, 2021, the WDNR requested additional investigation of per- and polyfluoroalkyl substances (PFAS). A *PFAS Additional Evaluation Work Plan* (Work plan) dated July 21, 2021, was submitted to WDNR with the proposed additional investigations. That Work plan was approved in an email dated July 26, 2021. The only modification was that WDNR required the full list of PFAS constituent required by Wisconsin, instead of the reduced list proposed in the Work plan.

The additional emerging contaminants sampling was performed in August 2021 (though results took over a month to receive from the laboratory). This *Emerging Contaminant Evaluation Report Amendment* provides details of the sampling methodology and analytical results for the initial (March 2021) sampling event and the additional August 2021 sampling activities. Requested revisions listed in the May 2021 response letter from WDNR have been completed as part of this amended report.

1.0 Emerging Contaminant Assessment

To appropriately complete the required evaluation of emerging contaminants, DAI Environmental, Inc. (DAI) performed a re-evaluation of the October 2014 dated Phase I Environmental Site Assessment (Phase I ESA) and a review of the WDNR guidance document RR-101E.

A review of the Phase I indicates that the property was originally developed prior to 1910 and has a long history of commercial/industrial uses. Information obtained from the Phase I ESA, including review of Sanborn® fire insurance maps, historical aerials, and historical city directories, indicated that the Site was originally utilized as the Caveney & Co. Coal & Wood Yard and was used as such until at least 1950. At some point between 1955 and 1958, the Site transitioned from industrial to commercial use with the construction of the northern-most building, the building addressed as 1009 Marquette Avenue. By 1963, a second commercial building had been constructed on the Site to the adjacent southeast of the 1009 Marquette Avenue building. The second building included what are now tenant spaces addressed as 2410 to 2414B 10th Avenue (previously 2410-2416). Between 1969 and 1971, the second building was extended to the southeast, adding the tenant spaces currently addressed as 2418-2422 10th Avenue. Various tenants have occupied the multi-tenant space since construction, including Sunbrite Cleaners (2410), Wolf's Dry Cleaners & Launderers (2416), and Caveney Heating Oil/Caveney & Co. (2416). The Site is presently used as a strip shopping mall, with three (3) tenants: Ace Hardware (1009 Marquette Avenue), a clothing retail shop (2412 10th Avenue), and Aurora Pharmacy (2414 10th Avenue). All other tenant spaces are presently vacant.

The historical uses of the property that are potential sources of contamination include dry cleaning and petroleum storage. Comparison of these sources with Table 1 of the WDNR guidance document indicate the following potential contaminants of concern (COCs):

- Volatile Organic Compounds (VOCs)
- VOC (n-nonane)
- VOC (1,4-Dioxane)
- Chlorinated VOCs (CVOCs)
- Petroleum VOCs (PVOCs)
- Polynuclear Aromatic Hydocarbons (PAHs)
- Polyfluoroalkyl substances (PFAS)

Extensive soil and groundwater sampling have been completed for VOCs and PAHs, leaving nnonane, 1,4-Dioxane, and PFAS as the COCs to evaluate as part of the emerging contaminant evaluation. Based upon the information currently available, there are no known specific uses, storage, handling, etc., of the three (3) potential COCs. To further evaluate potential sources that may have contributed to PFAS concentrations in groundwater, additional historical research was conducted to identify any potential occupants of the Site that were not previously identified and that may be associated with PFAS usage. The historical research included a review of any known or recorded fires at the Site that may have used PFAS containing flame retardants to put out the fire. Freedom of Information Act (FOIA) requests were submitted to the City of South Milwaukee and the South Milwaukee Fire Department. Neither FOIA request revealed any information that indicated a previously unknown source that may have contributed to the observed PFAS concentrations, nor any recording of an extinguished fire at the Site. Documentation obtained as part of this research is provided in Appendix C.1.F.

2.0 Sampling Methodology

2.1 Sampling Network

As proposed in the January 25, 2021, *Emerging Contaminant Evaluation Work Plan*, groundwater sampling for emerging contaminants was performed on March 11, 2021, at two (2) existing groundwater monitoring wells that have historically shown the highest levels of contamination (MW-3 and MW-5). These monitoring wells were chosen to be representative of a larger area because a specific location of any potential release of emerging contaminants was not known. The March 2021 sampling included analysis of n-nonane, 1,4-Dioxane, and PFAS.

Based upon the observation of various PFAS constituents in the groundwater sampling, WDNR requested that all available monitoring wells on-site be sampled. Therefore, additional sampling for PFAS was performed on August 4-5, 2021, at the six (6) existing monitoring wells: MW-1 to MW-5 and MW-201. Figure B.3.d in Appendix B shows the locations of the six (6) monitoring wells. This additional sampling included the resampling of MW-3 and MW-5 for comparison to previous sampling results. No sampling for 1,4-Dioxane or n-Nonane were performed based upon the lack of any detections of these compounds during the March 2021 sampling event.

In addition to sampling groundwater from the six (6) monitoring wells, the water in the Ace Hardware sump pit and the discharge from the water treatment system was for PFAS. The location of the Ace Hardware sump is also depicted in Figure B.3.d. Samples of the sump and system discharge were collected on August 5, 2021.

2.2 Monitoring Well Development

Consistent with the protocol followed during quarterly sampling, the monitoring wells sampled for emerging contaminants in March 2021 were purged, to the extent practicable, to remove turbidity from the groundwater and allow the collection of a sediment-free sample that was representative of the surrounding groundwater conditions. The monitoring wells were purged using a peristaltic pump and dedicated HDPE tubing, consistent with published recommendations for PFAS sampling.

During the August 2021 additional sampling, the development and sampling of the monitoring wells was conducted in accordance with the United States Environmental Protection Agency (USEPA) *Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells* (Sampling Procedure) dated January 19, 2010. Low-flow is an enhanced development and sampling protocol similar to sampling with a peristaltic pump that has been recommended as an improved sampling method providing higher quality and more consistent data. Unfortunately monitoring well MW-3 could not be sampled via low-flow protocol due to the damage to the well casing that apparently incurred during snow removal operations. In lieu of the low-flow pump unit, a peristaltic pump was substituted and all other protocol were followed as closely as possible.

Briefly the sampling protocol calls for a submersible pump, constructed of stainless steel, to be used for the extraction of groundwater at a relatively low rate which is manually controlled to minimize drawdown in the monitoring well (approximately 100 to 500-mL/min). HDPE tubing was used to minimize potential PFAS contamination from the sampling equipment. Dedicated tubing was utilized for each well, and the submersible pump was be decontaminated with a non-phosphate detergent (e.g., Alconox®) between monitoring wells, minimizing the potential for cross-contamination.

To monitor the purging progress and determine when stable conditions have been achieved and a representative groundwater sample could be collected, the water recovered by the low-flow pump unit passed through a small volume flow-through cell (e.g., 250-mL or less) coupled with a multi-parameter instrument (e.g., YSI Professional Plus or similar) for measuring field indicator parameters. The multi-parameter instrument measures pH, Oxidation-Reduction Potential (ORP), Dissolved Oxygen (DO), Specific Conductance, and Temperature. The indicator field parameters are measured at a regular interval, approximately equivalent to at least the turn-over rate of the flow-through cell (e.g., 250-mL flow-through cell with a flow rate of 100-mL/min would have a maximum monitoring frequency of every 2.5-min). The purging is considered complete and sampling begins when the field indicator parameters have stabilized in three (3) consecutive readings as follows:

- DO: 10% variance for values greater than 0.5-mg/L, or three (3) consecutive DO values less than 0.5-mg/L;
- Specific Conductance: 3%
- Temperature: ± 1 degree Celsius
- pH: ± 0.1 unit
- ORP: ± 10 -mV

A copy of the field sheets completed during the low-flow sampling are included Appendix C.1.G.

2.3 Groundwater Sampling Procedures

The groundwater samples from MW-3 and MW-5 during the March 2021 sampling event and the groundwater sample from MW-3 in August 2021 were collected using a peristaltic pump with dedicated tubing. Otherwise the groundwater samples were collected using the low-flow sampler. For wells developed following low-flow sampling protocol, the tubing was disconnected from the flow-through cell once purging was complete. Groundwater was then dispensed directly from either the peristaltic pump tubing or low-flow pump tubing into the appropriate sample jars, which were obtained from the laboratory. The groundwater samples were then analyzed for:

- 1,4-Dioxane via USEPA SW8270D by SIM (March 2021 only);
- N-nonane via USEPA SW8260C (March 2021 only); and
- PFAS (Wisconsin 33 list per March 1, 2021) via PFAS by Isotope Dilution (ID) Standard Operating Procedures (SOP).

The samples submitted for analysis of 1,4-Dioxane were dispensed into four (4) unpreserved 100-mL amber glass containers. Samples for n-nonane were dispensed into six (6) 40-mL vials preserved with hydrochloric acid, and the PFAS samples were dispensed into one (1) 250-mL unpreserved plastic container. New disposable nitrile gloves were used to collect each sample to limit cross contamination. The samples were stored on ice immediately after collection and were maintained at a temperature of 4°C or lower via a cooler with ice before being transferred to a refrigerator. Ice packs were not used per the published recommendations indicating a potential for PFAS contamination from the ice packs. The samples were then stored in the refrigerator until picked up by the laboratory courier. The courier transported the samples to Pace Analytical Services, LLC (Pace Analytical) of Green Bay, Wisconsin, an independent commercial Wisconsin certified analytical laboratory following standard chain-of-custody procedures. Pace Analytical subsequently transferred the samples to affiliate laboratories for specific analyses. The 1,4-Dixone analyses were performed by Pace Analytical National of Mt. Juliet, Tennessee, the n-nonane analyses were performed by Pace Analytical Long Island of Melville, New York, and the PFAS analyses were performed by Pace Analytical of West Columbia, South Carolina.

Per the requirements of the Wisconsin PFAS expectations guidance document, one (1) equipment blank (e.g., pump distilled water through pump into sample containers), one (1) field blank, and one (1) duplicate sample were collected for quality assurance/quality control purposes during the March 2021 PFAS sampling. With the resampling of MW-3 and MW-5 in August serving as "duplicate" samples to the March 2021 sampling, only an equipment blank and a field blank were collected during August 2021 PFAs sampling event.

3.0 Water Analytical Results

3.1 Groundwater

The emerging contaminants groundwater sampling was completed on March 11, 2021, and August 4, 2021. The March 2021 groundwater samples from MW-3 and MW-5 were analyzed for 1,4-Dioxane, n-nonane, and PFAS, and all monitoring wells were sampled for PFAS in August 2021. Summaries of the analytical results are provided Tables A.1.C-A.1.D (see Appendix A). The results are compared to the Preventative Action Limits (PALs) and Enforcement Standards listed in Table 1 of NR 140. For PFAS the PAL and Enforcement Standards listed in Table A.1.D are the recommended groundwater standards, bur are not approved regulatory standards. Copies of the laboratory analytical reports for the emerging contaminants sampling are provided in this report as Appendix C.1.E.

As observed in Table A.1.C, neither 1,4-Dioxane nor n-nonane were reported at concentrations above the laboratory Limit of Detection (LOD). Although the "non-detect" concentration limits reported for 1,4-Dioxane are above the PAL and the Enforcement Standard, the concentrations are reported to the lowest possible level (i.e., below the LOD in undiluted samples). Therefore, the reported concentrations are not evaluated as exceedances per NR 140.14(3)(a). Neither 1,4-Dioxane nor n-nonane are COCs at the Site.

Table A.1.D summarizes the results of the analyses for PFAS. As observed in the summary table, 18 of 33 constituents on the WDNR PFAS List were reported by the laboratory at concentrations

below the Limit of Quantification (LOQ). The 15 PFAS constituents reported at a concentration above the LOD are:

PFAS with Detectable Concentrations

- Perfluorobutanoic acid (PFBA)
- Perfluoropentanoic acid (PFPeA)
- Perfluorohexanoic acid (PFHxA)
- Perfluoroheptanoic acid (PFHpA)
- Perfluorononanoic acid (PFNA)
- Perfluorodecanoic acid (PFDA)
- Perfluorobutanesulfonic acid (PFBS)
- Perfluoropentanesulfonic acid (PFPeS)
- Perfluorohexanesulfonic acid (PFHxS)
- Perfluoroheptanesulfonic acid (PFHpS)
- 6:2 Fluorotelomersulfonic acid (6:2 FTS)
- Perfluorooctanoic acid (PFOA)*
- Perfluorooctanesulfonic acid (PFOS)*
- Perfluorooctane sulfonamide (PFOSA)*
- N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)*

* – One (1) of six (6) PFAS constituents included in cumulative concentration evaluated against applicable objectives.

Either eleven (11) or twelve (12) PFAS constituents were observed in each of the monitoring wells, with the exception of MW-201, where only seven (7) PFAS constituents were reported above the LOQ. Certain of constituents were observed in the equipment blank and/or laboratory Method Blank during the May 2021 sampling, but only the PFAS constituent 6:2 FTS was observed in the equipment blank sample in the August 2021 sampling event. Therefore, all PFAS reported at concentrations above the LOQ in the August 2021 sample results are evaluated as actual detections of that PFAS constituent.

Many of the PFAS constituents observed were reported at concentrations below the recommended PALs, or are listed constituents with no recommended PAL. The August 2021 sampling identified two (2) individual PFAS constituents reported at concentrations above the PAL: PFNA in MW-4 and PFHxS in all monitoring wells except MW-201. (PFNA was observed in MW-3 at a concentration above the PAL in May 2021, but the August 2021 results were below the PAL.) In addition to the individual PFAS constituents, the cumulative PFAS concentration of the PFOA, PFOS, PFOSA, and NEtFOSAA were observed at a total concentration above the recommended ES in MW-1 through MW-5, and also above the recommended PAL in MW-201. The identified exceedances are summarized below by well location. Figure B.3.b.3a provides a Site Plan showing the monitoring well locations and the locations of all identified PFAS exceedances in May 2021. Figure B.3.b.3b provides the August 2021 PFAS exceedances.

PFAS with Exceedances of the PALs

- PFNA MW-4
- PFHxS MW-1 to MW-5
- Combined PFAS (PFOA only) MW-201

PFAS with Exceedances of the Enforcement Standards

- Combined PFAS (PFOA and PFOS) MW-1
- Combined PFAS (PFOA, PFOS, PFOSA, and NEtFOSAA) MW-2
- Combined PFAS (PFOA, PFOS, and PFOSA) MW-3
- Combined PFAS (PFOA and PFOS) MW-4
- Combined PFAS (PFOA, PFOS, and PFOSA) MW-5

3.2 Ace Hardware Sump/Effluent

In addition to completing groundwater sampling, PFAS analysis was performed on the sump water from the basement of the Ace Hardware building. Samples from the sump influent as well as the effluent from the activated carbon treatment system were collected and analyzed. The results of the sampling are summarized in Table A.1.D. The results of these PFAS analyses are compared to the recommended PALs and Enforcement Standards for groundwater samples.

The results of the laboratory analyses of the Ace Hardware sump water indicate comparable, but slightly lower PFAS concentrations as compared to the groundwater concentrations observed in MW-5 (consistent with Tetrachloroethene results commonly observed between MW-5 and the sump). All individual PFAS constituents in the sump sample were reported at concentrations below the recommended PALs, or are constituents for which no PALs have been recommended. However, the combined concentrations of PFOA and PFOS in the sump influent exceed the recommended PAL, although effluent concentrations after treatment are below the Limit of Detection (LOQ). Therefore, results of the effluent sample indicate that the treatment system is effective in preventing any PFAS concentrations from discharging into the City of South Milwaukee stormwater sewer system and ultimately Lake Michigan.

4.0 Summary of Emerging Contaminant Evaluation

As requested by the WDNR, an evaluation of potential emerging COCs has been completed for the Sunrise Shopping Center Site. The previous uses of the property as a petroleum distribution facility and by two (2) historical dry cleaning operations were identified in the January 25, 2021, *Emerging Contaminant Evaluation Work Plan* as potential sources of n-nonane, 1,4-Dioxane, and PFAS. Two (2) on-site monitoring wells were sampled and analyzed for n-nonane, 1,4-Dioxane, and PFAS in March 2021 as proposed in the January 2021. The results of groundwater analyses reported 1,4-Dioxane and n-nonane at concentrations below the laboratory LOQ, and therefore are not considered COCs. The results of PFAS analysis identified 12 PFAS constituents in the groundwater samples.

Therefore, six (6) on-site monitoring wells were subsequently sampled and analyzed for PFAS in August 2021 as proposed in the July 2021 dated *PFAS Additional Evaluation Work Plan*. The results of August sampling identified 15 PFAS constituents in the groundwater samples. PFAS concentrations were observed in all monitoring wells, with the highest contaminant concentrations observed in monitoring well MW-4 and the least impacted groundwater monitoring well was MW-201. The concentrations of PFNA and/or PFHxS are above the recommended PALs in five (5) of the six (6) monitoring wells sampled. The combined concentrations of two (2) or more PFAS constituents (PFOA, PFOS, PFOSA, and NEtFOSAA) were observed at levels above the Enforcement Standards in the five (5) monitoring wells MW-1 to MW-5.

The influent sample to the sump indicated a combined concentration from two (2) PFAS constituents (PFOA and PFOS) at a level exceeding the PAL. However, the effluent sample results all show contaminant constituents at concentrations below the laboratory LOQs. Therefore, there is no discharge of any emerging contaminant into the City of South Milwaukee's stormwater sewer system.

The highest concentration of PFAS was observed at MW-4, which is located behind the former Wolf's Dry Cleaners tenant space. An attempt was also made to compare the locations and concentrations of PFAS with the known Tetrachlroroethene (Perc) contaminant plume. However, the spatial distribution of PFAS concentrations are not well correlated with the spatial distribution of Perc, implying that the source area of these two (2) contaminants are not the same.

A further review of potential sources of PFAS was also conducted, including prior building tenants that may have used PFAS, as well as a historical review of any recorded fires at the Site where PFAS containing firefighting foams may have been used. Unfortunately the review did not identify any additional potential sources. Finally, a review of the BRRTS database was undertaken to see if there are any known off-site sources of PFAS that may account for the concentrations observed on-site. However, the BRRRTS database did not reveal any other PFAS contaminated sites in the vicinity.

The observed groundwater contamination will be addressed as part of the Case Close Out, consistent with Perc and PAH contamination. If you have any questions or require any further information in association with this Emerging Contaminant Evaluation Report Amendment, please contact me at (847) 996-3580.

Sincerely, **DAI Environmental, Inc.**

Christipher Cailles

Christopher Cailles, P.E. Project Engineer

Attachments

cc: Steven Dukatt – Carol Investment Corporation (w/attachments)

APPENDIX A TABLES

Table A.1.C. Groundwater Analytical Table for Emerging Contaminants (mg/L) (1,4-Dioxane and n-nonane)

Emoning Contominants	Sample (Sampl	Location e Date)	DAT 1	ES ²	
Emerging Contaminants	MW-3 (03/11/21)	MW-5 (03/11/21)	PAL	ES-	
1,4-Dioxane	< 0.0447*	< 0.0447*	0.0003	0.003	
n-nonane	<0.52	< 0.52	NL	NL	

¹ – Preventive Action Limits (PALs) taken from Wisconsin Administrative Code, Chapter NR 140, Table 1

² – Enforcement Standards (ES) taken from Wisconsin Administrative Code, Chapter NR 140, Table 1

* – Limit of detection reported greater than most stringent applicable standard; "non-detect" concentration not taken as exceedance per NR140.14(3)(a)

NL – Not Listed in NR 140

1,4-Dioxane via USEPA Method SW8260C

n-nonane via USEPA Method SW8270D by SIM

			Sample Location (Sample Date)			D471	EG
Emerging Contaminants	MW-1 (08/04/21)	MW-2 (08/04/21)	MW-3 (03/11/21)	MW-3 (08/05/21)	MW-4 (08/05/21)	PAL	ES ²
Perfluorobutanoic acid (PFBA)	11	13	31 (EB)	17	71	(2,000)	(10,000)
Perfluoropentanoic acid (PFPeA)	83	17	<35	20	33	NL	(10,000) NL
Perfluorohexanoic acid (PFHxA)	7.6	9.4	<3.5	15	20	(30,000)	(150.000)
Perfluoroheptanoic acid (PFHpA)	5.9	4.1	4.5 (EB)	25	13	NL	NL
Perfluorononanoic acid (PFNA)	0.82 (J)	< 0.39	4.3	2.2 (J)	4.4	(3)	(30)
Perfluorodecanoic acid (PFDA)	<0.44	< 0.44	1.8 (J)	1 (J)	3.5	(60)	(300)
Perfluoroundecanoic acid (PFUnA)	< 0.52	< 0.53	<3.5	< 0.54	< 0.52	(600)	(3,000)
Perfluorododecanoic acid (PFDoA)	< 0.39	< 0.4	<3.5	< 0.41	< 0.39	(100)	(500)
Perfluorotridecanoic acid (PFTriA)	< 0.44	< 0.45	<3.5	< 0.46	< 0.44	NL	NL
Perfluorotetradecanoic acid (PFTeA)	< 0.5	< 0.5	<3.5	< 0.55	< 0.53	(2,000)	(10,000)
Perfluorobutanesulfonic acid (PFBS)	9	16	19	34	7	(90,000)	(450,000)
Perfluoropentanesulfonic acid (PFPeS)	2.8 (J)	6.7	<3.5	< 0.51	1.8 (J)	NL	NL
Perfluorohexanesulfonic acid (PFHxS)	11	14	<3.5	7.1	13	(4)	(40)
Perfluoroheptanesulfonic acid (PFHpS)	< 0.42	< 0.42	<3.5	< 0.43	0.9 (J)	NL	NL
Perfluorononanesulfonic acid (PFNs)	<0.6	<0.6	<3.5	< 0.61	< 0.59	NL	NL
Perfluorodecanesulfonic acid (PFDs)	< 0.65	< 0.65	<3.5	< 0.67	< 0.65	NL	NL
Perfluorododecanesulfonic acid (PFDoS)	< 0.87	< 0.88	<6.9	<0.9	< 0.87	NL	NL
4:2 Fluorotelomer sulfonic acid (4:2 FTSA)	<0.73	<0.74	<6.9	<0.75	<0.73	NL	NL
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	1.7 (J)	3.6 (J)	2.7 (J, FB)	<1.8	<1.3	NL	NL
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	<1.3	<1.3	<6.9	<1.4	<1.3	NL	NL
N-Methyl perfluorooctane sulfonamide (NMeFOSA)	<1.1	<1.1	<14	<1.1	<1	NL	NL
N-Methyl perfluorooctane sulfonamide (NMeFOSAA)	<0.78	<0.78	<6.9	<0.8	<0.77	NL	NL
N-Methyl perfluorooctane sulfonamidoacetic acid (NMeFOSE)	<1.1	<1.1	<6.9	<1.1	<1.1	NL	NL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	<1.7	<1.7	<6.9	<1.8	<1.7	(30)	(300)

Europia Contaniante			Sample Location (Sample Date)				ES?
Emerging Contaminants	MW-1 (08/04/21)	MW-2 (08/04/21)	MW-3 (03/11/21)	MW-3 (08/05/21)	MW-4 (08/05/21)	PAL	E3-
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	<0.4	<0.41	<6.9	<0.42	<0.4	(600)	(3,000)
9-chlorohexadecafluoro-3-oxanone-1- sulfonic acid (9Cl-PF3ONS)	<0.4	<0.41	<6.9	< 0.42	<0.4	NL	NL
11-chloroeicosafluoro-3-oxaundecane-1- sulfonic acid (11Cl-PF3OUdS)	<0.55	<0.56	<6.9	<0.57	<0.55	NL	NL
Perfluorooctanoic acid (PFOA)**	11	22	12	9.6	29		
Perfluorooctanesulfonic acid (PFOS)**	9.6	14	<3.5	29	69		
Perfluorooctane sulfonamide (PFOSA)**	< 0.51	0.84 (J)	47	4.2	< 0.51		
N-Ethyl perfluorooctane sulfonamide (NEtFOSA)**	<1.1	<1.1	<6.9	<1.2	<1.1	PAL ¹	ES ²
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)**	<0.63	2.5 (J)	<6.9	<0.65	<0.62		
N-Methyl perfluorooctane sulfonamidethanol (NEtFOSE)**	<0.8	<0.8	<6.9	<0.82	<0.79		
TOTAL ³	20.6	<u>39.34</u>	<u>59</u>	42.8	<u>98</u>	(2)	(20)

¹ – Preventive Action Limits (PALs) taken from Wisconsin Administrative Code, Chapter NR 140, Table 1

² – Enforcement Standards (ES) taken from Wisconsin Administrative Code, Chapter NR 140, Table 1

 3 – Total combined concentration of six (6) PFAS compared to the PAL and the ES

** - PFAS constituent included in the combined total compared to the PAL and the ES

--- All PFAS constituents reported below limit of quantification; total concentration taken as highest "non-detect concentration and listed in parentheses

NOTE: PAL and ES values in parentheses has been recommended to WDNR for inclusion in NR140 but is not yet a regulated value

NL - Not Listed in NR 140 or recommended for inclusion in NR 140

Bold – Concentration exceeds the PAL

 $\underline{Underlined}-Concentration$ exceeds the PAL and the ES

(J) - Concentration reported by the laboratory above the Limit of Detection, but below the Limit of Quantification

(B) - Concentration of contaminant observed in the laboratory method blank sample

(EB) - Concentration of contaminant observed in the equipment blank sample

(FB) – Concentration of contaminant observed in the field blank sample

PFAS via PFAS by ID SOP

		Sample (Samp	Location le Date)		D471	EG
Emerging Contaminants	MW-5	MW-5 Dup	MW-5	MW-201	PAL ¹	ES ²
	(03/11/21)	(03/11/21)	(08/05/21)	(08/04/21)		
Perfluorobutanoic acid (PFBA)	11 (EB)	11 (EB)	26	1.6 (J)	(2,000)	(10,000)
Perfluoropentanoic acid (PFPeA)	12 (EB)	12 (EB)	18	6.1	NL	NL
Perfluorohexanoic acid (PFHxA)	8.6 (EB)	9.1 (EB)	13	7.2	(30,000)	(150,000)
Perfluoroheptanoic acid (PFHpA)	5.9 (EB)	6.4 (EB)	8	5.3	NL	NL
Perfluorononanoic acid (PFNA)	<3.4	<3.4	0.97 (J)	< 0.38	(3)	(30)
Perfluorodecanoic acid (PFDA)	<3.4	<3.4	< 0.44	< 0.44	(60)	(300)
Perfluoroundecanoic acid (PFUnA)	<3.4	<3.4	< 0.52	< 0.52	(600)	(3,000)
Perfluorododecanoic acid (PFDoA)	<3.4	<3.4	< 0.39	< 0.39	(100)	(500)
Perfluorotridecanoic acid (PFTriA)	<3.4	<3.4	<0.44	<0.44	NL	NL
Perfluorotetradecanoic acid (PFTeA)	<3.4	<3.4	<0.5	<0.5	(2,000)	(10,000)
Perfluorobutanesulfonic acid (PFBS)	21	20	17	3.2 (J)	(90,000)	(450,000)
Perfluoropentanesulfonic acid (PFPeS)	1.4 (J)	1.3 (J)	1.3 (J)	<0.49	NL	NL
Perfluorohexanesulfonic acid (PFHxS)	5.2	5.9	6.1	0.95 (J)	(4)	(40)
Perfluoroheptanesulfonic acid (PFHpS)	<3.4	<3.4	< 0.42	< 0.41	NL	NL
Perfluorononanesulfonic acid (PFNs)	<3.4	<3.4	<0.6	< 0.59	NL	NL
Perfluorodecanesulfonic acid (PFDs)	<3.4	<3.4	<0.65	<0.65	NL	NL
Perfluorododecanesulfonic acid (PFDoS)	<6.7	<6.9	< 0.87	< 0.87	NL	NL
4:2 Fluorotelomer sulfonic acid (4:2 FTSA)	<6.7	<6.9	<0.73	<0.73	NL	NL
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	<6.7	<6.9	<1.7	29	NL	NL
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	<6.7	<6.9	<1.3	<1.3	NL	NL
N-Methyl perfluorooctane sulfonamide (NMeFOSA)	<13	<13	<1.1	<1	NL	NL
N-Methyl perfluorooctane sulfonamide (NMeFOSAA)	<6.7	<6.9	<0.78	<0.77	NL	NL
N-Methyl perfluorooctane sulfonamidoacetic acid (NMeFOSE)	<6.7	<6.9	<1.1	<1.1	NL	NL
Hexafluoropropylene oxide dimer acid (HFPO- DA)	<6.7	<6.9	<1.7	<1.7	(30)	(300)
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	<6.7	<6.9	<0.4	<0.4	(600)	(3,000)
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	<6.7	<6.9	<0.4	<0.4	NL	NL
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<6.7	<6.9	<0.55	<0.55	NL	NL

		Sample (Samp		DATI	ES2	
Emerging Contaminants	g ContaminantsMW-5 $(03/11/21)$ M (0noic acid (PFOA)**12sulfonic acid (PFOS)**<3.4sulfonamide (PFOSA)**9.5prooctane sulfonamide $EFOSA$)**<6.7tane sulfonamidoacetic acid 	MW-5 Dup (03/11/21)	MW-5 (08/05/21)	MW-201 (08/04/21)	PAL ¹	ES ²
Perfluorooctanoic acid (PFOA)**	12	12	15	6.7		
Perfluorooctanesulfonic acid (PFOS)**	<3.4	<3.4	13	<1.7		
Perfluorooctane sulfonamide (PFOSA)**	9.5	9.4	1.8J	< 0.51		
N-Ethyl perfluorooctane sulfonamide (NEtFOSA)**	<6.7	<6.9	<1.1	<1.1	PAL ¹	ES ²
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)**	<6.7	<6.9	<0.63	<0.62		
N-Methyl perfluorooctane sulfonamidethanol (NEtFOSE)**	<6.7	<6.9	<0.8	<0.79		
TOTAL ³	<u>21.5</u>	21.4	<u>29.8</u>	6.7	(2)	(20)

¹ – Preventive Action Limits (PALs) taken from Wisconsin Administrative Code, Chapter NR 140, Table 1

² – Enforcement Standards (ES) taken from Wisconsin Administrative Code, Chapter NR 140, Table 1

 3 – Total combined concentration of six (6) PFAS compared to the PAL and the ES

** - PFAS constituent included in the combined total compared to the PAL and the ES

--- All PFAS constituents reported below limit of quantification; total concentration taken as highest "non-detect concentration and listed in parentheses

NOTE: PAL and ES values in parentheses has been recommended to WDNR for inclusion in NR140 but is not yet a regulated value

NL – Not Listed in NR 140 or recommended for inclusion in NR 140

Bold - Concentration exceeds the PAL

Underlined - Concentration exceeds the PAL and the ES

(J) - Concentration reported by the laboratory above the Limit of Detection, but below the Limit of Quantification

(B) – Concentration of contaminant observed in the laboratory method blank sample

(EB) - Concentration of contaminant observed in the equipment blank sample

(FB) - Concentration of contaminant observed in the field blank sample

PFAS via PFAS by ID SOP

Emerging Contaminants		Sample I (Sample	Location e Date)		1	
	Equipment Blank (03/11/21)	Equipment Blank (08/04/21)	Field Blank (03/11/21)	Field Blank (08/04/21)	PAL ¹	ES ²
Perfluorobutanoic acid (PFBA)	9.8 (B)	< 0.42	<3.4	< 0.45	(2,000)	(10,000)
Perfluoropentanoic acid (PFPeA)	68	< 0.56	<3.4	< 0.59	NL	NL
Perfluorohexanoic acid (PFHxA)	2.6 (J)	< 0.7	<3.4	< 0.74	(30,000)	(150,000)
Perfluoroheptanoic acid (PFHpA)	8.1	< 0.46	<3.4	< 0.48	NL	NL
Perfluorononanoic acid (PFNA)	<3.4	< 0.47	<3.4	< 0.5	(3)	(30)
Perfluorodecanoic acid (PFDA)	<3.4	< 0.54	<3.4	< 0.57	(60)	(300)
Perfluoroundecanoic acid (PFUnA)	<3.4	< 0.64	<3.4	< 0.67	(600)	(3,000)
Perfluorododecanoic acid (PFDoA)	<3.4	< 0.48	<3.4	< 0.51	(100)	(500)
Perfluorotridecanoic acid (PFTriA)	<3.4	< 0.54	<3.4	< 0.57	NL	NL
Perfluorotetradecanoic acid (PFTeA)	<3.4	< 0.61	<3.4	< 0.65	(2,000)	(10,000)
Perfluorobutanesulfonic acid (PFBS)	<3.4	< 0.61	<3.4	< 0.65	(90,000)	(450,000)
Perfluoropentanesulfonic acid (PFPeS)	<3.4	< 0.61	<3.4	< 0.64	NL	NL
Perfluorohexanesulfonic acid (PFHxS)	<3.4	< 0.57	<3.4	< 0.59	(4)	(40)
Perfluoroheptanesulfonic acid (PFHpS)	<3.4	< 0.51	<3.4	< 0.54	NL	NL
Perfluorononanesulfonic acid (PFNs)	<3.4	< 0.73	<3.4	< 0.77	NL	NL
Perfluorodecanesulfonic acid (PFDs)	<3.4	<0.8	<3.4	< 0.84	NL	NL
Perfluorododecanesulfonic acid (PFDoS)	<6.7	<1.1	<6.8	<1.1	NL	NL
4:2 Fluorotelomer sulfonic acid (4:2 FTSA)	<6.7	<0.9	<6.8	< 0.94	NL	NL
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	<6.7	2.2 (J)	2.2 (J)	<2.2	NL	NL
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	<6.7	<1.6	<6.8	<1.7	NL	NL
N-Methyl perfluorooctane sulfonamide (NMeFOSA)	<13	<1.3	<14	<1.4	NL	NL
N-Methyl perfluorooctane sulfonamide (NMeFOSAA)	<6.7	<0.96	<6.8	<1.0	NL	NL
N-Methyl perfluorooctane sulfonamidoacetic acid (NMeFOSE)	<6.7	<1.3	<6.8	<1.4	NL	NL
Hexafluoropropylene oxide dimer acid (HFPO- DA)	<6.7	<2.1	<6.8	<2.2	(30)	(300)
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	<6.7	< 0.50	<6.8	< 0.52	(600)	(3,000)
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	<6.7	<0.49	<6.8	<0.52	NL	NL

Table A.1.D (Continued). Groundwater Analytical Table for Emerging Contaminants (ng/L)	
(Perfluoroalkyl and Polyfluoroalkyl Substances)	

Emerging Contaminants		Sample I (Sampl			ES2	
	Equipment Blank (03/11/21)	Equipment Blank (08/04/21)	Field Blank (03/11/21)	Field Blank (08/04/21)	PAL	F2-
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<6.7	<0.68	<6.8	<0.71	NL	NL
Perfluorooctanoic acid (PFOA)**	<3.4	< 0.85	<3.4	< 0.89		
Perfluorooctanesulfonic acid (PFOS)**	<3.4	<2.1	<3.4	<2.2		
Perfluorooctane sulfonamide (PFOSA)**	<3.4	< 0.63	<3.4	<0.66		
N-Ethyl perfluorooctane sulfonamide (NEtFOSA)**	<6.7	<1.4	<6.8	<1.5	PAL ¹	\mathbf{ES}^2
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)**	<6.7	<0.77	<6.8	<0.81		
N-Methyl perfluorooctane sulfonamidethanol (NEtFOSE)**	<6.7	<0.98	<6.8	<1		
TOTAL	(<6.7)	(<2.1)	(<6.8)	(<2.2)	(2)	(20)

¹ – Preventive Action Limits (PALs) taken from Wisconsin Administrative Code, Chapter NR 140, Table 1

 2 – Enforcement Standards (ES) taken from Wisconsin Administrative Code, Chapter NR 140, Table 1 3 – Total combined concentration of six (6) PFAS compared to the PAL and the ES

** – PFAS constituent included in the combined total compared to the PAL and the ES

--- All PFAS constituents reported below limit of quantification; total concentration taken as highest "non-detect concentration and listed in parentheses

NOTE: PAL and ES values in parentheses has been recommended to WDNR for inclusion in NR140 but is not yet a regulated value

NL – Not Listed in NR 140 or recommended for inclusion in NR 140

Bold – Concentration exceeds the PAL

Underlined - Concentration exceeds the PAL and the ES

(J) – Concentration reported by the laboratory above the Limit of Detection, but below the Limit of Quantification

(B) – Concentration of contaminant observed in the laboratory method blank sample

(EB) – Concentration of contaminant observed in the equipment blank sample

(FB) – Concentration of contaminant observed in the field blank sample

PFAS via PFAS by ID SOP

Emercia e Contominante	Sample 1 (Sampl	Location e Date)	PAL^1 $V05/21)$ PAL^1 <0.35 $(2,000)$ $(0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0$	ES2
Emerging Contaminants	Sump	Effluent	PAL	ES ²
	(08/04/21)	(08/05/21)		
Perfluorobutanoic acid (PFBA)	6.5	< 0.35	(2,000)	(10,000)
Perfluoropentanoic acid (PFPeA)	8.2	<0.46	NL	NL
Perfluorohexanoic acid (PFHxA)	5.4	< 0.58	(30,000)	(150,000)
Perfluoroheptanoic acid (PFHpA)	2.1 (J)	< 0.38	NL	NL
Perfluorononanoic acid (PFNA)	0.45 (J)	< 0.39	(3)	(30)
Perfluorodecanoic acid (PFDA)	< 0.46	< 0.44	(60)	(300)
Perfluoroundecanoic acid (PFUnA)	< 0.55	< 0.53	(600)	(3,000)
Perfluorododecanoic acid (PFDoA)	< 0.41	<0.4	(100)	(500)
Perfluorotridecanoic acid (PFTriA)	< 0.46	< 0.44	NL	NL
Perfluorotetradecanoic acid (PFTeA)	< 0.52	<0.5	(2,000)	(10,000)
Perfluorobutanesulfonic acid (PFBS)	13	<0.5	(90,000)	(450,000)
Perfluoropentanesulfonic acid (PFPeS)	1.1 (J)	<0.5	NL	NL
Perfluorohexanesulfonic acid (PFHxS)	3 (J)	< 0.46	(4)	(40)
Perfluoroheptanesulfonic acid (PFHpS)	< 0.44	< 0.42	NL	NL
Perfluorononanesulfonic acid (PFNs)	< 0.62	<0.6	NL	NL
Perfluorodecanesulfonic acid (PFDs)	< 0.68	< 0.65	NL	NL
Perfluorododecanesulfonic acid (PFDoS)	< 0.91	< 0.88	NL	NL
4:2 Fluorotelomer sulfonic acid (4:2 FTSA)	< 0.76	< 0.73	NL	NL
6:2 Fluorotelomer sulfonic acid (6:2 FTSA)	<1.7	<1.7	NL	NL
8:2 Fluorotelomer sulfonic acid (8:2 FTSA)	<1.4	<1.3	NL	NL
N-Methyl perfluorooctane sulfonamide (NMeFOSA)	<1.1	<1.1	NL	NL
N-Methyl perfluorooctane sulfonamide (NMeFOSAA)	<0.81	<0.78	NL	NL
N-Methyl perfluorooctane sulfonamidoacetic acid (NMeFOSE)	<1.1	<1.1	NL	NL
Hexafluoropropylene oxide dimer acid (HFPO- DA)	<1.8	<1.7	(30)	(300)
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	< 0.42	< 0.41	(600)	(3,000)
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	<0.42	<0.4	NL	NL

Emorging Contominants	Sample (Sampl	Location le Date)	DAT 1	ES2
	Sump (08/04/21)	Effluent (08/05/21)	PAL-	ES ⁻
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.58	<0.56	NL	NL
Perfluorooctanoic acid (PFOA)**	4.8	<0.7		
Perfluorooctanesulfonic acid (PFOS)**	5.9	<1.7		
Perfluorooctane sulfonamide (PFOSA)**	< 0.54	< 0.51		
N-Ethyl perfluorooctane sulfonamide (NEtFOSA)**	<1.2	<1.1	PAL ¹	\mathbf{ES}^2
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)**	<0.66	<0.63		
N-Methyl perfluorooctane sulfonamidethanol (NEtFOSE)**	<0.83	<0.8		
TOTAL ³	10.7	(<1.7)	(2)	(20)

¹ – Preventive Action Limits (PALs) taken from Wisconsin Administrative Code, Chapter NR 140, Table 1

² – Enforcement Standards (ES) taken from Wisconsin Administrative Code, Chapter NR 140, Table 1

 3 – Total combined concentration of six (6) PFAS compared to the PAL and the ES

** - PFAS constituent included in the combined total compared to the PAL and the ES

--- All PFAS constituents reported below limit of quantification; total concentration taken as highest "non-detect concentration and listed in parentheses

NOTE: PAL and ES values in parentheses has been recommended to WDNR for inclusion in NR140 but is not yet a regulated value

NL - Not Listed in NR 140 or recommended for inclusion in NR 140

Bold – Concentration exceeds the PAL

Underlined - Concentration exceeds the PAL and the ES

(J) - Concentration reported by the laboratory above the Limit of Detection, but below the Limit of Quantification

(B) - Concentration of contaminant observed in the laboratory method blank sample

(EB) - Concentration of contaminant observed in the equipment blank sample

(FB) – Concentration of contaminant observed in the field blank sample

PFAS via PFAS by ID SOP

APPENDIX B FIGURES







APPENDIX C.1.E LABORATORY ANALYTICAL REPORTS (EMERGING CONTAMINANTS ANALYSIS)



Pace Analytical Services, LLC 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

March 30, 2021

Chris Cailles DAI Environmental Polo Park Business Center 27834 Irma Lee Circle Lake Forest, IL 60045

RE: Project: 6255 SOUTH MILWAUKEE AVE Pace Project No.: 40223357

Dear Chris Cailles:

Enclosed are the analytical results for sample(s) received by the laboratory on March 13, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Laurie Woelfel

Laurie Woelfel laurie.woelfel@pacelabs.com (920)469-2436 Project Manager

Enclosures

cc: Jenny Rovzar, DAI



REPORT OF LABORATORY ANALYSIS



SAMPLE SUMMARY

Project: 6255 SOUTH MILWAUKEE AVE

Pace Project No.: 40223357

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40223357001	EQUIPMENT BLANK	Water	03/11/21 09:45	03/13/21 08:35
40223357002	MW-3	Water	03/11/21 10:00	03/13/21 08:35
40223357003	MW-5	Water	03/11/21 11:00	03/13/21 08:35
40223357004	FIELD BLANK	Water	03/11/21 09:45	03/13/21 08:35
40223357005	MW-5 (DUP)	Water	03/11/21 11:00	03/13/21 08:35

REPORT OF LABORATORY ANALYSIS

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e 1 of							column	2.5/	2.5/	2.5/	2.5/	2.5/	2.5/	2.5/	2.5/!	2.5/	2.5/	2.5/5	2.5/5	2.5/5	2.5/5	2.5/5	2.5/5	2.5/5	2.5/5	2.5/5	2.5/5	(ml	Volu			Service Street, \$ ay, WI
1	2						-	5/10	5 / 10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	10	5/10	5/10	/ 10	;/10	/ 10	/ 10	/ 10		ne	Page	e 4 of	s, LLC Suite 9 54302

F-GB-C-046-Rev.03 (11Feb2020) Sample Preservation Receipt Form

France Ample tiggel®	Sample Co	Docume ndition	ent Name: Upon Receipt (SCUR)	Document	Revised: 26Mar2020	
		Docun	nent No.:		Author:	
1241 Bellevue Street, Green Bay, WI 5430	2 ENV-F	RM-GB	AY-0014-Rev.00	Pace Gre	en Bay Quality Office	
Sample	Condition	Upon	Receipt Form (S	CUR)		
NATI			Project #:		· · · · · · · · · · · · · · · · · · ·	
Client Name: UAL EAV.		-		∩ #:4	0223357	
courier: CS Logistics 🔽 Fed Ex 🛛 Speed	dee 🔽 UPS	🗖 Wa	ltco			
Client Pace Other:					RAN A NA A RIA	
racking #:			40	223357		
ustody Seal on Cooler/Box Present.	no Seals	intact:	ryes □ no	<u></u>		
Custody Seal on Samples Present: 🔲 yes 🖡	Mo Seals	intact:				
bormometer lised SR - 0//	DDIE Bags			Samples on	ice cooling process has begu	n
Cooler Temperature Uncorrect CV /Correct	Type of ice.			Samples on	Person examining conter	nts:
Temp Blank Present: To ves V20	Biolo	- gical Tis	ssue is Frozen: 🔟 ye	es no	Date: 3-13-21 /Initials:	AL R
emp should be above freezing to 6°C. Biota Samples may be received at \leq 0°C if shipped on I	Dry Ice.				Labeled By Initials:	Y
Chain of Custody Present:	Yes INo	□n/A 1	•		· · ·	
Chain of Custody Filled Out:		□n/a 2	Dat Mail/in	Vill .	nos octanalusis ac	Чma
Chain of Custody Relinguished:	X Pes □No	□n/a 3	hPdate/fime		WL3-13-21 P	UR 3-1
Sampler Name & Signature on COC:	XVes □No					
Samples Arrived within Hold Time:	>deres □No		5.		· · · · ·	
- VOA Samples frozen upon receipt	□Yes □No		Date/Time:			
Short Hold Time Analysis (<72hr):		e).			
Rush Turn Around Time Requested:		7	7.			
Sufficient Volume:		1	al ab repaired	(i) BPZL	1 per sample poin	nt
For Analysis: □Yes ₩60 MS/MS	D: 🗆 Yes 🔂 🚧 o	□n/a		0	WA 3-13	1-21
Correct Containers Used:	Yes DNo).			· · · · ·
-Page Containers Lised	T Deres ⊡No					
Pace IP Containers Lised						
Containers Intact:	ATES [No		10			
Eiltered volume received for Dissolved tests			11		<u></u>	
Sample Labels match COC:			12 Acil Linna "Iri	NS	WA	
	W				313-0	21
-Includes date/time/D/Analysis Matrix		NTIM/A '	13			
Trin Blank Custody Seals Present		GHTA				
Pace Trip Blank Lot # (if purchased):					· · · · · · · · · · · · · · · · · · ·	
Client Notification/ Resolution:			If check	ed, see attach	ed form for additional comme	nts 📃
Person Contacted:		_Date/T	ime:			
Comments/ Resolution:		- · · ·	· · · · · · · · · · · · · · · · ·			

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

Page_____ of 31____



Report of Analysis

Pace Analytical Services, LLC

1241 Bellevue Street Suite 9 Green Bay, WI 54302 Attention: Laurie Woelfel

Project Name: 6255 SOUTH MILWAUKEE AVE Project Number: 40223357 Lot Number:**WC16034** Date Completed:03/26/2021

Kau Coman

03/28/2021 3:49 PM Approved and released by: Project Manager II: **Karen L. Coonan**





The electronic signature above is the equivalent of a handwritten signature. This report shall not be reproduced, except in its entirety, without the written approval of Pace Analytical Services, LLC.

Pace Analytical Services, LLC (*formerly Shealy Environmental Services, Inc.*) 106 Vantage Point Drive West Columbia, SC 29172 Tel: 803-791-9700 Fax: 803-791-9111 www.pacelabs.com

Case Narrative Pace Analytical Services, LLC Lot Number: WC16034

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

Sample WC16034-002 required centrifugation prior to extraction, due to excessive solids present in the samples. Centrifugation was performed following the PFAS Aqueous Centrifuge Protocol; samples were spiked with Surrogate (SUR; Extracted Internal Standard/EIS) and shaken vigorously before being poured into a conical bottle and centrifuged. The centrifuged aqueous sample was decanted back into the original sample bottle, off of the condensed solids remaining in the centrifuge bottle. Original sample bottle vas rinsed as normal and centrifuge bottle was rinsed with 4mL of MeOH. Centrifuge bottle rinsate was added to the elution. Samples concentrated to <10mL and reconstituted to 10mL using MeOH by transfer pipet.

Surrogate (4:2-FTS, 6:2-FTS and 8:2-FTS) recovery for the following sample was outside the upper control limit: WC16034-002. The sample was re-extracted. Surrogate recovery was outside the upper control limit in the Run 2. This sample did not contain any target analytes; results were reported.

The method blank associated with batch 86218 had PFBA detected at a concentration that was above the MDL but below $\frac{1}{2}$ the PQL. All samples associated with this method blank that have detections for PFBA have been flagged with a "B".

Sample Summary

Pace Analytical Services, LLC

Lot Number: WC16034

Project Name: 6255 SOUTH MILWAUKEE AVE

Project Number: 40223357

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	EQUIPMENT BLANK	Aqueous	03/11/2021 0945	03/16/2021
002	MW-3	Aqueous	03/11/2021 1000	03/16/2021
003	MW-5	Aqueous	03/11/2021 1100	03/16/2021
004	FIELD BLANK	Aqueous	03/11/2021 0945	03/16/2021
005	MW-5 (DUP)	Aqueous	03/11/2021 1100	03/16/2021

(5 samples)

Detection Summary

Pace Analytical Services, LLC

Lot Number: WC16034

Project Name: 6255 SOUTH MILWAUKEE AVE

Project Number: 40223357

e Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
EQUIPMENT BLANK	Aqueous	PFBA	PFAS by ID	9.8	В	ng/L	5
EQUIPMENT BLANK	Aqueous	PFHpA	PFAS by ID	8.1		ng/L	5
EQUIPMENT BLANK	Aqueous	PFHxA	PFAS by ID	2.6	J	ng/L	5
EQUIPMENT BLANK	Aqueous	PFPeA	PFAS by ID	68		ng/L	5
MW-3	Aqueous	6:2 FTS	PFAS by ID	2.7	JQ	ng/L	7
MW-3	Aqueous	PFBS	PFAS by ID	19		ng/L	7
MW-3	Aqueous	PFHxS	PFAS by ID	6.9		ng/L	7
MW-3	Aqueous	PFBA	PFAS by ID	31		ng/L	7
MW-3	Aqueous	PFDA	PFAS by ID	1.8	J	ng/L	7
MW-3	Aqueous	PFHpA	PFAS by ID	4.5		ng/L	7
MW-3	Aqueous	PFNA	PFAS by ID	4.3		ng/L	7
MW-3	Aqueous	PFOA	PFAS by ID	12		ng/L	7
MW-3	Aqueous	PFOS	PFAS by ID	47		ng/L	7
MW-5	Aqueous	PFBS	PFAS by ID	21		ng/L	9
MW-5	Aqueous	PFPeS	PFAS by ID	1.4	J	ng/L	9
MW-5	Aqueous	PFHxS	PFAS by ID	5.2		ng/L	9
MW-5	Aqueous	PFBA	PFAS by ID	11		ng/L	9
MW-5	Aqueous	PFHpA	PFAS by ID	5.9		ng/L	9
MW-5	Aqueous	PFHxA	PFAS by ID	8.6		ng/L	9
MW-5	Aqueous	PFOA	PFAS by ID	12		ng/L	9
MW-5	Aqueous	PFPeA	PFAS by ID	12		ng/L	9
MW-5	Aqueous	PFOS	PFAS by ID	9.5		ng/L	9
FIELD BLANK	Aqueous	6:2 FTS	PFAS by ID	2.2	J	ng/L	11
MW-5 (DUP)	Aqueous	PFBS	PFAS by ID	20		ng/L	13
MW-5 (DUP)	Aqueous	PFPeS	PFAS by ID	1.3	J	ng/L	13
MW-5 (DUP)	Aqueous	PFHxS	PFAS by ID	5.9		ng/L	13
MW-5 (DUP)	Aqueous	PFBA	PFAS by ID	11		ng/L	13
MW-5 (DUP)	Aqueous	PFHpA	PFAS by ID	6.4		ng/L	13
MW-5 (DUP)	Aqueous	PFHxA	PFAS by ID	9.1		ng/L	13
MW-5 (DUP)	Aqueous	PFOA	PFAS by ID	12		ng/L	13
MW-5 (DUP)	Aqueous	PFPeA	PFAS by ID	12		ng/L	13
MW-5 (DUP)	Aqueous	PFOS	PFAS by ID	9.4		ng/L	13
	E Sample ID EQUIPMENT BLANK EQUIPMENT BLANK EQUIPMENT BLANK EQUIPMENT BLANK EQUIPMENT BLANK MW-3 MW-5 MW-5	E Sample IDMatrixEQUIPMENT BLANKAqueousEQUIPMENT BLANKAqueousEQUIPMENT BLANKAqueousMW-3AqueousMW-3AqueousMW-3AqueousMW-3AqueousMW-3AqueousMW-3AqueousMW-3AqueousMW-3AqueousMW-3AqueousMW-3AqueousMW-3AqueousMW-3AqueousMW-3AqueousMW-3AqueousMW-3AqueousMW-5Aq	e Sample IDMatrixParameterEQUIPMENT BLANKAqueousPFBAEQUIPMENT BLANKAqueousPFHAAEQUIPMENT BLANKAqueousPFPeAMW-3Aqueous6.2 FTSMW-3AqueousPFBSMW-3AqueousPFBAMW-3AqueousPFBAMW-3AqueousPFBAMW-3AqueousPFBAMW-3AqueousPFDAMW-3AqueousPFDAMW-3AqueousPFDAMW-3AqueousPFDAMW-3AqueousPFDAMW-3AqueousPFDAMW-3AqueousPFDAMW-3AqueousPFDAMW-3AqueousPFDAMW-5AqueousPFBAMW-5AqueousPFBAMW-5AqueousPFBAMW-5AqueousPFBAMW-5AqueousPFDAMW-5AqueousPFDAMW-5AqueousPFDAMW-5AqueousPFBAMW-5AqueousPFBAMW-5AqueousPFBAMW-5AqueousPFBAMW-5AqueousPFBAMW-5AqueousPFBAMW-5AqueousPFBAMW-5AqueousPFBAMW-5AqueousPFBAMW-5AqueousPFBAMW-5AqueousPFBAMW-5AqueousPFBAMW-5AqueousPFBA	Ample IDMatrixParameterMethodEQUIPMENT BLANKAqueousPFBAPFAS by IDEQUIPMENT BLANKAqueousPFHpAPFAS by IDEQUIPMENT BLANKAqueousPFPAPFAS by IDEQUIPMENT BLANKAqueousPFEAPFAS by IDMW-3Aqueous6:2 FTSPFAS by IDMW-3AqueousPFBXPFAS by IDMW-3AqueousPFBXPFAS by IDMW-3AqueousPFBAPFAS by IDMW-3AqueousPFDAPFAS by IDMW-3AqueousPFDAPFAS by IDMW-3AqueousPFDAPFAS by IDMW-3AqueousPFDAPFAS by IDMW-3AqueousPFDAPFAS by IDMW-3AqueousPFOAPFAS by IDMW-3AqueousPFOAPFAS by IDMW-3AqueousPFDAPFAS by IDMW-3AqueousPFDAPFAS by IDMW-5AqueousPFDAPFAS by IDMW-5AqueousPFDAPFAS by IDMW-5AqueousPFNAPFAS by IDMW-5Aqueo	e Sample IDMatrixParameterMethodResultEQUIPMENT BLANKAqueousPFBAPFAS by ID9.8EQUIPMENT BLANKAqueousPFHAAPFAS by ID6.2EQUIPMENT BLANKAqueousPFPAAPFAS by ID6.2EQUIPMENT BLANKAqueous6.2 FTSPFAS by ID0.7MW-3Aqueous6.2 FTSPFAS by ID0.63MW-3AqueousPFBAPFAS by ID0.63MW-3AqueousPFDAPFAS by ID0.63MW-3AqueousPFDAPFAS by ID0.12MW-3AqueousPFDAPFAS by ID0.12MW-3AqueousPFASPFAS by ID0.12MW-3AqueousPFASPFAS by ID0.12MW-5AqueousPFBAPFAS by ID0.12MW-5AqueousPFBAPFAS by ID0.12MW-5AqueousPFBAPFAS by ID0.12MW-5AqueousPFAAPFAS by ID0.12MW-5AqueousPFBAPFAS by ID0.12MW-5AqueousPFBAPFAS by ID0.1	e Sample IDMatrixParameterMethodResultQEQUIPMENT BLANKAqueousPFBAPFAS by ID	e Sample DMatrixParameterMethodResulQ.UnitsEQUIPMENT BLANKAqueousPFBAPFAS by ID

(32 detections)

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC				Laboratory I	D:WC16034-00	1	
Description: EQUIPMENT BLANK				Matri	x: Aqueous		
Date Sampled:03/11/2021 0945	Project Nam	e: 6255 SOUTH MILW	AUKEE AV	E			
Date Received: 03/16/2021 P	Project Numbe	er: 40223357					
Due Deen Mathed Analytical Mathed	Dilution A	naluaia Data Analuat	Duon De	nta Datah			
1 SOP SPE PFAS by ID SOP	1 03	/21/2021 1551 MMM	03/19/202	1 1109 86218			
Parameter	CAS Numbe	S Analytical r Method	Result Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9CI-PF3ONS	5) 756426-58-	1 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3.) 763051-92-	9 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-	4 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-	2 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-	0 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-	4 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-	6 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-	4 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-	2 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-	6 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-	2 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-	-8 PFAS by ID SOP	ND	13	3.4	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-	9 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-	7 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-	5 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-	3 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-	8 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-	1 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-	6 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-	4 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-	5 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-	4 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-	4 PFAS by ID SOP	9.8 B	3.4	0.84	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-	2 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-	1 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-	9 PFAS by ID SOP	8.1	3.4	0.84	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-	5 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-	4 PFAS by ID SOP	2.6 J	3.4	0.84	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-	1 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-	6 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-	1 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-	3 PFAS by ID SOP	68	3.4	0.84	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-	7 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-	-8 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-	8 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-	1 PFAS by ID SOP	ND	3.4	0.84	ng/L	1
I Surrogate Q % R	Run 1 Acc Recovery	eptance Limits					
13C2_4:2FTS	100	25-150					
13C2_6:2FTS	96	25-150					
13C2_8:2FTS	94	25-150					
13C2_PFDoA	93	25-150					
13C2_PFHxDA	96	25-150					
13C2_PFTeDA	96	25-150					
LOQ = Limit of Quantitation B = Detected in the method blank ND = Not detected at or above the DL N = Recovery is out of criteria H = Out of holding time W = Reported on wet weight basis	E = Quantitation P = The RPD	on of compound exceeded the between two GC columns exce	calibration rang eds 40%	Je DL = Detection Lir J = Estimated resi	nit ult < LOQ and ⊵ DL	Q = Surro L = LCS/ S = MS/N	ogate failur LCSD failur

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.) 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC

Description: EQUIPMENT BLANK Date Sampled:03/11/2021 0945

Project Name: 6255 SOUTH MILWAUKEE AVE

Laboratory ID: WC16034-001

Matrix: Aqueous

Date Received: 03/16/2021

Project Number: **40223357**

Run 1 /	Acceptance
% Recovery	Limits
86	25-150
100	25-150
101	25-150
109	25-150
103	25-150
108	25-150
108	25-150
100	25-150
100	25-150
101	25-150
89	25-150
98	10-150
102	25-150
96	10-150
97	25-150
102	10-150
85	10-150
95	25-150
93	10-150
-	Run 1 % Recovery 4 86 100 101 109 103 108 108 100 100 100 100 100 101 89 98 102 96 97 102 85 95 93

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and \ge DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.) 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Se	ervices, LLC					Laboratory IE): WC16034-	·002	
Description: MW-3						Matrix	: Aqueous		
Date Sampled:03/11/2021 1000	Pr	roject Name:	6255 SOUTH MILWA	UKEE A	١VE				
Date Received: 03/16/2021	Proj	ject Number:	40223357						
Run Pren Method	Analytical Method Di	lution And	Ilvsis Date Analyst	Prop	Date	Batch			
1 SOP SPE	PFAS by ID SOP	1 03/2	3/2021 1924 SES	03/22/2	2021 1	146 86408			
2 SOP SPE	PFAS by ID SOP	1 03/2	4/2021 2033 JJG	03/22/2	021 1	146 86408			
	,								
Parameter		CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-s	ulfonic acid (9CI-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-	1-sulfonic acid (11CI-PF3)	763051-92-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfon	nic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND	Q	6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfo	onic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	2.7	JQ	6.9	1.7	ng/L	2
1H,1H,2H,2H-perfluorododecane sulfor	nic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic	acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	6.9	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid	(GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (A	ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide	(EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoa	acetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamide	o-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide	e (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	3.5	ng/L	1
N-methylperfluoro-1-octanesulfonamide	oacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonam	ido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-1-butanesulfonic acid (PFI	BS)	375-73-5	PFAS by ID SOP	19		3.5	0.87	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS	3)	335-77-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFH)	pS)	375-92-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS	3)	68259-12-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-octanesulfonamide (PFOS)	A)	754-91-6	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPe	eS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorododecanesulfonic acid (PFDC)S)	79780-39-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHx	S)	355-46-4	PFAS by ID SOP	6.9		3.5	0.87	ng/L	1
Perfluoro-n-butanoic acid (PFBA)		375-22-4	PFAS by ID SOP	31		3.5	0.87	ng/L	1
Perfluoro-n-decanoic acid (PFDA)		335-76-2	PFAS by ID SOP	1.8	J	3.5	0.87	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)		307-55-1	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)		375-85-9	PFAS by ID SOP	4.5		3.5	0.87	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxD	DA)	67905-19-5	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)		307-24-4	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)		375-95-1	PFAS by ID SOP	4.3		3.5	0.87	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA	\)	16517-11-6	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)		335-67-1	PFAS by ID SOP	12		3.5	0.87	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)		2706-90-3	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeD	A)	376-06-7	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)		72629-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)		2058-94-8	PFAS by ID SOP	ND		3.5	0.87	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	47		3.5	0.87	ng/L	1
	D.,	n 1 Acco	atanco Dun	.2 .4.0	oonto	200			

Surrogate	Q %	Run 1 Recovery	Acceptance Limits	Q	Run 2 A % Recovery	cceptance Limits	9	
13C2_4:2FTS	Ν	211	25-150	Ν	255	25-150		
13C2_6:2FTS	Ν	263	25-150	Ν	286	25-150		
13C2_8:2FTS	Ν	304	25-150	Ν	301	25-150		
13C2_PFDoA		88	25-150		86	25-150		
13C2_PFHxDA		34	25-150		30	25-150		
LOQ = Limit of Quantitation	B = Detected in the method bla	ank E = Qua	ntitation of compou	ind exc	eeded the calibration	range DL =	Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The	RPD between two	GC co	lumns exceeds 40%	J = E	Estimated result < LOQ and \ge DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight b	asis						S = MS/MSD failure

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.) 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com
Project Number: 40223357

Client: Pace Analytical Services, LLC

Description: MW-3

Date Received: 03/16/2021

Date Sampled:03/11/2021 1000

Laboratory ID: WC16034-002

Matrix: Aqueous

Project Name: 6255 SOUTH MILWAUKEE AVE

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C2_PFTeDA		55	25-150		50	25-150
13C3_PFBS		65	25-150		68	25-150
13C3_PFHxS		76	25-150		80	25-150
13C3-HFPO-DA		58	25-150		60	25-150
13C4_PFBA		34	25-150		36	25-150
13C4_PFHpA		77	25-150		81	25-150
13C5_PFHxA		64	25-150		68	25-150
13C5_PFPeA		49	25-150		52	25-150
13C6_PFDA		94	25-150		103	25-150
13C7_PFUdA		109	25-150		107	25-150
13C8_PFOA		83	25-150		90	25-150
13C8_PFOS		93	25-150		86	25-150
13C8_PFOSA		78	10-150		81	10-150
13C9_PFNA		94	25-150		99	25-150
d-EtFOSA		62	10-150		61	10-150
d5-EtFOSAA		98	25-150		104	25-150
d9-EtFOSE		51	10-150		54	10-150
d-MeFOSA		55	10-150		61	10-150
d3-MeFOSAA		98	25-150		100	25-150
d7-MeFOSE		49	10-150		53	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and \ge DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Client: Pace Analytical Services, LLC	Laboratory ID: WC16034-003								
Description: MW-5			Matrix	c: Aqueous					
Date Sampled:03/11/2021 1100	Project N	lame:	6255 SOUTH MILWA	UKEE /	AVE				
Date Received: 03/16/2021	Project Nu	mber:	40223357						
RunPrep MethodAnalytical Method1SOP SPEPFAS by ID SOI	Dilution	Ana 03/2	Ilysis Date Analyst 3/2021 1935 SES	Prep 03/22/2	Date 2021 1	Batch 146 86408			
Parameter	Nur	CAS	Analytical Method	Result	0	100	DI	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9CI-PF3ON	IS) 756426	6-58-1	PFAS by ID SOP	ND	~	6.7	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF	3) 76305 ²	-92-9	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108	3-34-4	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619	9-97-2	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226	6-60-0	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124	1-72-4	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252	2-13-6	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005	5-14-4	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151	-50-2	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991	-50-6	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691	-99-2	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506	6-32-8	PFAS by ID SOP	ND		13	3.4	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA) 2355	-31-9	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448	3-09-7	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375	-73-5	PFAS by ID SOP	21		3.4	0.84	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335	-77-3	PFAS by ID SOP	ND		3.4	0.84	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375	-92-8	PFAS by ID SOP	ND		3.4	0.84	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259	9-12-1	PFAS by ID SOP	ND		3.4	0.84	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754	-91-6	PFAS by ID SOP	ND		3.4	0.84	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706	-91-4	PFAS by ID SOP	1.4	J	3.4	0.84	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780)-39-5	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355	-46-4	PFAS by ID SOP	5.2		3.4	0.84	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375	-22-4	PFAS by ID SOP	11		3.4	0.84	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335	-76-2	PFAS by ID SOP	ND		3.4	0.84	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307	-55-1	PFAS by ID SOP	ND		3.4	0.84	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375	-85-9	PFAS by ID SOP	5.9		3.4	0.84	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905	5-19-5	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307	-24-4	PFAS by ID SOP	8.6		3.4	0.84	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375	-95-1	PFAS by ID SOP	ND		3.4	0.84	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517	7-11-6	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335	-67-1	PFAS by ID SOP	12		3.4	0.84	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706	-90-3	PFAS by ID SOP	12		3.4	0.84	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376	-06-7	PFAS by ID SOP	ND		3.4	0.84	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629	9-94-8	PFAS by ID SOP	ND		3.4	0.84	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058	-94-8	PFAS by ID SOP	ND		3.4	0.84	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763	-23-1	PFAS by ID SOP	9.5		3.4	0.84	ng/L	1
Surrogate Q %	Run 1 Recovery	Accej Lir	ptance mits						
13C2_4:2FTS	136	25	-150						
13C2_6:2FTS	103	25	-150						
13C2_8:2FTS	83	25	-150						
13C2_PFDoA	66	25	-150						
13C2_PFHxDA	61	25	-150						
13C2_PFTeDA	57	25	-150						
LOQ = Limit of Quantitation B = Detected in the method blan ND = Not detected at or above the DL N = Recovery is out of criteria H = Out of holding time W = Reported on wet weight back	nk E = Quar P = The I sis	ititation RPD bet	of compound exceeded the over two GC columns exce	calibration r eds 40%	ange	DL = Detection Lim J = Estimated resul	it It < LOQ and ≥ DL	Q = Surro L = LCS/L S = MS/M	ogate failui _CSD failu ISD failure

Laboratory ID: WC16034-003

Matrix: Aqueous

Client: Pace	Analytical	Services,	LLC

Description: MW-5

Date Received: 03/16/2021

d7-MeFOSE

Date Sampled:03/11/2021 1100

Project Name: 6255 SOUTH MILWAUKEE AVE

Project Number: 40223357

54

Surrogate	Run 1 Q % Recovery	Acceptance
13C3_PFBS	81	25-150
13C3_PFHxS	89	25-150
13C3-HFPO-DA	91	25-150
13C4_PFBA	90	25-150
13C4_PFHpA	96	25-150
13C5_PFHxA	94	25-150
13C5_PFPeA	95	25-150
13C6_PFDA	83	25-150
13C7_PFUdA	79	25-150
13C8_PFOA	93	25-150
13C8_PFOS	89	25-150
13C8_PFOSA	87	10-150
13C9_PFNA	93	25-150
d-EtFOSA	62	10-150
d5-EtFOSAA	72	25-150
d9-EtFOSE	59	10-150
d-MeFOSA	68	10-150
d3-MeFOSAA	79	25-150

10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and \ge DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Client: Pace Analytical Services, LLC				Laboratory	D: WC16034-00	4	
Description: FIELD BLANK				Matr	ix: Aqueous		
Date Sampled:03/11/2021 0945	Project Nam	e: 6255 SOUTH MILW		AVE			
Date Received: 03/16/2021	, Proiect Numbe	er: 40223357					
RunPrep MethodAnalytical Method1SOP SPEPFAS by ID SOP	Dilution A 1 03	nalysis Date Analyst /23/2021 1852 SES	Prep 03/22/2	Date Batch 2021 1146 86408			
Parameter	CAS Numbe	S Analytical r Method	Result	Q LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9CI-PF3ONS	6) 756426-58-	1 PFAS by ID SOP	ND	6.8	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3) 763051-92-	9 PFAS by ID SOP	ND	6.8	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-	4 PFAS by ID SOP	ND	6.8	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-	2 PFAS by ID SOP	2.2	J 6.8	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-	0 PFAS by ID SOP	ND	6.8	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-	4 PFAS by ID SOP	ND	6.8	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-	6 PFAS by ID SOP	ND	6.8	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-	4 PFAS by ID SOP	ND	6.8	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-	2 PFAS by ID SOP	ND	6.8	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-	6 PFAS by ID SOP	ND	6.8	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-	2 PFAS by ID SOP	ND	6.8	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-	8 PFAS by ID SOP	ND	14	3.4	ng/L	1
N-methylperiluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-	9 PFAS by ID SOP		6.8	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MerOSE)	24448-09-	F PEAS by ID SOP		6.8 3.4	1.7	ng/L	1
Perfluere 1 decapesulfonic acid (PEDS)	375-75-	2 PEAS by ID SOP		3.4	0.85	ng/L	1
Perfluoro-1-bentanesulfonic acid (PEHnS)	375-92-	8 PEAS by ID SOP		3.4	0.85	ng/L	1
Perfluoro-1-neptanesulfonic acid (PENS)	68250-12	1 PEAS by ID SOP		3.4	0.85	ng/L	1
Perfluoro-1-octanesulfonamide (PEOSA)	75/-91-	6 PEAS by ID SOP		3.4	0.05	ng/L	1
Perfluoro-1-pentanesulfonic acid (PEPeS)	2706-91-	4 PEAS by ID SOP		3.4	0.85	ng/L	1
Perfluorododecanesulfonic acid (PEDOS)	79780-39-	5 PEAS by ID SOP		6.8	0.05	ng/L	1
Perfluorohexanesulfonic acid (PEHxS)	355-46-	4 PEAS by ID SOP	ND	3.4	0.85	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-	4 PFAS by ID SOP	ND	3.4	0.85	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-	2 PFAS by ID SOP	ND	3.4	0.85	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-	1 PFAS by ID SOP	ND	3.4	0.85	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-	9 PFAS by ID SOP	ND	3.4	0.85	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-	5 PFAS by ID SOP	ND	6.8	1.7	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-	4 PFAS by ID SOP	ND	3.4	0.85	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-	1 PFAS by ID SOP	ND	3.4	0.85	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-	6 PFAS by ID SOP	ND	6.8	1.7	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-	1 PFAS by ID SOP	ND	3.4	0.85	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-	3 PFAS by ID SOP	ND	3.4	0.85	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-	7 PFAS by ID SOP	ND	3.4	0.85	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-	8 PFAS by ID SOP	ND	3.4	0.85	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-	8 PFAS by ID SOP	ND	3.4	0.85	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-	1 PFAS by ID SOP	ND	3.4	0.85	ng/L	1
Surrogate Q % F	Run 1 Acc Recovery I	eptance _imits					
13C2_4:2FTS	87	25-150					
13C2_6:2FTS	89	25-150					
13C2_8:2FTS	84	25-150					
13C2_PFDoA	79	25-150					
13C2_PFHxDA	84	25-150					
13C2_PFTeDA	79	25-150					
LOQ = Limit of Quantitation B = Detected in the method blank ND = Not detected at or above the DL N = Recovery is out of criteria H = Out of holding time W = Reported on wet weight basis	E = Quantitatio P = The RPD I	on of compound exceeded the between two GC columns exce	calibration r eeds 40%	ange DL = Detection Li J = Estimated res	mit ult < LOQ and ≥ DL	Q = Surro L = LCS/ S = MS/N	ogate failure LCSD failur ISD failure

Client: Pace Analytical Services, LLC

Description: FIELD BLANK Date Sampled:03/11/2021 0945 Matrix: Aqueous

Laboratory ID: WC16034-004

Date Received: 03/16/2021

Project Name: 6255 SOUTH MILWAUKEE AVE Project Number: 40223357

Surrogate	Run 1 0 % Recovery	Acceptance
13C3 PFBS	75	25-150
13C3 PEHxS	81	25-150
13C3-HEPO-DA	91	25-150
13C4 PEBA	91	25-150
1304_110.0	89	25-150
	89 86	25-150
1305_FEEDA	80	25-150
	69	25-150
	0Z	20-100
13C7_PFUdA	84	25-150
13C8_PFOA	92	25-150
13C8_PFOS	91	25-150
13C8_PFOSA	83	10-150
13C9_PFNA	89	25-150
d-EtFOSA	78	10-150
d5-EtFOSAA	78	25-150
d9-EtFOSE	85	10-150
d-MeFOSA	74	10-150
d3-MeFOSAA	78	25-150
d7-MeFOSE	73	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and \ge DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Client: Pace Analytical Services, LLC						Laboratory I	D: WC16034-00	5	
Description: MW-5 (DUP)						Matrix	c Aqueous		
Date Sampled:03/11/2021 1100	Project Na	ame: 62	55 SOUTH MILWA		AVE		-		
Date Received 03/16/2021	Project Num	nber: 40	223357						
RunPrep MethodAnalytical Method1SOP SPEPFAS by ID SC	DP 1	Analy: 03/23/2	sis Date Analyst 2021 1946 SES	Prep 03/22/2	Date 2021 11	Batch 46 86408			
Parameter	C Num	CAS Iber	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9CI-PF3C	DNS) 756426-	-58-1 F	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-F	PF3) 763051-	-92-9 F	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-	-34-4 F	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-	-97-2 F	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-	-60-0 F	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-	-72-4 F	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-	-13-6 F	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-	-14-4 F	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-	-50-2 F	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-	-50-6 F	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-	·99-2 F	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-	-32-8 F	PFAS by ID SOP	ND		14	3.4	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSA	A) 2355-	·31-9 F	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)) 24448-	-09-7 F	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-	·73-5 I	PFAS by ID SOP	20		3.4	0.86	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-	-77-3 F	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-	-92-8 F	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-	-12-1 F	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-	·91-6 F	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-	·91-4 I	PFAS by ID SOP	1.3	J	3.4	0.86	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-	-39-5 F	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-	46-4	PFAS by ID SOP	5.9		3.4	0.86	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-	-22-4	PFAS by ID SOP	11		3.4	0.86	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-	-76-2 F	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-	·55-1 F	PFAS by ID SOP	ND		3.4	0.86	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-	·85-9 I	PFAS by ID SOP	6.4		3.4	0.86	ng/L	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-	-19-5 F	PFAS by ID SOP	ND		6.9	17	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-	-24-4	PFAS by ID SOP	9.1		3.4	0.86	na/L	1
Perfluoro-n-nonanoic acid (PENA)	375-	·95-1 F	PFAS by ID SOP	ND		3.4	0.86	na/L	1
Perfluoro-n-octadecanoic acid (PEODA)	16517-	-11-6 F	PEAS by ID SOP	ND		6.9	1 7	ng/l	1
Perfluoro-n-octanoic acid (PFOA)	335-	-67-1 I	PFAS by ID SOP	12		3.4	0.86	na/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-	90-3	PFAS by ID SOP	12		3.4	0.86	na/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-	-06-7 F	PFAS by ID SOP	ND		3.4	0.86	na/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-	-94-8 F	PFAS by ID SOP	ND		3.4	0.86	na/L	1
Perfluoro-n-undecanoic acid (PELIdA)	2058-	-94-8 F	PEAS by ID SOP	ND		34	0.86	ng/l	1
Perfluorooctanesulfonic acid (PEOS)	1763-	.23-1 1	PFAS by ID SOP	9.4		34	0.86	ng/L	1
	1100			0.4		0.4	0.00		•
Surrogate Q	Run 1 A % Recovery	Accepta Limit	ance ts						
13C2_4:2FTS	138	25-15	50						
13C2_6:2FTS	105	25-15	50						
13C2_8:2FTS	88	25-15	50						
13C2_PFDoA	72	25-15	50						
13C2_PFHxDA	68	25-15	50						
13C2_PFTeDA	58	25-15	50						
100 - Limit of Quantitation P. Detected in the sector of the	lank E - Ouert	itation of -	compound avaac ded at -	colibrotion	2000 0		i+	0 - 0	anto failur-
ND = Not detected at or above the DL $N = Recovery$ is out of criteria	P = The R	PD betwee	en two GC columns exce	eds 40%	ange D J	= Estimated resu	It < LOQ and > DL	L = LCS/I	Jaie iallure
H = Out of holding time W = Reported on wet weight h	basis							S = MS/N	ISD failure

Client: Pace Analytical Services, LLC

Description: MW-5 (DUP) Date Sampled:03/11/2021 1100

Project Name: 6255 SOUTH MILWAUKEE AVE

Laboratory ID: WC16034-005

Matrix: Aqueous

Date Received: 03/16/2021

d7-MeFOSE

Project Number: 40223357

Surrogate	Run 1 % Recoverv	Acceptance Limits
13C3_PFBS	84	25-150
13C3_PFHxS	91	25-150
13C3-HFPO-DA	93	25-150
13C4_PFBA	95	25-150
13C4_PFHpA	99	25-150
13C5_PFHxA	98	25-150
13C5_PFPeA	98	25-150
13C6_PFDA	91	25-150
13C7_PFUdA	83	25-150
13C8_PFOA	100	25-150
13C8_PFOS	101	25-150
13C8_PFOSA	97	10-150
13C9_PFNA	96	25-150
d-EtFOSA	59	10-150
d5-EtFOSAA	76	25-150
d9-EtFOSE	55	10-150
d-MeFOSA	70	10-150
d3-MeFOSAA	80	25-150

10-150

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LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and \ge DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

QC Summary

PFAS by LC/MS/MS - MB

Sample ID: WQ86218-001 Batch: 86218 Analytical Method: PFAS by ID SOP

Matrix: Aqueous Prep Method: SOP SPE

Prep Date: 03/19/2021 1109

Parameter	Resi	ult (ຊ Dil	LOQ	DL	Units	Analysis Date
9CI-PF3ONS	ND		1	8.0	2.0	ng/L	03/21/2021 1426
11CI-PF3OUdS	ND		1	8.0	2.0	ng/L	03/21/2021 1426
8:2 FTS	ND		1	8.0	2.0	ng/L	03/21/2021 1426
6:2 FTS	ND		1	8.0	2.0	ng/L	03/21/2021 1426
10:2 FTS	ND		1	8.0	2.0	ng/L	03/21/2021 1426
4:2 FTS	ND		1	8.0	2.0	ng/L	03/21/2021 1426
GenX	ND		1	8.0	2.0	ng/L	03/21/2021 1426
ADONA	ND		1	8.0	2.0	ng/L	03/21/2021 1426
EtFOSA	ND		1	8.0	2.0	ng/L	03/21/2021 1426
EtFOSAA	ND		1	8.0	2.0	ng/L	03/21/2021 1426
EtFOSE	ND		1	8.0	2.0	ng/L	03/21/2021 1426
MeFOSA	ND		1	16	4.0	ng/L	03/21/2021 1426
MeFOSAA	ND		1	8.0	2.0	ng/L	03/21/2021 1426
MeFOSE	ND		1	8.0	2.0	ng/L	03/21/2021 1426
PFBS	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFDS	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFHpS	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFNS	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFOSA	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFPeS	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFDOS	ND		1	8.0	2.0	ng/L	03/21/2021 1426
PFHxS	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFBA	1.5	•	J 1	4.0	1.0	ng/L	03/21/2021 1426
PFDA	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFDoA	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFHpA	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFHxDA	ND		1	8.0	2.0	ng/L	03/21/2021 1426
PFHxA	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFNA	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFODA	ND		1	8.0	2.0	ng/L	03/21/2021 1426
PFOA	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFPeA	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFTeDA	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFTrDA	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFUdA	ND		1	4.0	1.0	ng/L	03/21/2021 1426
PFOS	ND		1	4.0	1.0	ng/L	03/21/2021 1426
Surrogate	Q	% Rec	Acceptance Limit				
13C2_4:2FTS		95	25-150				
13C2_6:2FTS		103	25-150				
13C2_8:2FTS		99	25-150				
13C2_PFDoA		93	25-150				
13C2_PFHxDA		104	25-150				

LOQ = Limit of Quantitation ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% DL = Detection Limit J = Estimated result < LOQ and \ge DL + = RPD is out of criteria

* = RSD is out of criteria

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

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PFAS by LC/MS/MS - MB

Sample ID: WQ86218-001 Batch: 86218			Matrix: Prep Method:	Aqueous SOP SPE	
Analytical Method: PFAS by ID SOP			Prep Date:	03/19/2021	1109
Surrogate	Q% Rec	Acceptance Limit			
13C2_PFTeDA	100	25-150			
13C3_PFBS	90	25-150			
13C3_PFHxS	104	25-150			
13C3-HFPO-DA	107	25-150			
13C4_PFBA	109	25-150			
13C4_PFHpA	109	25-150			
13C5_PFHxA	110	25-150			
13C5_PFPeA	109	25-150			
13C6_PFDA	103	25-150			
13C7_PFUdA	97	25-150			
13C8_PFOA	106	25-150			
13C8_PFOS	96	25-150			
13C8_PFOSA	102	10-150			
13C9_PFNA	102	25-150			
d-EtFOSA	86	10-150			
d5-EtFOSAA	97	25-150			
d9-EtFOSE	107	10-150			
d-MeFOSA	90	10-150			
d3-MeFOSAA	98	25-150			
d7-MeFOSE	104	10-150			

LOQ = Limit of Quantitation ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% DL = Detection Limit J = Estimated result < LOQ and \ge DL * = RSD is out of criteria + = RPD is out of criteria

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

PFAS by LC/MS/MS - LCS

Sample ID: WQ86218-002 Batch: 86218 Analytical Method: PFAS by ID SOP Matrix: Aqueous Prep Method: SOP SPE

Prep Date: 03/19/2021 1109

Parameter	Spike Amount (ng/L)	Result (ng/L)	Q Dil	% Rec	%Rec Limit	Analysis Date
	15	14	1	97	50-150	03/21/2021 1436
11CI-PE3OUdS	15	14	1	95	50-150	03/21/2021 1436
8:2 FTS	15	12	1	76	50-150	03/21/2021 1436
6:2 FTS	15	16	1	108	50-150	03/21/2021 1436
10:2 FTS	15	16	1	102	50-150	03/21/2021 1436
4:2 FTS	15	15	1	100	50-150	03/21/2021 1436
GenX	32	32	1	100	50-150	03/21/2021 1436
ADONA	15	15	1	97	50-150	03/21/2021 1436
EtFOSA	16	20	1	124	50-150	03/21/2021 1436
EtFOSAA	16	15	1	91	50-150	03/21/2021 1436
EtFOSE	16	17	1	105	50-150	03/21/2021 1436
MeFOSA	16	19	1	119	50-150	03/21/2021 1436
MeFOSAA	16	16	1	97	50-150	03/21/2021 1436
MeFOSE	16	17	1	104	50-150	03/21/2021 1436
PFBS	14	16	1	114	50-150	03/21/2021 1436
PFDS	15	18	1	114	50-150	03/21/2021 1436
PFHpS	15	13	1	86	50-150	03/21/2021 1436
PFNS	15	15	1	94	50-150	03/21/2021 1436
PFOSA	16	14	1	90	50-150	03/21/2021 1436
PFPeS	15	17	1	110	50-150	03/21/2021 1436
PFDOS	15	16	1	100	50-150	03/21/2021 1436
PFHxS	15	14	1	95	50-150	03/21/2021 1436
PFBA	16	16	1	99	50-150	03/21/2021 1436
PFDA	16	16	1	98	50-150	03/21/2021 1436
PFDoA	16	16	1	100	50-150	03/21/2021 1436
PFHpA	16	15	1	95	50-150	03/21/2021 1436
PFHxDA	16	17	1	109	50-150	03/21/2021 1436
PFHxA	16	15	1	94	50-150	03/21/2021 1436
PFNA	16	14	1	85	50-150	03/21/2021 1436
PFODA	16	17	1	107	50-150	03/21/2021 1436
PFOA	16	15	1	94	50-150	03/21/2021 1436
PFPeA	16	15	1	95	50-150	03/21/2021 1436
PFTeDA	16	16	1	101	50-150	03/21/2021 1436
PFTrDA	16	16	1	100	50-150	03/21/2021 1436
PFUdA	16	15	1	92	50-150	03/21/2021 1436
PFOS	15	15	1	104	50-150	03/21/2021 1436
Surrogate	Q% Rec	Acceptance Limit	9			
13C2_4:2FTS	109	25-150				
13C2_6:2FTS	100	25-150				
13C2_8:2FTS	105	25-150				
13C2_PFDoA	93	25-150				
13C2_PFHxDA	100	25-150				

 LOQ = Limit of Quantitation
 ND = Not detected at or above the DL
 N = Recovery is out of criteria

 DL = Detection Limit
 J = Estimated result < LOQ and ≥ DL</td>
 P = The RPD between two GC columns exceeds 40%

 * = RSD is out of criteria
 + = RPD is out of criteria

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

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PFAS by LC/MS/MS - LCS

		•			
Sample ID: WQ86218-002 Batch: 86218			Matrix: Prep Method:	Aqueous SOP SPE	
Analytical Method: PFAS by ID SOP			· Prep Date:	03/19/2021	1109
Surrogate	Q% Rec	Acceptance Limit			
13C2_PFTeDA	101	25-150			
13C3_PFBS	86	25-150			
13C3_PFHxS	103	25-150			
13C3-HFPO-DA	106	25-150			
13C4_PFBA	111	25-150			
13C4_PFHpA	107	25-150			
13C5_PFHxA	108	25-150			
13C5_PFPeA	110	25-150			
13C6_PFDA	104	25-150			
13C7_PFUdA	99	25-150			
13C8_PFOA	104	25-150			
13C8_PFOS	92	25-150			
13C8_PFOSA	109	10-150			
13C9_PFNA	111	25-150			
d-EtFOSA	89	10-150			
d5-EtFOSAA	96	25-150			
d9-EtFOSE	109	10-150			
d-MeFOSA	91	10-150			
d3-MeFOSAA	96	25-150			
d7-MeFOSE	101	10-150			

 LOQ = Limit of Quantitation
 ND = Not detected at or above the DL
 N = Recovery is out of criteria

 DL = Detection Limit
 J = Estimated result < LOQ and ≥ DL</td>
 P = The RPD between two GC columns exceeds 40%

 * = RSD is out of criteria
 + = RPD is out of criteria

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PFAS by LC/MS/MS - MB

Sample ID: WQ86408-001 Batch: 86408 Analytical Method: PFAS by ID SOP Matrix: Aqueous Prep Method: SOP SPE

Prep Date: 03/22/2021 1146

Parameter	Resi	ult (Q Dil	LOQ	DL	Units	Analysis Date
9CI-PF3ONS	ND		1	8.0	2.0	ng/L	03/23/2021 1810
11CI-PF3OUdS	ND		1	8.0	2.0	ng/L	03/23/2021 1810
8:2 FTS	ND		1	8.0	2.0	ng/L	03/23/2021 1810
6:2 FTS	ND		1	8.0	2.0	ng/L	03/23/2021 1810
10:2 FTS	ND		1	8.0	2.0	ng/L	03/23/2021 1810
4:2 FTS	ND		1	8.0	2.0	ng/L	03/23/2021 1810
GenX	ND		1	8.0	2.0	ng/L	03/23/2021 1810
ADONA	ND		1	8.0	2.0	ng/L	03/23/2021 1810
EtFOSA	ND		1	8.0	2.0	ng/L	03/23/2021 1810
EtFOSAA	ND		1	8.0	2.0	ng/L	03/23/2021 1810
EtFOSE	ND		1	8.0	2.0	ng/L	03/23/2021 1810
MeFOSA	ND		1	16	4.0	ng/L	03/23/2021 1810
MeFOSAA	ND		1	8.0	2.0	ng/L	03/23/2021 1810
MeFOSE	ND		1	8.0	2.0	ng/L	03/23/2021 1810
PFBS	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFDS	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFHpS	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFNS	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFOSA	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFPeS	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFDOS	ND		1	8.0	2.0	ng/L	03/23/2021 1810
PFHxS	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFBA	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFDA	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFDoA	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFHpA	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFHxDA	ND		1	8.0	2.0	ng/L	03/23/2021 1810
PFHxA	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFNA	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFODA	ND		1	8.0	2.0	ng/L	03/23/2021 1810
PFOA	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFPeA	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFTeDA	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFTrDA	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFUdA	ND		1	4.0	1.0	ng/L	03/23/2021 1810
PFOS	ND		1	4.0	1.0	ng/L	03/23/2021 1810
Surrogate	Q	% Rec	Acceptance Limit				
13C2_4:2FTS		89	25-150				
13C2_6:2FTS		88	25-150				
13C2_8:2FTS		88	25-150				
 13C2_PFDoA		97	25-150				
 13C2 PFHxDA		100	25-150				
-							

LOQ = Limit of Quantitation	ND = Not detected at or above the DL	N = Recovery is out of criteria
DL = Detection Limit	$J = Estimated result < LOQ and \ge DL$	P = The RPD between two GC columns exceeds 40%
	* = RSD is out of criteria	+ = RPD is out of criteria

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

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PFAS by LC/MS/MS - MB

Sample ID: WQ86408-001 Batch: 86408			Matrix: Prep Method:	Aqueous SOP SPE	
Analytical Method: PFAS by ID SOP			Prep Date:	03/22/2021 1146	
Surrogate	Q % Rec	Acceptance Limit			
13C2_PFTeDA	97	25-150			
13C3_PFBS	82	25-150			
13C3_PFHxS	87	25-150			
13C3-HFPO-DA	94	25-150			
13C4_PFBA	96	25-150			
13C4_PFHpA	101	25-150			
13C5_PFHxA	90	25-150			
13C5_PFPeA	91	25-150			
13C6_PFDA	99	25-150			
13C7_PFUdA	97	25-150			
13C8_PFOA	97	25-150			
13C8_PFOS	97	25-150			
13C8_PFOSA	94	10-150			
13C9_PFNA	98	25-150			
d-EtFOSA	81	10-150			
d5-EtFOSAA	87	25-150			
d9-EtFOSE	98	10-150			
d-MeFOSA	79	10-150			
d3-MeFOSAA	90	25-150			
d7-MeFOSE	88	10-150			

LOQ = Limit of Quantitation ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% DL = Detection Limit J = Estimated result < LOQ and \ge DL * = RSD is out of criteria + = RPD is out of criteria Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: WQ86408-002 Batch: 86408 Analytical Method: PFAS by ID SOP

Matrix: Aqueous Prep Method: SOP SPE

Prep Date: 03/22/2021 1146

Parameter	Spike Amount (ng/L)	Result (ng/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
	15	15		1	102	50-150	03/23/2021 1821
11CI-PE3OUdS	15	15		1	98	50-150	03/23/2021 1821
8:2 FTS	15	12		1	78	50-150	03/23/2021 1821
6:2 FTS	15	17		1	115	50-150	03/23/2021 1821
10:2 FTS	15	18		1	116	50-150	03/23/2021 1821
4:2 FTS	15	17		1	117	50-150	03/23/2021 1821
GenX	32	33		1	105	50-150	03/23/2021 1821
ADONA	15	16		1	106	50-150	03/23/2021 1821
EtFOSA	16	24		1	148	50-150	03/23/2021 1821
EtFOSAA	16	17		1	109	50-150	03/23/2021 1821
EtFOSE	16	18		1	112	50-150	03/23/2021 1821
MeFOSA	16	17		1	109	50-150	03/23/2021 1821
MeFOSAA	16	16		1	100	50-150	03/23/2021 1821
MeFOSE	16	20		1	124	50-150	03/23/2021 1821
PFBS	14	17		1	121	50-150	03/23/2021 1821
PFDS	15	14		1	90	50-150	03/23/2021 1821
PFHpS	15	16		1	105	50-150	03/23/2021 1821
PFNS	15	14		1	90	50-150	03/23/2021 1821
PFOSA	16	17		1	106	50-150	03/23/2021 1821
PFPeS	15	18		1	122	50-150	03/23/2021 1821
PFDOS	15	14		1	92	50-150	03/23/2021 1821
PFHxS	15	16		1	107	50-150	03/23/2021 1821
PFBA	16	17		1	109	50-150	03/23/2021 1821
PFDA	16	17		1	107	50-150	03/23/2021 1821
PFDoA	16	19		1	117	50-150	03/23/2021 1821
PFHpA	16	17		1	106	50-150	03/23/2021 1821
PFHxDA	16	19		1	120	50-150	03/23/2021 1821
PFHXA	16	17		1	104	50-150	03/23/2021 1821
	16	18		1	110	50-150	03/23/2021 1821
PFODA	16	19		1	121	50-150	03/23/2021 1821
	10	16		1	101	50-150	03/23/2021 1821
PFPEA DETaDA	16	16		1	100	50-150	03/23/2021 1821
PFTeDA	10	17		1	107	50-150	03/23/2021 1821
	10	17		1	107	50-150	03/23/2021 1821
PFOGA	10	17		1	105	50-150	03/23/2021 1821
FIUS	15	1.J	~~	1	100	50-150	03/23/2021 1821
Surrogate	Q % Rec	Limit	ce				
13C2_4:2FTS	87	25-150	1				
13C2_6:2FTS	86	25-150					
13C2_8:2FTS	86	25-150	1				
13C2_PFDoA	85	25-150	1				
13C2_PFHxDA	98	25-150	I				

LOQ = Limit of Quantitation ND = Not detected at or above the DL N = Recovery is out of criteria DL = Detection Limit J = Estimated result < LOQ and \ge DL P = The RPD between two GC columns exceeds 40%

* = RSD is out of criteria

+ = RPD is out of criteria

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

PFAS by LC/MS/MS - LCS

Sample ID: WQ86408-002 Batch: 86408				Matrix: Prep Method:	Aqueous SOP SPE	
Analytical Method: PFAS by ID SOP				Prep Date:	03/22/2021	1146
Surrogate	Q	% Rec	Acceptance Limit			
13C2_PFTeDA		91	25-150			
13C3_PFBS		79	25-150			
13C3_PFHxS		86	25-150			
13C3-HFPO-DA		90	25-150			
13C4_PFBA		92	25-150			
13C4_PFHpA		94	25-150			
13C5_PFHxA		91	25-150			
13C5_PFPeA		92	25-150			
13C6_PFDA		90	25-150			
13C7_PFUdA		93	25-150			
13C8_PFOA		92	25-150			
13C8_PFOS		99	25-150			
13C8_PFOSA		94	10-150			
13C9_PFNA		90	25-150			
d-EtFOSA		75	10-150			
d5-EtFOSAA		90	25-150			
d9-EtFOSE		96	10-150			
d-MeFOSA		75	10-150			
d3-MeFOSAA		85	25-150			
d7-MeFOSE		82	10-150			

LOQ = Limit of Quantitation ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% DL = Detection Limit J = Estimated result < LOQ and \ge DL * = RSD is out of criteria + = RPD is out of criteria

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

Chain of Custody and Miscellaneous Documents

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Laurie Woelfel Pace Analytical Green Bay		P ₂₀	oe Analyticel Wes 3 Ventage Point D	t Columbia							
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Green Bay, Wi 54302 Phone room/actore		-	hie-lexional and	2				_			
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1 EOUIPMENT BLANK	Sd	3/11/2021 09:4	5 40223357001	Water	1-						JSE ONLY
Z WW43	Sd	3/11/2021 10:0	0 40223357002	Water	-						
3 MW/6	PS	SH1/2021 11:0	0 40223357003	Water	-				-		
4 FIELD BLANK	Sd	3/11/2021 09/4	5 40223357004	Water	7 -						
6 MW-5 (DUP)	S	3/11/2021 11:0	0 40223357005	Water	-		Ě				
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Samples Receipt Checklist (SRC) (ME0018C-15)

Issuing Authority: Pace ENV - WCOL

Revised:9/29/2020 Page 1 of 1

Sample Receipt Checklist (SRC)

Client: PACE Cooler Inspected by/date: MEH / 03/16/2021 Lot C WC16034
Means of receipt: Pace Client / UPS FedEx Other:
Yes No I. Were custody seals present on the cooler?
Yes No NA 2. If custody seals were present, were they intact and unbroken?
pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA
Martin A C NA /NA °C NA /NA °C NA /NA °C
Method: of Temperature Blank Against Bottles IR Gun ID: 6 IR Gun Correction Factor: 0 C
Weinod of coolant: M Wet Ice L Ice Packs Dry Ice None
Yes No VNA S. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified?
Ver No N144 Is for any second by: phone / email / face-to-face (circle one).
Ves No 5 Ware proper outs to the commercial contrier's packing slip attached to this form?
Vere sample (Dalieted on the COCC)
✓ Yes No. 7 Were sample IDs listed on the COC7
Vi Yes No 8 Was collection date & time listed on the OCOP
V Yes No 9. Was collection date & time listed on all complements of
V Yes No (10, Did all container label information (ID, data time) and so (1)
V Yes No 11. Were tests to be performed listed on the COC?
12 Did all ameters in the color
Yes No 12, Did an samples arrive in the proper containers for each test and/or in good condition
V res No 13. Was adequate sample volume available?
Vec / No 14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
15. were any samples containers missing/excess (circle one) samples Not listed on COC?
\Box Yes \Box No \Box NA in any of the WOA and RSK-175 samples, were bubbles present >"pea-size" (4" or 6mm in diameter)
Yes No VNA 17. Were all DRO/metols/nutrient complex proving the Vice of the
Yes No \sqrt{N} NA[18. Were all examples received at a pH of < 2?
Vac $[12]$ Not $[7]$ Were all applicable NH ₂ /TKN/cyanide/phenol/625 1/608 3 (< 0 Small) complex free for the first standard free for the f
Test Live residual chlorine?
Yes No Zina 20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc.)
correctly transcribed from the COC into the comment section in LIMS?
Yes 1 No. 21. Was the quote number listed on the container label? If yes, Ouote # No.
ample Preservation (Must be completed for any sample(s) incorrectly preserved or with headenane)
ample(s) NA were received incorrectly eccentration
a sample receiving with NA mL of circle one: H2SO4, HNO3, HCI, NaOH using SP # NA
ime of preservation NA
ample(s) NA
were received with bubbles >6 mm in diameter.
were received with TRC > 0.5 mg/L (If #19 is no) and were
approved accordingly in sample receiving with sodrum thiosalfate (Na ₂ S ₂ O ₃) with Shealy ID: NA
R barcode labels applied by: IRG2 Date: 03/16/2021
omments:



Pace Analytical Services, LLC 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

March 22, 2021

Chris Cailles DAI Environmental Polo Park Business Center 27834 Irma Lee Circle Lake Forest, IL 60045

RE: Project: 6255 SOUTH MILWAUKEE AVE Pace Project No.: 40223366

Dear Chris Cailles:

Enclosed are the analytical results for sample(s) received by the laboratory on March 13, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network: • Pace National - Mt. Juliet

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Laurie Woelfel

Laurie Woelfel laurie.woelfel@pacelabs.com (920)469-2436 Project Manager

Enclosures

cc: Jenny Rovzar, DAI





Pace Analytical Services, LLC 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

CERTIFICATIONS

Project: 6255 SOUTH MILWAUKEE AVE

Pace Project No.: 40223366

Pace Analytical Services National

12065 Lebanon Road, Mt. Juliet, TN 37122 Alabama Certification #: 40660 Alaska Certification 17-026 Arizona Certification #: AZ0612 Arkansas Certification #: 88-0469 California Certification #: 2932 Canada Certification #: 1461.01 Colorado Certification #: TN00003 Connecticut Certification #: PH-0197 DOD Certification: #1461.01 EPA# TN00003 Florida Certification #: E87487 Georgia DW Certification #: 923 Georgia Certification: NELAP Idaho Certification #: TN00003 Illinois Certification #: 200008 Indiana Certification #: C-TN-01 Iowa Certification #: 364 Kansas Certification #: E-10277 Kentucky UST Certification #: 16 Kentucky Certification #: 90010 Louisiana Certification #: AI30792 Louisiana DW Certification #: LA180010 Maine Certification #: TN0002 Maryland Certification #: 324 Massachusetts Certification #: M-TN003 Michigan Certification #: 9958 Minnesota Certification #: 047-999-395 Mississippi Certification #: TN00003 Missouri Certification #: 340 Montana Certification #: CERT0086 Nebraska Certification #: NE-OS-15-05

Nevada Certification #: TN-03-2002-34 New Hampshire Certification #: 2975 New Jersey Certification #: TN002 New Mexico DW Certification New York Certification #: 11742 North Carolina Aquatic Toxicity Certification #: 41 North Carolina Drinking Water Certification #: 21704 North Carolina Environmental Certificate #: 375 North Dakota Certification #: R-140 Ohio VAP Certification #: CL0069 Oklahoma Certification #: 9915 Oregon Certification #: TN200002 Pennsylvania Certification #: 68-02979 Rhode Island Certification #: LAO00356 South Carolina Certification #: 84004 South Dakota Certification Tennessee DW/Chem/Micro Certification #: 2006 Texas Mold Certification #: LAB0152 Texas Certification #: T 104704245-17-14 USDA Soil Permit #: P330-15-00234 Utah Certification #: TN00003 Virginia Certification #: VT2006 Vermont Dept. of Health: ID# VT-2006 Virginia Certification #: 460132 Washington Certification #: C847 West Virginia Certification #: 233 Wisconsin Certification #: 998093910 Wyoming UST Certification #: via A2LA 2926.01 A2LA-ISO 17025 Certification #: 1461.01 A2LA-ISO 17025 Certification #: 1461.02 AIHA-LAP/LLC EMLAP Certification #:100789



SAMPLE SUMMARY

Project: 6255 SOUTH MILWAUKEE AVE

Pace Project No.: 40223366

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40223366001	MW-3	Water	03/11/21 10:00	03/13/21 08:35
40223366002	MW-5	Water	03/11/21 11:00	03/13/21 08:35



SAMPLE ANALYTE COUNT

Project: 6255 SOUTH MILWAUKEE AVE

Pace Project No.: 40223366

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40223366001	MW-3	EPA 8270D by SIM	AO	2	PAN
40223366002	MW-5	EPA 8270D by SIM	AO	2	PAN

PAN = Pace National - Mt. Juliet



ANALYTICAL RESULTS

Project: 6255 SOUTH MILWAUKEE AVE

Pace Project No.: 40223366

Sample: MW-3	Lab ID:	40223366001	Collected	d: 03/11/21	10:00	Received: 03/	13/21 08:35 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
SVOA (GC/MS) 8270 D-SIM	Analytical Pace Natio	Method: EPA 8 onal - Mt. Juliet	270D by SI	M Preparat	ion Met	hod: 3510C			
1,4-Dioxane (p-Dioxane)	<0.0447	ug/L	0.149	0.0447	1	03/18/21 11:24	03/18/21 20:50	123-91-1	
Nitrobenzene-d5 (S)	58.8	%	10.0-120		1	03/18/21 11:24	03/18/21 20:50	4165-60-0	



ANALYTICAL RESULTS

Project: 6255 SOUTH MILWAUKEE AVE

Pace Project No.: 40223366

Sample: MW-5	Lab ID:	40223366002	Collecte	d: 03/11/21	11:00	Received: 03/	/13/21 08:35 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
SVOA (GC/MS) 8270 D-SIM	Analytical Pace Natio	Method: EPA 8 onal - Mt. Juliet	270D by SI	M Preparat	ion Me	thod: 3510C			
1,4-Dioxane (p-Dioxane) Surrogates	<0.0447	ug/L	0.149	0.0447	1	03/18/21 11:24	03/18/21 20:10	123-91-1	
Nitrobenzene-d5 (S)	57.4	%	10.0-120		1	03/18/21 11:24	03/18/21 20:10	4165-60-0	



QUALITY CONTROL DATA

Project: 6255 SOUTH MIL	VAUKEE AVE									
Pace Project No.: 40223366										
QC Batch: 1636158		Analys	is Method	: Ef	PA 8270[D by SIM				
QC Batch Method: 3510C		Analys	is Descrip	tion: S	/OA (G	C/MS) 82	270 D-SIM			
		Labora	atory:	Pa	ace Natio	onal - Mt.	Juliet			
Associated Lab Samples: 40223366	001, 40223366002									
METHOD BLANK: R3632677-3		N	Aatrix: Wa	iter						
Associated Lab Samples: 40223366	001, 40223366002									
		Blank	. F	Reporting						
Parameter	Units	Result	t	Limit	Ana	lyzed	Qualif	iers		
1,4-Dioxane (p-Dioxane)	ug/L	<0.0	0447	0.149	03/18/	21 19:49				
Nitrobenzene-d5 (S)	%		60.2	10.0-120	03/18/	21 19:49				
		7 1		D3633677 3						
LABORATORT CONTROL SAMPLE &	LC3D. K303207	Spike	LCS	LCSD	LCS	LCSD	% Rec		Мах	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	50.0	66.0	66.0	132	132	73.0-146	0.00	20	
Nitrobenzene-d5 (S)	%				60.0	65.2	10.0-120			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: 6255 SOUTH MILWAUKEE AVE

Pace Project No.: 40223366

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:6255 SOUTH MILWAUKEE AVEPace Project No.:40223366

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40223366001	MW-3	3510C	1636158	EPA 8270D by SIM	1636158
40223366002	MW-5	3510C	1636158	EPA 8270D by SIM	1636158

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Company Name:	: DAI Environmen	fal	, <i>s</i>		A	1. 1! -	a/®			MN: 61	12-607- 1	1700	WI: 920-469-2436	I H	022336	26 2/13/21
Branch/Location	" Lake Forest IL		11	ace	Ana	<i>IYTIC</i>	al	;				-		40	12336	<u>5 1 %</u>
Project Contact:	Chris Caelles				er er er er efter		- 11						Quote #:	; >>,		
Phone:	847-573-890	N V	' C	HA	\IN	OF	: <u>C</u> l	JSI	ΓΟ	DY	-		Mail To Contact:	Non-articles Non-articles	a state of the second	
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Project State:	Wisconsin		FILTERED? (YES/NO)	Y/N		Ţ										
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GB-C-046-Rev.03 (11Feb2020) Sample Preservation Receipt Form

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/race	Analytical			Do	cument No ·	
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Custody Seal on Cooler/B	ox Present. Ves	no	Sea	ls intac	t: Jes no	1
Custody Seal on Samples	Present: Ves	1710	Sea	ls intac	t: 🔽 yes 🔽 no	
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Biota Samples may be received	at ≤ 0°C if shipped on Dry	y Ice.				Labeled By Initials:
Chain of Custody Present:	······································	Yes			1.	
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Sampler Name & Signature of	on COC:	X Yes	□No	□n/A	4.	
Samples Arrived within Hold	Time:	≥ E ¥€s	□No		5.	
- VOA Samples frozer	n upon receipt	□Yes			Date/Time:	
Short Hold Time Analysis (<72hr):	□Yes	Ĵ ⊆ R\o		6.	
Rush Turn Around Time Re	quested:	□Yes,	ALD RO		7	
Sufficient Volume:		3 -			8.	
For Analysis: 📈	Zes INO MS/MSD:	Pres	□No			
Correct Containers Used:		Pres	□No		9.	
-Pace Containers Used:		Pres	□No	□n/a		
-Pace IR Containers Used	:	□Yes	□No			
Containers Intact:		a des	□No		10.	
Filtered volume received for [Dissolved tests	□Yes	□No		11.	
Sample Labels match COC:	۲ مو	Yes	ΠNο	□n/a	12.	
-Includes date/time/ID/Ana	<u>ılysis Matrix: M</u>	J				
Trip Blank Present:		□Yes	□No	DAN/A	13.	
Trip Blank Custody Seals Pre	sent	□Yes				
Pace Trip Blank Lot # (if purch	nased):					
Person Contacted: Comments/ Resolution:		• • .	•	Date/T	If checked, s	see attached form for additional comments

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample login M_{31321} (age 2.0.2) M_{31321} (age 2.0.2) M_{31321} (age 2.0.2) M_{31321}

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Pace Analytical Services, LLC 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

March 24, 2021

Chris Cailles DAI Environmental Polo Park Business Center 27834 Irma Lee Circle Lake Forest, IL 60045

RE: Project: 6255 SOUTH MILWAUKEE AVE Pace Project No.: 40223367

Dear Chris Cailles:

Enclosed are the analytical results for sample(s) received by the laboratory on March 13, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network: • Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Laurie Woelfel

Laurie Woelfel laurie.woelfel@pacelabs.com (920)469-2436 Project Manager

Enclosures

cc: Jenny Rovzar, DAI





CERTIFICATIONS

Project: 6255 SOUTH MILWAUKEE AVE

Pace Project No.: 40223367

Pace Analytical Services Long Island

Delaware Certification # NY10478 Virginia Certification # 460302 Delaware Certification # NY10478 575 Broad Hollow Rd, Melville, NY 11747 New York Certification #: 10478 Primary Accrediting Body New Jersey Certification #: NY158 Pennsylvania Certification #: 68-00350 Connecticut Certification #: PH-0435 Maryland Certification #: 208 Rhode Island Certification #: LAO00340 Massachusetts Certification #: M-NY026 New Hampshire Certification #: 2987



SAMPLE SUMMARY

Project: 6255 SOUTH MILWAUKEE AVE

Pace Project No.: 40223367

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40223367001	MW-3	Water	03/11/21 10:00	03/13/21 08:35
40223367002	MW-5	Water	03/11/21 11:00	03/13/21 08:35



SAMPLE ANALYTE COUNT

Project:6255 SOUTH MILWAUKEE AVEPace Project No.:40223367

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40223367001	MW-3	EPA 8260C/5030C	KGG	4	PACE-MV
40223367002	MW-5	EPA 8260C/5030C	KGG	4	PACE-MV

PACE-MV = Pace Analytical Services - Melville



ANALYTICAL RESULTS

Project: 6255 SOUTH MILWAUKEE AVE

Pace Project No.: 40223367

Lab ID:	40223367001	Collected	d: 03/11/21	10:00	Received: 03	/13/21 08:35 Ma	atrix: Water	
Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Analytical Pace Anal	Method: EPA 8 ytical Services	260C/50300 - Melville	C					
<0.52	ug/L	4.0	0.52	1		03/21/21 14:19	111-84-2	N3
89	%	70-123		1		03/21/21 14:19	17060-07-0	
95	%	66-119		1		03/21/21 14:19	460-00-4	
93	%	82-121		1		03/21/21 14:19	2037-26-5	
	Lab ID: Results Analytical Pace Anal <0.52 89 95 93	Lab ID:40223367001ResultsUnitsAnalytical Method: EPA 8Pace Analytical Services<0.52	Lab ID: 40223367001 Collected Results Units LOQ Analytical Method: EPA 8260C/50300 Pace Analytical Services - Melville <0.52 ug/L 4.0 89 % 70-123 95 % 66-119 93 % 82-121	Lab ID: 40223367001 Collected: 03/11/21 Results Units LOQ LOD Analytical Method: EPA 8260C/5030C EPA 8260C/5030C EPA 8260C/5030C Pace Analytical Services - Melville 0.52 0.52 89 % 70-123 95 95 % 66-119 93 93 % 82-121	Lab ID: 40223367001 Collected: 03/11/21 10:00 Results Units LOQ LOD DF Analytical Method: EPA 8260C/5030C Drestrices Drestrices	Lab ID: 40223367001 Collected: 03/11/21 10:00 Received: 03 Results Units LOQ LOD DF Prepared Analytical Method: EPA 8260C/5030C Feace Analytical Services - Melville 70-123 1 % 70-123 1 1 95 % 66-119 1 93 % 82-121 1 1 1 1	Lab ID: 40223367001 Collected: 03/11/21 10:00 Received: 03/13/21 08:35 Mail Results Units LOQ LOD DF Prepared Analyzed Analytical Method: EPA 8260C/5030C Pace Analytical Services - Melville 03/21/21 14:19 9% 70-123 1 03/21/21 14:19 95 % 66-119 1 03/21/21 14:19 93 % 82-121 1 03/21/21 14:19	Lab ID: 40223367001 Collected: 03/11/21 0:00 Received: 03/13/21 08:35 Matrix: Water Results Units LOQ LOD DF Prepared Analyzed CAS No. Analytical Method: EPA 8260C/5030C Pace Analytical Services - Melville 03/21/21 14:19 111-84-2 89 % 70-123 1 03/21/21 14:19 17060-07-0 95 % 66-119 1 03/21/21 14:19 2037-26-5 93 % 82-121 1 03/21/21 14:19 2037-26-5


ANALYTICAL RESULTS

Project: 6255 SOUTH MILWAUKEE AVE

Pace Project No.: 40223367

Sample: MW-5	Lab ID:	40223367002	Collecte	d: 03/11/21	11:00	Received: 03	/13/21 08:35 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics	Analytical Pace Ana	Method: EPA 8 lytical Services	260C/5030 - Melville	С					
n-Nonane Surrogates	<0.52	ug/L	4.0	0.52	1		03/21/21 14:38	111-84-2	N3
1,2-Dichloroethane-d4 (S)	90	%	70-123		1		03/21/21 14:38	17060-07-0	
4-Bromofluorobenzene (S)	95	%	66-119		1		03/21/21 14:38	460-00-4	
Toluene-d8 (S)	93	%	82-121		1		03/21/21 14:38	2037-26-5	



QUALITY CONTROL DATA

Project: 62	255 SOUTH MII	WAUKEE AVE								
Pace Project No.: 40	0223367									
QC Batch:	201046		Analysis	Metho	d: E	PA 8260C/503	0C			
QC Batch Method:	EPA 8260C/503	OC	Analysis	Descri	ption: 8	260 MSV				
			Laborato	ory:	P	ace Analytical	Services - Me	lville		
Associated Lab Sample	es: 4022336	7001, 40223367002								
METHOD BLANK: 98	39627		Ма	trix: W	ater					
Associated Lab Sample	es: 4022336	7001, 40223367002								
			Blank		Reporting					
Paramet	er	Units	Result		Limit	Analyzed	Quali	fiers		
n-Nonane		ua/l	<0	.52	4.0	03/21/21 12	17 N3			
1,2-Dichloroethane-d4	(S)	%		89	70-123	03/21/21 12:	:17			
4-Bromofluorobenzene	e (S)	%		96	66-119	03/21/21 12:	:17			
Toluene-d8 (S)		%		90	82-121	03/21/21 12:	:17			
LABORATORY CONT	ROL SAMPLE:	989628								
			Spike	LC	S	LCS	% Rec			
Paramet	er	Units	Conc.	Res	sult	% Rec	Limits	Qual	ifiers	
n-Nonane		ug/L	50		61.7	123	54-139	N3,v1		
1,2-Dichloroethane-d4	(S)	%				90	70-123			
4-Bromofluorobenzene	e (S)	%				96	66-119			
Toluene-d8 (S)		%				92	82-121			
MATRIX SPIKE SAMP	LE:	989629								
			70165984	001	Spike	MS	MS		% Rec	
Paramet	er	Units	Result		Conc.	Result	% Rec		Limits	Qualifiers
n-Nonane		ug/L		<4.0	50	41.8		34	60-140 I	N3,v1
1,2-Dichloroethane-d4	(S)	%					:	37	70-123	
4-Bromofluorobenzene	e (S)	%					9	92	66-119	
Toluene-d8 (S)		%					9	95	82-121	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: 6255 SOUTH MILWAUKEE AVE

Pace Project No.: 40223367

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

- N3 Accreditation is not offered by the relevant laboratory accrediting body for this parameter.
- v1 The continuing calibration verification was above the method acceptance limit. Any detection for the analyte in the associated samples may have a high bias.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:6255 SOUTH MILWAUKEE AVEPace Project No.:40223367

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40223367001 40223367002	MW-3 MW-5	EPA 8260C/5030C EPA 8260C/5030C	201046 201046		

(F	Please Print Clearly)					,					UPPEF		ST RI	EGION		Page 1	of
Company Name:	DAI ENVIRONMENT	ntal		ø							MN: 6	12-607-17	00	WI: 920-469-2436	$(1 \sim$	$\sim \sim \sim \sim$	
Branch/Location:	Lake Forest, I	1			eace.	Ana	IYTICa								401	23561	
Project Contact:	Chris Cailles					www.pa	061015-0	QITT						Quote #:			
Phone:	847-573 8900		I	C	CHA	IN	OF		US [.]	ΤΟ	DY			Mail To Contact:			
Project Number:	6255		A=No	ne B=h	HCL C=H	12504	Preservat	tion Cod E=DI \	les Water F	=Methan	ol G=N	аОН		Mail To Company:			
Project Name:	South Milwark	PLAND,	H=So	dium Bisul	fate Solutio	n	I=Sodium	h Thiosulf	ate J=	Other				Mail To Address:			
Project State:	MISCUNSIN		FILTE	RED? /NO)	Y/N												
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Sampled By (Sign)	MARINE MIL			52)										Invoice To Company:			
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	el IV	C = Charcoal D = Oil S = Soil	GW = Groun SW = Surfac WW = Waste	d Water e Water	alyse	ð V											Drefile #
		SI = Sludge COLLE	WP = Wipe	MATERY	An	5										ise Oniv)	Frome #
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Telephone:		Relind	quished By:	J."	<u> </u>		Da	ate/Time:			Receive	d By:		Date/Time:		OK / A	djusted
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C019a(27Jun2006)

ORIGINAL

Client Name:	DATENV.

Sample Preservation Receipt Form

Pace Analytical Services, LLC 1241 Bellevue Street, Suite 9 Green Bay, WI 54302

Date/

Initial when

All containers needing preservation have been checked and noted below: "Yes No bold A

										Lab	Lot#	of pH	рарег	:			La	b Std	#ID of	prese	ervatio	n (if p	H adju	isted):					comp	leted:		Time:	
_	Ð	Ŋ	E	ତା ସ	ass ⊇	Ŋ]]]	D	5		Plas m	tic Z		A	–	Vi	als エ	Σ	D		; 	ars D		G	enera	al	'ials (>6mm) *	t pH ≤2	+Zn Act pH 29	pH 212	pH ≤2	sr adjusted	Volume (mL)
Pace Lab #	AG	BG	AG1	AG4	AG4	AG5	AG2	BG3	BP1	BP3	BP3	BP3	BP3	VG9.	DG9	VG9	VG9	VG9	VG9	JGFI	JG9(WGF	WPF	SP51	ZPLO	U U N	V OA V	H2SO4	NaOH-	NaOH	HNO3	pH afte	
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GB-C-046-Rev.03 (11Feb2020) Sample Preservation Receipt Form

Page Page 11 of 12

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Pace Applytical [®]	Sample C	Doci Conditi	on Upon Receipt (SCUR)	Document Revised: 26Mar2020
		Do	cument No.:	Author
1241 Bellevue Street, Green Bay, WI 54302	ENV	-FRM-	GBAY-0014-Rev.00	Pace Green Bay Quality Office
Sample C	Condition	n Und	n Recoint Form (S	
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Courier: CS Logistics Fed Ex For Speede		- s r v	Valtco	0#:40223367
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Custody Seal on Samples Present: Ves	io Seal	s intact	: 🔽 yes 🦵 no	
Thermometer lies in the second	e Bags 🛛 🖡	Non	e 🗂 Other	
Cooler Temperature	Type of Ice	: Wet	Blue Dry None 📂	Samples on ice, cooling process has begun
Temp Blank Present:	Biol			Person examining contents:
Temp should be above freezing to 6°C.	Biolo	Jyicai	rissue is Frozen: 1 yes	Date: 3:13:24 /Initials: ML
Biota Samples may be received at ≤ 0°C if shipped on Dry	Ice.			Labeled By Initials:SRI<
Chain of Custody Present:	Yes No		1.	
Chain of Custody Filled Out:	UYes Ko		2.pa#, Mail/inv	ICC. Mes. Her 3-13-21
Chain of Custody Relinquished:	ØØes □No	□n/a	3. Nordate/Hime	Mil-3-13-21
Sampler Name & Signature on COC:	KVes □No		4.	
احد Samples Arrived within Hold Time:	EFFes □No		5.	
- VOA Samples frozen upon receipt	□Yes □No		Date/Time:	
Short Hold Time Analysis (<72hr):	Yes Yolo		6.	
Rush Turn Around Time Requested:	Yes 200		7	
Sufficient Volume:			8.	
For Analysis: 🗹 Yes 🗆 No MS/MSD: 🗴	Pres 🗆 No	□n/A		
Correct Containers Used:	Pres □No		9.	
-Pace Containers Used:	FYes □No	□n/a		
-Pace IR Containers Used:	∃Yes □No	GAR A		
Containers Intact:	Bes Ino		10.	· .
Filtered volume received for Dissolved tests	∃Yes □No		11.	
Sample Labels match COC:	IYes □No	□n/a	12.	· · · ·
-Includes date/time/ID/Analysis Matrix:				
Trip Blank Present:	JYes Sen io		13.	
Trip Blank Custody Seals Present]Yes ∐No	DA IA		
Pace Trip Blank Lot # (if purchased):			· · ·	
Person Contacted:		Date/T	If checked,	see attached form for additional comments
Comments/ Resolution:		Date/1		

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir MM Vage Piggel 2012 313-21 D-1-

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Pace Analytical Services, LLC 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

September 13, 2021

Chris Cailles DAI Environmental Polo Park Business Center 27834 Irma Lee Circle Lake Forest, IL 60045

RE: Project: 6255 SOUTH MILWAUKEE Pace Project No.: 40231335

Dear Chris Cailles:

Enclosed are the analytical results for sample(s) received by the laboratory on August 10, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

LVM

Steven Mleczko steve.mleczko@pacelabs.com (920)469-2436 Project Manager

Enclosures

cc: Jenny Rovzar, DAI





Pace Analytical Services, LLC 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

SAMPLE SUMMARY

Project: 6255 SOUTH MILWAUKEE

Pace Project No.: 40231335

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40231335001	MW-1	Water	08/04/21 12:15	08/10/21 09:00
40231335002	MW-2	Water	08/04/21 13:05	08/10/21 09:00
40231335003	MW-201	Water	08/04/21 13:50	08/10/21 09:00
40231335004	MW-5	Water	08/05/21 10:55	08/10/21 09:00
40231335005	MW-4	Water	08/05/21 11:45	08/10/21 09:00
40231335006	MW-3	Water	08/05/21 09:15	08/10/21 09:00
40231335007	SUMP	Water	08/05/21 12:45	08/10/21 09:00
40231335008	EFFLUENT	Water	08/05/21 13:30	08/10/21 09:00
40231335009	EQUIP BLANK	Water	08/04/21 11:45	08/10/21 09:00
40231335010	FIELD BLANK	Water	08/04/21 11:45	08/10/21 09:00

Company Name: Branch/Location: Project Contact: Project Number: Project Name: Project Name: Project State: Sampled By (Print) Sampled By (Sign): O #: Data Package O (billable) EPA Leve EPA Leve EPA Leve PACE LAB # OO1 MW OO2 Internet OO2 MW OO5 MW OO5 MW OO5 MW OO5 MW	DAI Environm Lake Forest Chris Caille S47-J73-39 6255 Soth Milwow Warus Gresc Marcus ym Marcus ym Marcus gresc Marcus ym CLIENT FIELD ID N-1 J-5 1-5	$\frac{e_{1}+c_{1}}{s_{2}}$	A=N H=S FILTH (YESE) PRESEI (CC W = Water DW = Drink GW = Grou SW = Surfa GW = Grou SW = Surfa GW = Grou SW = Surfa (CC DW = Vipe ECTION TIME Z,15 1,50	Aone B= Sodium Bisul ERED? S/NO? S/NO? RVATION DDE? S S King Water ace Water ace Water ace Water ace Water AGW GW	Pace CH/ HCL C Ifate Solu Pick Peterson Pick Solution				US ⁻ Water F ate J=	TOI =Methancc =Other	MN: 612	2-607-1700 Эн		II: 920-469-2436 Quote #: Mail To Contact: Mail To Company: Mail To Address: Invoice To Contact: Invoice To Company: Invoice To Address: Invoice To Address: CLIENT COMMENTS		2 3 2 9 7 18 3 9 7 18 1 9 7 10	Profile #
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40231335

Steve Mleczko

Flag Status:

From:	Chris Cailles <cailles@daienv.com></cailles@daienv.com>
Sent:	Tuesday, August 10, 2021 8:17 AM
То:	Steve Mleczko
Subject:	PFAS samples, S. Milwaukee
Attachments:	1669_001.pdf
Follow Up Flag:	Follow up

Flagged

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe. Steve,

For the PFAS water samples that you should be receiving today, the chain did not specifically note that the field blank and equipment blank are to be analyzed for PFAS (see attached). Those samples are to be analyzed as well. Please note the correction upon your forwarding to the sister laboratory. Thanks,

Chris

Clie	nt l	Nar	ne:	\mathcal{O}	A١	E	- - - -	t,				S	am	ple	Pr o	e se ojec	rva t #	tior			ipt	For 긹	rm 3	35	5						Pace Ar 1241 B	nalytical ellevue Green E	Services, LLC Street, Suite 9 Bay, WI 54302
	All c	ontair	ners r	needin	g pres	ervati	on ha	ve be	en ch	ecked Lab	and n Lot# c	oted b	elow:	□Yes	□No	(ÎN/A	Lat	Std #	#ID of	prese	rvatior	ו) (if pH	l adiu	sted):					Initial comp	when leted:		Date/ Time:	
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				Gl	ass]				Plast	ic				Via	als				Ja	ars		Ge	enera	al 🔤	: (>6mn	≤2	Act pH	212	₹3	djusted	Volume
Pace	\G1U	3G1U	VG1H	VG4S	\G4U	\G5U	VG2S	3G3U	3P1U	3P3U	3P3B	3P3N	3P3S	/G9A	JG9T	UG9V	H6D/	MG9M	/G9D	IGFU	IG9U	VGFU	VPFU	SP5T	PLC	N	'OA Vials	12SO4 pH	laOH+Zn	laOH pH	Hd EON	H after a	(mL)
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	1 lite	ar am	bor c	1000			.,	R B	2411	1 lite	r nla	stic u	nroe					40 m		-	corbi				FII	4 07	amh	r iar	unnr	96		-	1
BG1U	1 lite	er cle	ar ala	388				BF	230	250	mL plat	lastic	unore	es			39T	40 m	nL am	ber N	la Th	io		JC	39U	9 oz	amb	er jar	unpr	es			
AG1H	1 lite	er am	ber g	glass	HCL			BF	23B	250	mL p	lastic	NaOl	H		vo	9U	40 m	nL cle	ar via	al unp	res		W	GFU	4 oz	clea	r jar u	Inpres	3			
AG4S	125	mL a	ambe	r glas	s H28	SO4		BF	P3N	250	mL p	lastic	HNO	3		VO	9H	40 m	nL cle	ar via	al HCI	-		W	PFU	4 oz	plas	tic jar	unpr	es			1
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BG3U	250	mL c	lear	glass	unpre	es																		Ļ		1							

F-GB-C-046-Rev.03 (11Feb2020) Sample Preservation Receipt Form

Pace Analytical [®]	Do Sample Cond	ocument Name: ition Upon Receipt (SCI	UR) Document Revised: 26Mar2020
1241 Bellevue Street, Green Bay, WI 54302	ENV-FRM	ocument No.: I-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office
Sample (Condition U	pon Receipt Form	(SCUR)
		Project #	
Client Name: DHL Env.			WO#:40231335
Courier: 💢 CS Logistics 🗖 Fed Ex 🛛 🗖 Speede		Waltco	
Client Pace Other			
Fracking #:			40231335
Custody Seal on Cooler/Box Present: 🕅 yes	no Seals int	act: 🕅 yes 🗖 no 📋	
Custody Seal on Samples Present: 🔲 yes 🔀	no Seals int	act: 🗖 yes 🗖 no	
Packing Material: 1X Bubble Wrap 1 Bubb			
	Type of ice.	blue bly None	Person examining contents:
Temp Blank Present: Types 🔲 no	Biologic	al Tissue is Frozen:	yes no Date: 8/10/2/Initials: AL
Femp should be above freezing to 6°C. Biota Samples may be received at \leq 0°C if shipped on Dr	y Ice.		Labeled By Initials:
Chain of Custody Present:	Yes 🛛 No 🗆	N/A 1.	
Chain of Custody Filled Out:		N/A 2.00 Datt.M	railling inthe filt pres 8
Chain of Custody Relinquished:	YYes □No □	IN/A 3.	
Sampler Name & Signature on COC:	Y Yes □No □	N/A 4.	
Samples Arrived within Hold Time:	XYes □No	5.	
- VOA Samples frozen upon receipt	□Yes □No	Date/Time:	
Short Hold Time Analysis (<72hr):	Xyes □No	6.	
Rush Turn Around Time Requested:		7.	
Sufficient Volume:		8.	
For Analysis: 🗙 Yes 🗆 No 🛛 MS/MSD	: 🗆 Yes 🗙 No 🗆	IN/A	
Correct Containers Used:	XYes □No	9.004+010	added to Col per PM, recin
-Pace Containers Used:	□Yes 🕅No 🗆	INA in shipmen	+ 8110122 A21
-Pace IR Containers Used:	🗆 Yes 🗆 No 🏷	KN/A	
Containers Intact:	₩es □No	10	
Filtered volume received for Dissolved tests	□Yes □No 🎽	N/A 11.	
Sample Labels match COC:	□Yes 🗙No 🗆	IN/A 12.004: no .	times 8/10/22 022
-Includes date/time/ID/Analysis Matrix:	ω		· · · · · · · · · · · · · · · · · · ·
Frip Blank Present:	🗆 Yes 🗆 No 🌶	N/A 13.	
Trip Blank Custody Seals Present	□Yes □No 🗴	N/A	
Pace Trip Blank Lot # (if purchased):			
Client Notification/ Resolution:	ח	If ch ate/Time:	ecked, see attached form for additional comments
	0		

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample login

Page 2 of 2



Report of Analysis

Pace Analytical Services, LLC

1241 Bellevue Street Suite 9 Green Bay, WI 54302 Attention: Brian Basten

Project Name: 6255 South Milwaukee Project Number: 40231335 Lot Number:**WH11069** Date Completed:09/12/2021

Kau Coman

09/13/2021 5:09 PM Approved and released by: Project Manager II: **Karen L. Coonan**





The electronic signature above is the equivalent of a handwritten signature. This report shall not be reproduced, except in its entirety, without the written approval of Pace Analytical Services, LLC.

Case Narrative Pace Analytical Services, LLC Lot Number: WH11069

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

Samples WH11069-001, WH11069-002, WH11069-005, and WH11069-006 required centrifugation prior to extraction, due to excessive solids present in the samples. Centrifugation was performed following the PFAS Aqueous Centrifuge Protocol; samples were spiked with Surrogate (SUR; Extracted Internal Standard/EIS) and shaken vigorously before being poured into a conical bottle and centrifuged. The centrifuged aqueous sample was decanted back into the original sample bottle, off of the condensed solids remaining in the centrifuge bottle. Original sample bottle was rinsed as normal and centrifuge bottle was rinsed with 4mL of MeOH. Centrifuge bottle rinsate was added to the elution. Samples concentrated to <10mL and reconstituted to 10mL using MeOH by transfer pipet.

Surrogate recoveries for the following samples were outside the upper control limit: WH11069-001, WH11069-002, WH11069-004. This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Surrogate recoveries for the following samples were outside control limits: WH11069-005, WH11069-006. Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

The method blank (MB) and the laboratory control sample (LCS) for prep batch 14070 recovered outside acceptance criteria. For the following samples there was an insufficient amount to perform a re-extraction or re-analysis: WH11069-008. The data has been reported.

Re-extraction and re-analysis (Run 2) for the following samples were performed outside of the analytical holding time for the analytes 6:2FTS and PFTeDA: WH11069-004, -005, -006 and -007. Samples were re-extracted and re-analyzed due to the QC failures (MB, LCS and internal standards) in batch 14070.

Sample Summary Pace Analytical Services, LLC Lot Number: WH11069 Project Name: 6255 South Milwaukee Project Number: 40231335

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-1	Aqueous	08/04/2021 1215	08/11/2021
002	MW-2	Aqueous	08/04/2021 1305	08/11/2021
003	MW-201	Aqueous	08/04/2021 1350	08/11/2021
004	MW-5	Aqueous	08/05/2021 1055	08/11/2021
005	MW-4	Aqueous	08/05/2021 1145	08/11/2021
006	MW-3	Aqueous	08/05/2021 0915	08/11/2021
007	SUMP	Aqueous	08/05/2021 1245	08/11/2021
008	EFFLUENT	Aqueous	08/05/2021 1330	08/11/2021
009	EQUIP BLANK	Aqueous	08/04/2021 1145	08/11/2021
010	FIELD BLANK	Aqueous	08/04/2021 1145	08/11/2021

(10 samples)

Detection Summary Pace Analytical Services, LLC Lot Number: WH11069 Project Name: 6255 South Milwaukee Project Number: 40231335

Sampl	e Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-1	Aqueous	6:2 FTS	PFAS by ID	1.7	J	ng/L	7
001	MW-1	Aqueous	PFBS	PFAS by ID	11		ng/L	7
001	MW-1	Aqueous	PFPeS	PFAS by ID	2.8	J	ng/L	7
001	MW-1	Aqueous	PFHxS	PFAS by ID	11		ng/L	7
001	MW-1	Aqueous	PFBA	PFAS by ID	9.0		ng/L	7
001	MW-1	Aqueous	PFHpA	PFAS by ID	5.9		ng/L	7
001	MW-1	Aqueous	PFHxA	PFAS by ID	7.6		ng/L	7
001	MW-1	Aqueous	PFNA	PFAS by ID	0.82	J	ng/L	7
001	MW-1	Aqueous	PFOA	PFAS by ID	11		ng/L	7
001	MW-1	Aqueous	PFPeA	PFAS by ID	8.3		ng/L	7
001	MW-1	Aqueous	PFOS	PFAS by ID	9.6		ng/L	7
002	MW-2	Aqueous	6:2 FTS	PFAS by ID	3.6	J	ng/L	9
002	MW-2	Aqueous	EtFOSAA	PFAS by ID	2.5	J	ng/L	9
002	MW-2	Aqueous	PFBS	PFAS by ID	13		ng/L	9
002	MW-2	Aqueous	PFOSA	PFAS by ID	0.84	J	ng/L	9
002	MW-2	Aqueous	PFPeS	PFAS by ID	6.7		ng/L	9
002	MW-2	Aqueous	PFHxS	PFAS by ID	14		ng/L	9
002	MW-2	Aqueous	PFBA	PFAS by ID	16		ng/L	9
002	MW-2	Aqueous	PFHpA	PFAS by ID	4.1		ng/L	9
002	MW-2	Aqueous	PFHxA	PFAS by ID	9.4		ng/L	9
002	MW-2	Aqueous	PFOA	PFAS by ID	22		ng/L	9
002	MW-2	Aqueous	PFPeA	PFAS by ID	17		ng/L	9
002	MW-2	Aqueous	PFOS	PFAS by ID	14		ng/L	9
003	MW-201	Aqueous	6:2 FTS	PFAS by ID	29		ng/L	11
003	MW-201	Aqueous	PFBS	PFAS by ID	1.6	J	ng/L	11
003	MW-201	Aqueous	PFHxS	PFAS by ID	0.95	J	ng/L	11
003	MW-201	Aqueous	PFBA	PFAS by ID	3.2	J	ng/L	11
003	MW-201	Aqueous	PFHpA	PFAS by ID	5.3		ng/L	11
003	MW-201	Aqueous	PFHxA	PFAS by ID	7.2		ng/L	11
003	MW-201	Aqueous	PFOA	PFAS by ID	6.7		ng/L	11
003	MW-201	Aqueous	PFPeA	PFAS by ID	6.1		ng/L	11
004	MW-5	Aqueous	PFBS	PFAS by ID	26		ng/L	13
004	MW-5	Aqueous	PFOSA	PFAS by ID	1.8	J	ng/L	13
004	MW-5	Aqueous	PFPeS	PFAS by ID	1.3	J	ng/L	13
004	MW-5	Aqueous	PFHxS	PFAS by ID	6.1		ng/L	13
004	MW-5	Aqueous	PFBA	PFAS by ID	17		ng/L	13
004	MW-5	Aqueous	PFHpA	PFAS by ID	8.0		ng/L	13
004	MW-5	Aqueous	PFHxA	PFAS by ID	13		ng/L	13
004	MW-5	Aqueous	PFNA	PFAS by ID	0.97	J	ng/L	13
004	MW-5	Aqueous	PFOA	PFAS by ID	15		ng/L	13
004	MW-5	Aqueous	PFPeA	PFAS by ID	18		ng/L	13
004	MW-5	Aqueous	PFOS	PFAS by ID	13		ng/L	13
005	MW-4	Aqueous	PFBS	PFAS by ID	71		ng/L	15

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Detection Summary (Continued) Lot Number: WH11069

Sampl	e Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
005	MW-4	Aqueous	PFHpS	PFAS by ID	0.90	J	ng/L	15
005	MW-4	Aqueous	PFPeS	PFAS by ID	1.8	J	ng/L	15
005	MW-4	Aqueous	PFHxS	PFAS by ID	13		ng/L	15
005	MW-4	Aqueous	PFBA	PFAS by ID	7.0		ng/L	15
005	MW-4	Aqueous	PFDA	PFAS by ID	3.5		ng/L	15
005	MW-4	Aqueous	PFHpA	PFAS by ID	13		ng/L	15
005	MW-4	Aqueous	PFHxA	PFAS by ID	20		ng/L	15
005	MW-4	Aqueous	PFNA	PFAS by ID	4.4		ng/L	15
005	MW-4	Aqueous	PFOA	PFAS by ID	29		ng/L	15
005	MW-4	Aqueous	PFPeA	PFAS by ID	33		ng/L	15
005	MW-4	Aqueous	PFOS	PFAS by ID	69		ng/L	15
006	MW-3	Aqueous	PFBS	PFAS by ID	17		ng/L	17
006	MW-3	Aqueous	PFOSA	PFAS by ID	4.2		ng/L	17
006	MW-3	Aqueous	PFHxS	PFAS by ID	7.1		ng/L	17
006	MW-3	Aqueous	PFBA	PFAS by ID	34	Q	ng/L	17
006	MW-3	Aqueous	PFDA	PFAS by ID	1.0	J	ng/L	17
006	MW-3	Aqueous	PFHpA	PFAS by ID	25		ng/L	17
006	MW-3	Aqueous	PFHxA	PFAS by ID	15		ng/L	17
006	MW-3	Aqueous	PFNA	PFAS by ID	2.2	J	ng/L	17
006	MW-3	Aqueous	PFOA	PFAS by ID	9.6		ng/L	17
006	MW-3	Aqueous	PFPeA	PFAS by ID	20		ng/L	17
006	MW-3	Aqueous	PFOS	PFAS by ID	29		ng/L	17
007	SUMP	Aqueous	PFBS	PFAS by ID	6.5		ng/L	19
007	SUMP	Aqueous	PFPeS	PFAS by ID	1.1	J	ng/L	19
007	SUMP	Aqueous	PFHxS	PFAS by ID	3.0	J	ng/L	19
007	SUMP	Aqueous	PFBA	PFAS by ID	13		ng/L	19
007	SUMP	Aqueous	PFHpA	PFAS by ID	2.1	J	ng/L	19
007	SUMP	Aqueous	PFHxA	PFAS by ID	5.4		ng/L	19
007	SUMP	Aqueous	PFNA	PFAS by ID	0.45	J	ng/L	19
007	SUMP	Aqueous	PFOA	PFAS by ID	4.8		ng/L	19
007	SUMP	Aqueous	PFPeA	PFAS by ID	8.2		ng/L	19
007	SUMP	Aqueous	PFOS	PFAS by ID	5.9		ng/L	19
009	EQUIP BLANK	Aqueous	6:2 FTS	PFAS by ID	2.2	J	ng/L	23

(76 detections)

Client: Pace Analytical Services, LLC				Laboratory	ID: WH11069-00	1	
Description: MW-1				Mat	rix: Aqueous		
Date Sampled:08/04/2021 1215	Project Name:	: 6255 South Milwaul	kee				
Date Received: 08/11/2021	roiect Number:	40231335					
		aluaia Data Analuat	Draw	Data Datah			
1 SOP SPE PFAS by ID SOP	1 09/0	01/2021 1846 JJG	08/31/20	Date Batch D21 1810 14001			
Parameter	CAS Number	Analytical Method	Result	Q LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9CI-PF3ONS) 756426-58-1	PFAS by ID SOP	ND	6.7	0.40	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3.) 763051-92-9	PFAS by ID SOP	ND	6.7	0.55	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND	6.7	1.3	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	1.7	J 6.7	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q 6.7	0.73	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND	6.7	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND	6.7	0.40	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND	6.7	1.1	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND	6.7	0.63	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND	6.7	0.80	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND	13	1.1	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND	6.7	0.78	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND	6.7	1.1	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	11	3.3	0.35	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND	3.3	0.65	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND	3.3	0.42	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND	3.3	0.60	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND	3.3	0.51	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	2.8	J 3.3	0.50	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND	6.7	0.87	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	11	3.3	0.46	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	9.0	3.3	0.50	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND	3.3	0.44	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND	3.3	0.39	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	5.9	3.3	0.37	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	7.6	3.3	0.58	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	0.82	J 3.3	0.39	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	11	3.3	0.69	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	8.3	3.3	0.45	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND	3.3	0.50	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND	3.3	0.44	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND	3.3	0.52	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	9.6	3.3	1.7	ng/L	1
Surrogate 0 % E	Run 1 Acce	ptance					
13C2 4:2FTS	189 21	5-150					
13C2 6:2FTS	112 2	5-150					
13C2 8:2FTS	77 2	5-150					
13C2 PFDoA	70 2	5-150					
13C2 PFTeDA	64 2!	5-150					
13C3 PFBS	75 2!	5-150					
13C3 PFHxS	78 2!	5-150					
13C3-HEPO-DA	73 2	5-150					
13C4_PFBA	58 2	5-150					
_	_						
LOQ = Limit of Quantitation B = Detected in the method blank	E = Quantitation	of compound exceeded the	calibration ra	nge DL = Detection I		Q = Surro	gate failure
H = Out of holding time W = Reported on wet weight basis	F - THE KPU DE	Concentivo GC columns exce	.cus 40%	J = ESUMALED FE	.suit < LOQ dHQ ≥ DL	L = LCS/L S = MS/N	ISD failure

Client: Pace Analytical Services, LLC			Laboratory ID: WH11069-001
Description: MW-1			Matrix: Aqueous
Date Sampled:08/04/2021 1215	Project N	lame: 6255 South Milwaukee	
Date Received: 08/11/2021	Project Nur	mber: 40231335	
Surrogate	Run 1 Q % Recovery	Acceptance Limits	
13C4_PFHpA	81	25-150	
13C5_PFHxA	90	25-150	
13C5_PFPeA	72	25-150	
13C6_PFDA	78	25-150	
13C7_PFUdA	74	25-150	
13C8_PFOA	80	25-150	
13C8_PFOS	74	25-150	
13C8_PFOSA	75	10-150	
13C9_PFNA	81	25-150	
d-EtFOSA	62	10-150	
d5-EtFOSAA	71	25-150	
d9-EtFOSE	65	10-150	
d-MeFOSA	65	10-150	
d3-MeFOSAA	69	25-150	
d7-MeFOSE	69	10-150	

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and \ge DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Client: Pace Analytical	Services, LLC					Laboratory I	D: WH11069-002	, -	
Description: MW-2						Matrix	: Aqueous		
Date Sampled:08/04/2021 1305	Pi	roject Name:	6255 South Milwauk	kee			·		
Date Received: 08/11/2021	Pro	iect Number:	40231335						
1 SOP SPE	Analytical Method Di PFAS by ID SOP	1 09/0	alysis Date Analyst)1/2021 1857 JJG	Prep 08/31/2	Date 2021 18	Batch 10 14001			
Parameter		CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1	-sulfonic acid (9CI-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.7	0.41	ng/L	1
11-chloroeicosafluoro-3-oxaundecane	e-1-sulfonic acid (11CI-PF3)	763051-92-9	PFAS by ID SOP	ND		6.7	0.56	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfo	onic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.7	1.3	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sul	fonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	3.6	J	6.7	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfon	ic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	6.7	0.74	ng/L	1
Hexafluoropropylene oxide dimer acid	d (GenX)	13252-13-6	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid	(ADONA)	919005-14-4	PFAS by ID SOP	ND		6.7	0.41	ng/L	1
N-ethylperfluoro-1-octanesulfonamide	e (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.7	1.1	ng/L	1
N-ethylperfluoro-1-octanesulfonam	nidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	2.5	J	6.7	0.63	ng/L	1
2-N-ethylperfluoro-1-octanesulfonami	do-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.7	0.80	ng/L	1
N-methylperfluoro-1-octanesulfonami	de (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		13	1.1	ng/L	1
N-methylperfluoro-1-octanesulfonami	doacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.7	0.78	ng/L	1
2-N-methylperfluoro-1-octanesulfonal	mido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.7	1.1	ng/L	1
Perfluoro-1-butanesulfonic acid (P	FBS)	375-73-5	PFAS by ID SOP	13		3.4	0.35	ng/L	1
Perfluoro-1-decanesulfonic acid (PFD	DS)	335-77-3	PFAS by ID SOP	ND		3.4	0.65	ng/L	1
Perfluoro-1-heptanesulfonic acid (PF	HpS)	375-92-8	PFAS by ID SOP	ND		3.4	0.42	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFN	IS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.60	ng/L	1
Perfluoro-1-octanesulfonamide (PF	OSA)	754-91-6	PFAS by ID SOP	0.84	J	3.4	0.52	ng/L	1
Perfluoro-1-pentanesulfonic acid (I	PFPeS)	2706-91-4	PFAS by ID SOP	6.7		3.4	0.50	ng/L	1
Perfluorododecanesulfonic acid (PFD	OS)	79780-39-5	PFAS by ID SOP	ND		6.7	0.88	ng/L	1
Perfluorohexanesulfonic acid (PFF	lxS)	355-46-4	PFAS by ID SOP	14		3.4	0.46	ng/L	1
Perfluoro-n-butanoic acid (PFBA)		375-22-4	PFAS by ID SOP	16		3.4	0.51	ng/L	1
Perfluoro-n-decanoic acid (PFDA)		335-76-2	PFAS by ID SOP	ND		3.4	0.44	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA))	307-55-1	PFAS by ID SOP	ND		3.4	0.40	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA	A)	375-85-9	PFAS by ID SOP	4.1		3.4	0.38	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)		307-24-4	PFAS by ID SOP	9.4		3.4	0.58	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)		375-95-1	PFAS by ID SOP	ND		3.4	0.39	ng/L	1
Perfluoro-n-octanoic acid (PFOA)		335-67-1	PFAS by ID SOP	22		3.4	0.70	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA	.)	2706-90-3	PFAS by ID SOP	17		3.4	0.46	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTe	DA)	376-06-7	PFAS by ID SOP	ND		3.4	0.50	ng/L	1
Perfluoro-n-tridecanoic acid (PF IrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.45	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.53	ng/L	1
Perfluorooctanesulfonic acid (PFO	S)	1763-23-1	PFAS by ID SOP	14		3.4	1.7	ng/L	1
Surrogate	Ru O % Poo	n 1 Acce	ptance						
13C2 4:2ETS	N 1	75 21	5-150						
13C2_62ETS		, c 20 20 21	5-150						
13C2_8:2FTS	\$	30 2!	5-150						
13C2 PEDoA	-	70 2!	5-150						
13C2 PFTeDA	Į	53 2!	5-150						
	8	38 2!	5-150						
 13C3_PFHxS	8	34 2!	5-150						
– 13C3-HFPO-DA	{	32 2!	5-150						
13C4_PFBA	(59 2!	5-150						
_OQ = Limit of Quantitation B	= Detected in the method blank	E = Quantitation P = The PPD here	of compound exceeded the o	calibration r	ange Di	L = Detection Lim	hit It < LOO and > DI	Q = Surroc	gate failure
H = Out of holding time W	/ = Reported on wet weight basis			545 -070	J	25timated resu		S = MS/MS	SD failure

Client: Pace Analytical Services, LL	.C			Laboratory ID: WH11069-002
Description: MW-2				Matrix: Aqueous
Date Sampled:08/04/2021 1305		Project N	Name: 6255 South Milwaukee	
Date Received: 08/11/2021		Project Nu	Imber: 40231335	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits	
13C4_PFHpA		92	25-150	
13C5_PFHxA		92	25-150	
13C5_PFPeA		83	25-150	
13C6_PFDA		87	25-150	
13C7_PFUdA		69	25-150	
13C8_PFOA		83	25-150	
13C8_PFOS		74	25-150	
13C8_PFOSA		88	10-150	
13C9_PFNA		83	25-150	
d-EtFOSA		73	10-150	
d5-EtFOSAA		69	25-150	
d9-EtFOSE		71	10-150	
d-MeFOSA		85	10-150	
d3-MeFOSAA		77	25-150	
d7-MeFOSE		70	10-150	

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and \geq DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Client: Pace Analytical Services, LLC				Laboratory	ID: WH11069-00	3	
Description: MW-201				Matr	ix: Aqueous		
Date Sampled:08/04/2021 1350	Project Name	e: 6255 South Milwaul	kee				
Date Received: 08/11/2021 F	roject Numbe	r: 40231335					
Run Prep Method Analytical Method	Dilution Ar	alvsis Date Analyst	Pren [Date Batch			
1 SOP SPE PFAS by ID SOP	1 09/	01/2021 1908 JJG	08/31/20	D21 1810 14001			
Descurrenter	CAS	Analytical	Desult	0 100		l la lta	Dura
Parameter 9. chlorobovadocafluoro 2. ovanono 1. sulfonic acid (0CL DE2ONS	NUMDer		Result		MDL	Units	Run
11.chloroeicosafluoro-3-oxarione-1-sulfonic acid (11CL-DE3) 763051-02-0	D PEAS by ID SOP		0.0	0.40	ng/L	1
1H 1H 2H 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-	PEAS by ID SOP	ND	6.6	0.55	ng/L	1
1H 1H 2H 2H-perfluorooctape sulfonic acid (6:2 FTS)	27619-97-	PEAS by ID SOP	29	6.6	1.3	ng/L	1
1H 1H 2H 2H-perfluorobexane sulfonic acid (4:2 FTS)	757124-72-	4 PEAS by ID SOP	ND	6.6	0.72	ng/L	1
Hexafluoronronvlene ovide dimer acid (GenX)	13252-13-	5 PEAS by ID SOP		6.6	0.73	ng/L	1
4 8-dioxa-3H-perfluoroponanoic acid (ADONA)	919005-14-	1 PEAS by ID SOP		6.6	0.40	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtEOSA)	4151-50-3	PEAS by ID SOP		6.6	1 1	ng/L	1
$N_{\rm ethylperfluoro_1-octanesulfonamidoacetic acid (EtEOSAA)$	2991-50-6	PEAS by ID SOP		6.6	0.62	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtEOSE)	1691-99-2	PEAS by ID SOP		6.6	0.79	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeEOSA)	31506-32-	B PEAS by ID SOP		13	1.0	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeEOSAA)	2355-31-9	PEAS by ID SOP	ND	6.6	0.77	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeEOSE)	24448-09-	7 PEAS by ID SOP	ND	6.6	11	ng/L	1
Perfluoro-1-butanesulfonic acid (PERS)	375-73-	5 PEAS by ID SOP	16	1 33	0.34	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND	3.3	0.65	na/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	B PFAS by ID SOP	ND	3.3	0.41	na/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-	1 PFAS by ID SOP	ND	3.3	0.59	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND	3.3	0.51	na/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND	3.3	0.49	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-	5 PFAS by ID SOP	ND	6.6	0.87	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	0.95	J 3.3	0.46	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	3.2	J 3.3	0.50	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	2 PFAS by ID SOP	ND	3.3	0.44	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND	3.3	0.39	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	5.3	3.3	0.37	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	7.2	3.3	0.57	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND	3.3	0.38	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	6.7	3.3	0.69	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	6.1	3.3	0.45	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND	3.3	0.50	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	B PFAS by ID SOP	ND	3.3	0.44	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	B PFAS by ID SOP	ND	3.3	0.52	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND	3.3	1.7	ng/L	1
Surrogate Q % F	Run 1 Acc Recoverv L	eptance .imits					
13C2_4:2FTS	86 2	25-150					
13C2_6:2FTS	127 2	25-150					
13C2_8:2FTS	85 2	25-150					
13C2_PFDoA	83 2	25-150					
13C2_PFTeDA	76 2	25-150					
13C3_PFBS	83 2	25-150					
13C3_PFHxS	77 2	25-150					
13C3-HFPO-DA	77 2	25-150					
13C4_PFBA	86 2	25-150					
LOQ = Limit of Quantitation B = Detected in the method blank ND = Not detected at or above the DL N = Recovery is out of criteria H = Out of holding time W = Reported on wet weight basis	E = Quantitatio P = The RPD b	n of compound exceeded the etween two GC columns exce	calibration ra eeds 40%	nge DL = Detection Li J = Estimated res	mit ult < LOQ and \ge DL	Q = Surro L = LCS/I S = MS/N	ogate failure _CSD failur 1SD failure

Client: Pace Analytical Services, LLC	C		Laboratory ID: WH11069-003
Description: MW-201			Matrix: Aqueous
Date Sampled:08/04/2021 1350	Project	Name: 6255 South Milwaukee	
Date Received: 08/11/2021	Project N	umber: 40231335	
Surrogate	Run 1 Q % Recovery	Acceptance y Limits	
13C4_PFHpA	81	25-150	
13C5_PFHxA	90	25-150	
13C5_PFPeA	82	25-150	
13C6_PFDA	84	25-150	
13C7_PFUdA	85	25-150	
13C8_PFOA	83	25-150	
13C8_PFOS	85	25-150	
13C8_PFOSA	83	10-150	
13C9_PFNA	83	25-150	
d-EtFOSA	72	10-150	
d5-EtFOSAA	85	25-150	
d9-EtFOSE	77	10-150	
d-MeFOSA	75	10-150	
d3-MeFOSAA	83	25-150	
d7-MeFOSE	81	10-150	

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and \ge DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Client: Pace Analytical Services, LLC				Lal	boratory II	D: WH11069-0	004	
Description: MW-5					Matri	x: Aqueous		
Date Sampled:08/05/2021 1055	Proiect Name:	6255 South Milwauk	kee			ļ		
Date Received: 08/11/2021	hiert Number	40231335						
	Jeet Number.	40231333						
Run Prep Method Analytical Method D	Vilution Ana	alysis Date Analyst	Prep	Date	Batch			
2 SOR SPE PEAS by ID SOP	1 09/0	0/2021 1010 JJG	09/01/2	021 1309	14070			
2 SOF SEL FLAS by 10 SOF	1 09/0	9/2021 2210 JJG	09/08/2	021 1229	14719			
	CAS	Analytical						
Parameter	Number	Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9CI-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.7	0.40	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3)	763051-92-9	PFAS by ID SOP	ND		6.7	0.55	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.7	1.3	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	Н	6.7	1.7	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	6.7	0.73	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.7	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.7	0.40	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.7	1.1	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.7	0.63	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.7	0.80	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		13	1.1	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.7	0.78	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.7	1.1	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	26		3.3	0.35	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.3	0.65	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.3	0.42	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.3	0.60	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	1.8	J	3.3	0.51	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	1.3	J	3.3	0.50	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.7	0.87	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	6.1		3.3	0.46	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	17		3.3	0.50	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.3	0.44	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.3	0.39	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	8.0		3.3	0.37	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	13		3.3	0.58	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	0.97	J	3.3	0.39	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	15		3.3	0.69	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	18		3.3	0.45	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND	Н	3.3	0.50	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.3	0.44	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.3	0.52	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	13		3.3	1.7	ng/L	1
R	un 1 Acce	ptance Rur	n 2 Ac	ceptance				
Surrogate Q % Re	covery Li	mits Q % Rec	overy	Limits				
13C2_4:2FTS N	168 25	5-150 HN 1	77	25-150				
13C2_6:2FTS	100 25	5-150 H 14	42	25-150				
13C2_8:2FTS	76 25	5-150 H 10	28	25-150				
13C2_PFDoA	53 25	5-150 H 6	4	25-150				
13C2_PFTeDA	48 25	5-150 H 5	7	25-150				
13C3_PFBS	86 25	5-150 H 10	02	25-150				
13C3_PFHxS	101 25	5-150 H 9	3	25-150				
13C3-HFPO-DA	91 25	5-150 H 10	02	25-150				

LOQ = Limit of QuantitationB = Detected in the method blankE = Quantitation of compound exceeded the calibration rangeDL = Detection LimitQ = Surrogate failureND = Not detected at or above the DLN = Recovery is out of criteriaP = The RPD between two GC columns exceeds 40%J = Estimated result < LOQ and \geq DLL = LCS/LCSD failureH = Out of holding timeW = Reported on wet weight basisS = MS/MSD failureS = MS/MSD failure

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Client: Pace Analytical Services, LLC					Laboratory ID: WH11069-004
Description: MW-5					Matrix: Aqueous
Date Sampled:08/05/2021 1055	Project N	lame: 6255 So	outh	Milwaukee	
Date Received: 08/11/2021	Project Nur	mber: 402313	35		
Surrogate Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 A % Recovery	Acceptance Limits
13C4_PFBA	82	25-150	Н	92	25-150
13C4_PFHpA	91	25-150	Н	99	25-150
13C5_PFHxA	92	25-150	Н	110	25-150
13C5_PFPeA	86	25-150	Н	98	25-150
13C6_PFDA	77	25-150	Н	94	25-150
13C7_PFUdA	61	25-150	Н	88	25-150
13C8_PFOA	95	25-150	Н	101	25-150
13C8_PFOS	85	25-150	Н	74	25-150
13C8_PFOSA	89	10-150	Н	102	10-150
13C9_PFNA	87	25-150	Н	99	25-150
d-EtFOSA	45	10-150	Н	66	10-150
d5-EtFOSAA	70	25-150	Н	89	25-150
d9-EtFOSE	52	10-150	Н	59	10-150
d-MeFOSA	51	10-150	Н	66	10-150
d3-MeFOSAA	74	25-150	Н	103	25-150
d7-MeFOSE	56	10-150	Н	60	10-150

LOQ = Limit of QuantitationB = Detected in the method blankE = Quantitation of compound exceeded the calibration rangeDL = Detection LimitQ = Surrogate failureND = Not detected at or above the DLN = Recovery is out of criteriaP = The RPD between two GC columns exceeds 40%J = Estimated result < LOQ and \geq DLL = LCS/LCSD failureH = Out of holding timeW = Reported on wet weight basisS = MS/MSD failure

Client: Pace Analytical Services, LL	.C					La	aboratory I	ID: WH11069-00	5	
Description: MW-4			Matrix: Aqueous							
Date Sampled:08/05/2021 1145	P	Project Nar	ne: 6255 S	South Milv	vaukee					
Date Received: 08/11/2021	Pro	ject Numb	ber: 40231	335						
Run Prep Method Analytica	al Method D	ilution	Analysis I	Date Ana	lyst Pre	p Date	Batch			
1 SOP SPE PFAS	by ID SOP	1 C	9/02/2021	1621 JJ	G 09/01	/2021 130	9 14070			
2 SOP SPE PFAS	by ID SOP	1 C	9/09/2021	2221 JJ	G 09/08	8/2021 1229	9 14719			
		C	AS A	nalytical						
Parameter		Numb	er	Method	Resu	It Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9CI-PF3ONS)	756426-5	8-1 PFAS	S by ID SOP	N)	6.6	0.40	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic aci	id (11CI-PF3)	763051-9	2-9 PFAS	5 by ID SOP	N)	6.6	0.55	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 F	TS)	39108-3	4-4 PFAS	S by ID SOP	N)	6.6	1.3	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 F	TS)	27619-9	7-2 PFAS	5 by ID SOP	N) HQ	7.1	1.8	ng/L	2
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FT	S)	757124-7	2-4 PFAS	5 by ID SOP	N	Q	6.6	0.73	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)		13252-1	3-6 PFAS	5 by ID SOP	N)	6.6	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)		919005-1	4-4 PFAS	S by ID SOP	N)	6.6	0.40	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)		4151-50	0-2 PFAS	S by ID SOP	N)	6.6	1.1	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (E	tFOSAA)	2991-5	0-6 PFAS	6 by ID SOP	N)	6.6	0.62	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (Et	FOSE)	1691-9	9-2 PFAS	6 by ID SOP	N)	6.6	0.79	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)		31506-3	2-8 PFAS	6 by ID SOP	N)	13	1.0	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-3	1-9 PFAS	6 by ID SOP	N)	6.6	0.77	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (I	MeFOSE)	24448-0	9-7 PFAS	6 by ID SOP	N)	6.6	1.1	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)		375-7	3-5 PFA	S by ID SOF	р 7	1	3.3	0.34	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)		335-7	7-3 PFAS	6 by ID SOP	N)	3.3	0.65	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)		375-93	2-8 PFA	S by ID SOF	0.9	D J	3.3	0.41	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)		68259-1	2-1 PFAS	6 by ID SOP	N)	3.3	0.59	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)		754-9	1-6 PFAS	6 by ID SOP	N)	3.3	0.51	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)		2706-9	1-4 PFA	S by ID SOF	D 1.8	3 J	3.3	0.49	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)		79780-3	9-5 PFAS	6 by ID SOP	N)	6.6	0.87	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)		355-4	6-4 PFA	S by ID SOF	D 1	3	3.3	0.46	ng/L	1
Perfluoro-n-butanoic acid (PFBA)		375-2	2-4 PFA	S by ID SOF	р 7.()	3.3	0.50	ng/L	1
Perfluoro-n-decanoic acid (PFDA)		335-7	6-2 PFA	S by ID SOF	o 3.	5	3.3	0.44	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)		307-5	5-1 PFAS	6 by ID SOP	N)	3.3	0.39	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)		375-8	5-9 PFA	S by ID SOF	D 1	3	3.3	0.37	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)		307-2-	4-4 PFA	S by ID SOF	D 2	D	3.3	0.57	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)		375-9	5-1 PFA	S by ID SOF	o 4.4	1	3.3	0.38	ng/L	1
Perfluoro-n-octanoic acid (PFOA)		335-6	7-1 PFA	S by ID SOF	ک 2	9	3.3	0.69	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)		2706-9	0-3 PFA	S by ID SOF	o 3	3	3.3	0.45	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)		376-0	6-7 PFAS	6 by ID SOP	N	н	3.6	0.53	ng/L	2
Perfluoro-n-tridecanoic acid (PFTrDA)		72629-9	4-8 PFAS	6 by ID SOP	N)	3.3	0.44	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)		2058-9	4-8 PFAS	6 by ID SOP	N)	3.3	0.52	ng/L	1
Perfluorooctanesulfonic acid (PFOS)		1763-2	3-1 PFA	S by ID SOF	6	9	3.3	1.7	ng/L	1
	Ru	un 1 Ao	cceptance	9	Run 2		е			
Surrogate	Q % Re	covery	Limits	Q %	Recovery	Limits				
13C2_4:2FTS	N 2	224	25-150	HN	306	25-150				
13C2_6:2FTS	N 2	257	25-150	HN	242	25-150				
13C2_8:2FTS		139	25-150	HN	154	25-150				
13C2_PFD0A		56	25-150	H	64	25-150				
13C2_PFTeDA		53	25-150	Н	59	25-150				
13C3_PFBS		68	25-150	Н	82	25-150				
13C3_PFHxS		79	25-150	Н	85	25-150				
13C3-HFPO-DA		63	25-150	Н	75	25-150				
LOO Limit of Quantitation D. Date in Linit	mathed block	E 0	tion of		d the octions to	n son as	Detection	it	0.0	ants f-"
$L \cup Q = Limit$ or Quantitation B = Detected in the ND = Not detected at or above the DI NI = Recovery is or	e method blank	E = Quantita P = The PPI	Non of compo	ouna exceeder	u ine calibratio	⊓range DL⊧ I_I	= Detection Li	ult < LOO and < DI	Q = Surro	ugate tailu
H = Out of holding time $W = Reported on v$	vet weight basis	. – me kri	- Setween tw			5 - 1			S = MS/M	ISD failur

Client: Pace Analytical Services, LLC						Labo	ratory ID: WH11069-005
Description: MW-4							Matrix: Aqueous
Date Sampled:08/05/2021 1145		Project N	ame: 6255 So	outh	Milwaukee		
Date Received: 08/11/2021		Project Nun	nber: 402313	35			
		_					
Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 Ao % Recovery	cceptance Limits	
13C4_PFBA		46	25-150	Н	51	25-150	
13C4_PFHpA		82	25-150	Н	90	25-150	
13C5_PFHxA		65	25-150	Н	81	25-150	
13C5_PFPeA		55	25-150	Н	62	25-150	
13C6_PFDA		78	25-150	Н	97	25-150	
13C7_PFUdA		66	25-150	Н	85	25-150	
13C8_PFOA		79	25-150	Н	91	25-150	
13C8_PFOS		70	25-150	Н	74	25-150	
13C8_PFOSA		86	10-150	Н	96	10-150	
13C9_PFNA		83	25-150	Н	99	25-150	
d-EtFOSA		48	10-150	Н	60	10-150	
d5-EtFOSAA		72	25-150	Н	80	25-150	
d9-EtFOSE		57	10-150	Н	54	10-150	
d-MeFOSA		49	10-150	Н	66	10-150	
d3-MeFOSAA		82	25-150	Н	100	25-150	
d7-MeFOSE		60	10-150	Н	61	10-150	

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and \ge DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Description MM-3 Mathix: Aqueous Data Sampido B05/201 P07 Project Number: 4223 T35 Event Number: 4223 T35 Run Prog Mothod Analytical Mothod Universe Analytical Number: 4223 T35 Batch 1 SOP SPL PFAS JU IS OF 1 00072021 123 JUS 0007201 123 JUS NU 0 </th <th>Client: Pace Analytical Services, LLC</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>La</th> <th>boratory I</th> <th>D: WH11069-00</th> <th>)6</th> <th></th>	Client: Pace Analytical Services, LLC						La	boratory I	D: WH11069-00)6	
Date Servervier (00111021 Project Number 40231335 Project Number 40231335 Sun Proje Michod 1 Analytical Method PAAS by ID SOP 1 0900/2021 1231 Different Number 4023135 Batch Proje Michod 2 SOP SPL PAAS by ID SOP 1 0900/2021 1231 Different Number 4023135 Batch Praameler CAS Analytical Method Method 1 Number 4023121 Different Number 400221121 Different Number 400221121 Different Number 400221 Parameler Number 40121 Prode View 1 Number 40021121 Different Number 40021 Number 40021 Number 40021 Different Number 40021 Number 40021 <td>Description: MW-3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Matri</td> <td>x: Aqueous</td> <td></td> <td></td>	Description: MW-3							Matri	x: Aqueous		
Date Received 08/11/2021 Proget Number 40231335 Run Preg Method 1 Onlog 10 09/09/2021 221 Pres Duit Sol 0000/2021 1221 Onlog 10 0000/2021 1221 Sol 0000/2021 1221 Sol 0000/2011 100 Sol 0000	Date Sampled:08/05/2021 0915	Projec	ct Name:	6255 South N	lilwauk	ee					
Run Prep Method 1 Analysical Method PFAS by ID SOP Divide 1 Orap Date 09/02/2011 331 Date 0 Date 0 <thdate 0 Date 0 <thdate 0</thdate </thdate 	Date Received:08/11/2021	Project	Number:	40231335							
1 SOP SPE PFAS by ID SOP 1 0902/2021 1231 JJC 0906/2021 1231 JJC 0906/2021 1231 1 0 Parameter CAS MMIDER MMIDER MMIDER MMIDER No 49 0.42 0.11 0.11 No 1 0 0 0.42 0.11 No 9 0.42 0.11 No 49 0.42 0.11 1 No 49 0.42 0.11 1	Run Prep Method Analytical Metho	od Diluti	on Ana	llysis Date A	nalvst	Pren	Date	Batch			
2 SDP SPE PFAS by (D S.OP. 1 0000/0221 2231 LO 0000/0221 1229 14719 Parameter CAS Number Number Number CAS Number Number Number Number Number Number Number Number Number Number Number	1 SOP SPE PFAS by ID S	OP 1	09/0	2/2021 1631	JJG	09/01/2	2021 1309	14070			
Parameter CAS Number Analytical Number Result C LOC MDL Units Reu Parameter	2 SOP SPE PFAS by ID S	OP 1	09/0	9/2021 2231	JJG	09/08/2	2021 1229	14719			
Parameter CAS Analytical Result C LOO MDL Units Run 9-cithcorbacedocationos-3-ourannee-1-sufforic acid (VeLPF30K5) 766426.84 PFAS by DSDP ND 0 0.9 0.42 rpgL 1 11.11, 11, 21, 21 perfunctories sufficie acid (VeLPF30K5) 727019.97.2 PFAS by DSDP ND 0 0.9 0.7.3 1.3 0.01 0 0.9 0.7.3 1.3 0.01 0 0.9 0.7.3 1.3 0.01 0 0.9 0.7.3 1.3 0.01 0 0.9 0.7.3 1.3 0.01 0 0.9 0.7.3 1.3 0.01 0.7.3 0.3 0.0 0.7.9 1.0 0.9 0.7.3 0.3 0.0 0.7.9 0.0 0.7.9 0.0 0.7.9 0.0 0.7.9 0.0 0.7.9 0.0 0.7.9 0.0 0.7.9 0.0 0.7.9 0.0 0.7.9 0.0 0.7.9 0.0 0.7.9 0.0 0.7.9 0.0 0.7.9<											
Characterized Control	Darameter	N	CAS	Analytica	al 1	Docult	0	100	MDI	Unite	Dun
11 charasetsoatilizero 3 caxundreane 3 suttotic acid (2 FTS) 276 (2 FTS)	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9CI-PE3)		426-58-1	PFAS by ID S	DP	ND	Q	6.9	0.42	na/L	1
11, 11, 21, 21, perfunctionations actin (2, 2175) 37(0), 34, 4 PAS by (0, SOP ND 0 6, 9 1, 4 ng1 1 11, 11, 21, 21, perfunctionations submit actin (2, 2175) 27(3), 214, 27, 4 PAS by (0, SOP ND 0 6, 9 1, 8 ng1 1 11, 11, 22, 21, perfunctionations submit actin (2, 2175) 1232, 214, 6 PAS by (0, SOP ND 0 6, 9 1, 8 ng1 1 11, 11, 22, 21, perfunctionationationationationationationationa	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-	PF3) 763	051-92-9	PFAS by ID S	OP	ND		6.9	0.57	ng/L	1
11 H 12 H 2, 21-perfunctoates sufficie acid (2-FTS) 226194-72 PFAS by ID SOP ND HO 7.3 1.8 npL 1 11 H 2H 2, 21-perfunctoates sufficie acid (2+FTS) 1252-13.4 PFAS by ID SOP ND 6.9 0.75 npL 1 4.8 diox3 H perfunctoates sufficie acid (2+GTS) 191005-14.4 PFAS by ID SOP ND 6.9 0.42 ngL 1 1.4 strengt sufficience acid (2+GTSA) 191005-14.4 PFAS by ID SOP ND 6.9 0.42 ngL 1 1.4 strengt sufficience acid (2+GTSA) 2911-56.2 PFAS by ID SOP ND 6.9 0.42 ngL 1 2.4 hethyperfluoro 1-octanesulforamidacetic acid (2+GTSA) 3156-32.8 PFAS by ID SOP ND 6.9 0.40 ngL 1 2.4 hethyperfluoro 1-octanesulforamidacetic acid (2+GTSA) 2385-31.9 PFAS by ID SOP ND 6.9 0.40 0.60 0.75 ngL 1 2.4 hethyperfluoro 1-octanesulforamidacetic acid (2+FDS) 375-75 PFAS by ID SOP ND 3.4 0.4 0.61 ngL 1 Perfluoro 1-octanesulforic acid (2+FDS) 577-75 PFAS	1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	, 39	108-34-4	PFAS by ID S	OP	ND	Q	6.9	1.4	ng/L	1
1111122141 perfusion axide dimer addi (dep TFS) 157124 2/24 PFAS by 10 SOP ND 0 6.9 0.75 mg1 1 Hexathuoroprophene axide dimer addi (GED CA) 1700521144 PFAS by 10 SOP ND 6.9 0.42 mg1 1 Neuthyperhuoro-1-actanesuffamamida (EFI COS A) 1515-50-2 PFAS by 10 SOP ND 6.9 0.42 mg1 1 2 N ethyperhuoro-1-actanesuffamamida cells and (MeTO SA) 1515-50-2 PFAS by 10 SOP ND 6.9 0.42 mg1 1 N ethyperhuoro-1-actanesuffamamida cells and (MeTO SA) 13505-32.8 PFAS by 10 SOP ND 6.9 0.40 mg1 1 N ethyperhuoro-1-actanesuffamamida (MeTO SA) 2248-37.9 PFAS by 10 SOP ND 6.9 1.1 mg1 1 Perhuro-1-bacenesuffonk and (MeTO SA) 2348-37.7.8 PFAS by 10 SOP ND 3.4 0.61 mg1 1 Perhuro-1-bacenesuffonk and (MeTO SA) 3357.7.8 PFAS by 10 SOP ND 3.4 0.61 mg1 1 Perhuro-1-bacenesuffonk and (MeTO SA) 754.94 PFAS by 10 SOP ND 3.4 0.61 mg	1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27	619-97-2	PFAS by ID S	OP	ND	HQ	7.3	1.8	ng/L	2
Hexafluoroproproproproproduce oxide dimer add (GenX) 1322-13.6 PTAS by 10 SOP ND 6.9 1.8 ng1L 1 4.8-docas 3H-perfuturionmanic add (ADD(NA) 4150-52 PTAS by 10 SOP ND 6.9 0.42 ng1L 1 Neethyperfuturo-1-octanesultonamidacellic add (EFICSA) 4250-522 PTAS by 10 SOP ND 6.9 0.65 ng1L 1 Neethyperfuturo-1-octanesultonamidacellic add (EFICSA) 31506-32.8 PFAS by 10 SOP ND 6.9 0.66 ng1L 1 Nmethyperfuturo-1-octanesultonamidacellic add (MFICSA) 31506-32.8 PFAS by 10 SOP ND 6.9 0.80 ng1L 1 Nmethyperfuturo-1-octanesultonamidacellic add (MFICSA) 2355-31-9 PFAS by 10 SOP ND 6.9 0.80 ng1L 1 Perfuturo-1-butanesultonamidacellic add (MFICSA) 2375-73-5 PFAS by 10 SOP ND 3.4 0.43 ng1L 1 Perfuturo-1-butanesultonamidacellic add (PFIAS) 7375-73-5 PFAS by 10 SOP ND 3.4 0.41 ng1L 1 Perfuturo-1-butanesultona add (PFIAS) 7375-73-5 PFAS by 10 SOP ND 3.4	1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757	124-72-4	PFAS by ID S	OP	ND	Q	6.9	0.75	ng/L	1
4.8 dixe 341-perturnon-anotic add (ADDN) 979005-14.4 PFAS by ID SOP ND 6.9 0.42 ngL 1 Nethyperturno-1-actimesufformatide (EFOSA) 41515-02 PFAS by ID SOP ND 6.9 0.62 ngL 1 2.N ethyperturno-1-actimesufformatide (MFOSA) 1911 902 PFAS by ID SOP ND 6.9 0.62 ngL 1 2.N ethyperturno-1-actimesufformatide (MFOSA) 2356-31 PFAS by ID SOP ND 6.9 0.80 ngL 1 N-methyperturno-1-actimesufformatide (MFOSA) 2358-31 PFAS by ID SOP ND 6.9 0.80 ngL 1 Perturo-1-batanesufformatide (MFOSA) 2358-317.3 PFAS by ID SOP ND 3.4 0.61 ngL 1 Perturo-1-batanesufformatide (PFDS) 33577.3 PFAS by ID SOP ND 3.4 0.61 ngL 1 Perturo-1-batanesufformatide (PFDS) 2326-91-14 PFAS by ID SOP ND 3.4 0.61 ngL 1 Perturo-1-batanesufformatide (PFDS) 2726-91-14 PFAS by ID SOP ND 3.4 0.61 ngL 1 Perturo-1-bat	Hexafluoropropylene oxide dimer acid (GenX)	13	252-13-6	PFAS by ID S	OP	ND		6.9	1.8	ng/L	1
N=Hylperfluoro-1 octanesultanamidae (EFOSA) 4151 50-2 PFAS by ID SOP ND 6.9 1.2 ng/t 1 N=Hylperfluoro-1-octanesultanamidaeutar ad (EFOSA) 2091-56.4 PFAS by ID SOP ND 6.9 0.65 ng/t 1 N=methylperfluoro-1-octanesultanamidaeutar ad (EFOSA) 3130-324 PFAS by ID SOP ND 6.9 0.80 ng/t 1 N=methylperfluoro-1-octanesultanamidaeutar ad (MeFOSA) 3130-324 PFAS by ID SOP ND 6.9 0.80 ng/t 1 N=methylperfluoro-1-octanesultanamidaeutar add (MeFOSA) 3130-324 PFAS by ID SOP ND 6.9 0.80 ng/t 1 Perfluoro-1-octanesultanamidaeutar add (PFBS) 3175-73 PFAS by ID SOP ND 3.4 0.34 ng/t 1 Perfluoro-1-octanesultanamidaeutar (PFDS) 375-73 PFAS by ID SOP ND 3.4 0.61 ng/t 1 Perfluoro-1-octanesultanamidaeutar add (PFNS) 375-924 PFAS by ID SOP ND 4.0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919	005-14-4	PFAS by ID S	OP	ND		6.9	0.42	ng/L	1
N=Harpiperhance-1-octanesultanumidao-athana (EFOSA) 2991-50-4 PFAS by ID SOP ND 6.9 0.65 ngL 1 2-N=Hylperhance-1-octanesultanumidao-athana (M=OSE) 1091-99-2 PFAS by ID SOP ND 6.9 0.82 ngL 1 N=methylperhance-1-octanesultanumidao-athana (M=OSE) 2456-319 PFAS by ID SOP ND 6.9 0.80 ngL 1 2-N-methylperhance-1-octanesultanumidao-athana (M=FOSE) 2456-319 PFAS by ID SOP ND 6.9 0.61 ngL 1 2-N-methylperhance-1-octanesultanumidao-athana (M=FOSE) 2446-80-7 PFAS by ID SOP ND 3.4 0.67 ngL 1 Perhance-1-balanesultanic add (PFBS) 535-73 PFAS by ID SOP ND 3.4 0.61 ngL 1 Perhance-1-ensultanic add (PFBS) 592-89 PFAS by ID SOP ND 3.4 0.61 ngL 1 Perhance-1-ensultanic add (PFBS) 754-94 PFAS by ID SOP ND 3.4 0.61 ngL 1 Perhance-1-ensultanic add (PFBA) 754-94 PFAS by ID SOP ND 3.4 0.61 ngL 1	N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4	151-50-2	PFAS by ID S	OP	ND		6.9	1.2	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido ethanol (EIFOSE) 1691-99-2 PFAS by ID SOP ND 6.9 0.82 ngl. 1 N methylperfluoro 1-octanesulfonamido ethanol (MeFOSA) 31506 32.8 PFAS by ID SOP ND 6.9 0.80 ngl. 1 2-N-methylperfluoro 1-octanesulfonamido-ethanol (MeFOSA) 355-319 PFAS by ID SOP ND 6.9 0.80 ngl. 1 2-N-methylperfluoro 1-octanesulfonamido-ethanol (MeFOSA) 355-73 PFAS by ID SOP ND 3.4 0.61 ngl. 1 Perfluoro 1-ottanesulfonamido ethanol (MEFOS) 335-77.3 PFAS by ID SOP ND 3.4 0.41 ngl. 1 Perfluoro 1-ottanesulfonamido (PFNS) 52591-21 PFAS by ID SOP ND 3.4 0.41 ngl. 1 Perfluoro 1-ottanesulfonamido (PFNS) 2706-914 PFAS by ID SOP ND 3.4 0.53 ngl. 1 Perfluoro-1-ottanesulfonamido (PFNS) 355-644 PFAS by ID SOP ND 3.4 0.43 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.34 0.52 ngl. 1 <t< td=""><td>N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)</td><td>2</td><td>991-50-6</td><td>PFAS by ID S</td><td>OP</td><td>ND</td><td></td><td>6.9</td><td>0.65</td><td>ng/L</td><td>1</td></t<>	N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2	991-50-6	PFAS by ID S	OP	ND		6.9	0.65	ng/L	1
Nmethylperfluoro-1-octanesulfonamide (MeFOSA) 31506-32-8 PFAS by ID SOP ND 14 1.1 ngL 1 Nmethylperfluoro-1-octanesulfonamido-ethane (MeFOSA) 2355-319 PFAS by ID SOP ND 6.9 0.80 ngL 1 Perfluoro-1-baceasulfonic acid (PFDS) 335-77-3 PFAS by ID SOP ND 3.4 0.36 ngL 1 Perfluoro-1-decanesulfonic acid (PFDS) 335-77-3 PFAS by ID SOP ND 3.4 0.43 ngL 1 Perfluoro-1-decanesulfonic acid (PFDS) 325-77-3 PFAS by ID SOP ND 3.4 0.61 ngL 1 Perfluoro-1-decanesulfonic acid (PFDS) 68259-121 PFAS by ID SOP ND 3.4 0.61 ngL 1 Perfluoro-1-opentanesulfonic acid (PFDS) 79780-35 PFAS by ID SOP ND 3.4 0.61 ngL 1 Perfluoro-n-decanesulfonic acid (PFDA) 375-22 PFAS by ID SOP ND 3.4 0.51 ngL 1 Perfluoro-n-decanoic acid (PFDA) 375-25 PFAS by ID SOP ND	2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1	691-99-2	PFAS by ID S	OP	ND		6.9	0.82	ng/L	1
N-methylperfluoro-1-octanesulfonamid-oculic acid (MeFOSA) 2355-31-9 PFAS by ID SOP ND 6.9 0.80 ngl. 1 2-N-methylperfluoro-1-octanesulfonamid-oculic acid (PFDS) 335.77.3 PFAS by ID SOP ND 6.9 0.80 ngl. 1 Perfluoro-1-decanesulfonic acid (PFDS) 335.77.3 PFAS by ID SOP ND 3.4 0.67 ngl. 1 Perfluoro-1-decanesulfonic acid (PFNS) 335.77.3 PFAS by ID SOP ND 3.4 0.61 ngl. 1 Perfluoro-1-octanesulfonic acid (PFNS) 754.91.6 PFAS by ID SOP ND 3.4 0.63 ngl. 1 Perfluoro-1-octanesulfonic acid (PFNS) 2706.91.4 PFAS by ID SOP ND 6.9 0.90 ngl. 1 Perfluoro-n-octanesulfonic acid (PFNS) 2706.91.4 PFAS by ID SOP ND 6.9 0.90 ngl. 1 Perfluoro-n-octanesulfonic acid (PFNS) 355.46.4 PFAS by ID SOP ND 3.4 0.48 0.91 1 Perfluoro-n-octanesulfonic acid (PFNA) 375.75.5 PFAS by ID SOP ND 3.4 0.41 ngl. 1	N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31	506-32-8	PFAS by ID S	OP	ND		14	1.1	ng/L	1
2-N-methylperfluoro 1-octanesulfona mido-ethanol (MeFOSE) 24448-09-7 PFAS by ID SOP ND 6.9 1.1 ng/L 1 Perfluoro 1-butanesulfonic acid (PFDS) 375-73-5 PFAS by ID SOP ND 3.4 0.36 ng/L 1 Perfluoro 1-butanesulfonic acid (PFDS) 375-73-5 PFAS by ID SOP ND 3.4 0.43 ng/L 1 Perfluoro 1-butanesulfonic acid (PFDS) 68259-12-1 PFAS by ID SOP ND 3.4 0.43 ng/L 1 Perfluoro 1-butanesulfonic acid (PFDS) 68259-12-1 PFAS by ID SOP ND 3.4 0.61 ng/L 1 Perfluoro 1-butanesulfonic acid (PFDOS) 79760-39-5 PFAS by ID SOP ND 3.4 0.61 ng/L 1 Perfluoro-hotanesulfonic acid (PFDA) 355-46-4 PFAS by ID SOP ND 3.4 0.48 ng/L 1 Perfluoro-notanol acid (PFDA) 355-46-4 PFAS by ID SOP ND 3.4 0.41 ng/L 1 Perfluoro-notanol acid (PFDA) 375-85-1 PFAS by ID SOP ND <td>N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOS/</td> <td>A) 2</td> <td>355-31-9</td> <td>PFAS by ID S</td> <td>OP</td> <td>ND</td> <td></td> <td>6.9</td> <td>0.80</td> <td>ng/L</td> <td>1</td>	N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOS/	A) 2	355-31-9	PFAS by ID S	OP	ND		6.9	0.80	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS) 375-73-5 PFAS by ID SOP 17 3.4 0.36 ng1L 1 Perfluoro-1-decanesulfonic acid (PFDS) 335-77-3 PFAS by ID SOP ND 3.4 0.67 ng1L 1 Perfluoro-1-decanesulfonic acid (PFHpS) 535-77-3 PFAS by ID SOP ND 3.4 0.61 ng1L 1 Perfluoro-1-decanesulfonic acid (PFHpS) 64259-12-1 PFAS by ID SOP ND 3.4 0.61 ng1L 1 Perfluoro-1-decanesulfonic acid (PFDS) 726-974 PFAS by ID SOP ND 3.4 0.61 ng1L 1 Perfluoro-1-decanesulfonic acid (PFDS) 77960-39-5 PFAS by ID SOP ND 3.4 0.45 ng1L 1 Perfluoro-necanesulfonic acid (PFDA) 335-76-2 PFAS by ID SOP ND 3.4 0.45 ng1L 1 Perfluoro-necanesulfonic acid (PFDA) 335-75-2 PFAS by ID SOP ND 3.4 0.41 ng1L 1 Perfluoro-nechanic acid (PFDA) 335-75-1 PFAS by ID SOP ND	2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE) 24	448-09-7	PFAS by ID S	OP	ND		6.9	1.1	na/L	1
Perfluoro-1-decanesulfonic acid (PFDS) 335-77.3 PFAS by ID SOP ND 3.4 0.67 ng/L 1 Perfluoro-1-heplanesulfonic acid (PFNS) 375-92.8 PFAS by ID SOP ND 3.4 0.43 ng/L 1 Perfluoro-1-heplanesulfonic acid (PFNS) 66259-12.1 PFAS by ID SOP ND 3.4 0.41 ng/L 1 Perfluoro-1-pentanesulfonic acid (PFDSA) 754-91.6 PFAS by ID SOP ND 3.4 0.51 ng/L 1 Perfluoro-1-pentanesulfonic acid (PFDSA) 79780-39.5 PFAS by ID SOP ND 6.9 0.90 ng/L 1 Perfluoro-n-betanesulfonic acid (PFDA) 335-64 PFAS by ID SOP ND 3.4 0.45 ng/L 1 Perfluoro-n-beptanoic acid (PFDA) 3375-62 PFAS by ID SOP ND 3.4 0.41 ng/L 1 Perfluoro-n-beptanoic acid (PFDA) 3375-52 PFAS by ID SOP ND 3.4 0.41 ng/L 1 Perfluoro-n-beptanoic acid (PFDA) 375-55 PFAS by ID SOP ND 3.4<	Perfluoro-1-butanesulfonic acid (PFBS)	,	375-73-5	PFAS by ID S	SOP	17		3.4	0.36	ng/L	1
Perfluoro-1-heptanesullonic acid (PFHpS) 375-92-8 PFAS by ID SOP ND 3.4 0.43 ng/L 1 Perfluoro-1-nonanesullonic acid (PFHpS) 64259-121 PFAS by ID SOP ND 3.4 0.61 ng/L 1 Perfluoro-1-pentanesullonic acid (PFPOS) 756-91-6 PFAS by ID SOP ND 3.4 0.51 ng/L 1 Perfluoro-1-pentanesullonic acid (PFDOS) 7780-91-6 PFAS by ID SOP ND 6.9 0.90 ng/L 1 Perfluoro-nesultonic acid (PFDA) 335-76-2 PFAS by ID SOP 3.4 0.43 0.92 ng/L 1 Perfluoro-n-decanoic acid (PFDA) 337-75-2 PFAS by ID SOP ND 3.4 0.43 0.92 ng/L 1 Perfluoro-n-beptanoic acid (PFDA) 337-75-2 PFAS by ID SOP ND 3.4 0.41 ng/L 1 Perfluoro-n-beptanoic acid (PFDA) 375-95-1 PFAS by ID SOP ND 3.4 0.40 ng/L 1 Perfluoro-n-pentanoic acid (PFDA) 375-95-1 PFAS by ID SOP ND	Perfluoro-1-decanesulfonic acid (PFDS)		335-77-3	PFAS by ID S	OP	ND		3.4	0.67	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS) 68259-12-1 PFAS by ID SOP ND 3.4 0.61 ng/L 1 Perfluoro-1-octanesulfonic acid (PFNS) 754.91.6 PFAS by ID SOP ND 4.4 0.51 ng/L 1 Perfluoro-1-pentanesulfonic acid (PFDOS) 7780.91.95 PFAS by ID SOP ND 6.9 0.90 ng/L 1 Perfluoro-n-butanesulfonic acid (PFDAS) 355-46.4 PFAS by ID SOP ND 6.9 0.90 ng/L 1 Perfluoro-n-butanoic acid (PFDA) 375-52.2 PFAS by ID SOP 7.1 3.4 0.45 ng/L 1 Perfluoro-n-decanoic acid (PFDA) 375-52.9 PFAS by ID SOP 10 J 3.4 0.45 ng/L 1 Perfluoro-n-betanoic acid (PFDA) 375-51 PFAS by ID SOP 10 J 3.4 0.41 ng/L 1 Perfluoro-n-betanoic acid (PFDA) 375-95-1 PFAS by ID SOP 20 3.4 0.40 ng/L 1 Perfluoro-n-otacianoic acid (PFDA) 376-06-7 PFAS by ID SOP <	Perfluoro-1-heptanesulfonic acid (PFHpS)		375-92-8	PFAS by ID S	OP	ND		3.4	0.43	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA) 754-91-6 PFAS by ID SOP 4.2 3.4 0.53 ng/L 1 Perfluoro-1-pertlanesulfonic acid (PFDOS) 7764-91-6 PFAS by ID SOP ND 3.4 0.51 ng/L 1 Perfluoro-1-pertlanesulfonic acid (PFDOS) 77780-39-5 PFAS by ID SOP ND 6.9 0.90 ng/L 1 Perfluoro-n-butanoic acid (PFDA) 335-76-2 PFAS by ID SOP ND 0.4 0.52 ng/L 1 Perfluoro-n-butanoic acid (PFDA) 335-76-2 PFAS by ID SOP ND 3.4 0.45 ng/L 1 Perfluoro-n-betanoic acid (PFDA) 335-76-2 PFAS by ID SOP ND 3.4 0.45 ng/L 1 Perfluoro-n-heptanoic acid (PFDA) 337-754-5 PFAS by ID SOP ND 3.4 0.40 ng/L 1 Perfluoro-n-heptanoic acid (PFNA) 375-95-1 PFAS by ID SOP 2.2 3.4 0.40 ng/L 1 Perfluoro-n-pertanoic acid (PFNA) 376-67-7 PFAS by ID SOP 2.0 3.4 0.47 ng/L 1 Perfluoro-n-pertanoic acid (PFNA) <t< td=""><td>Perfluoro-1-nonanesulfonic acid (PFNS)</td><td>68</td><td>259-12-1</td><td>PFAS by ID S</td><td>OP</td><td>ND</td><td></td><td>3.4</td><td>0.61</td><td>na/L</td><td>1</td></t<>	Perfluoro-1-nonanesulfonic acid (PFNS)	68	259-12-1	PFAS by ID S	OP	ND		3.4	0.61	na/L	1
Perfluoro 1. pentanesulfonic acid (PFPes) 2706-91-4 PFAS by ID SOP ND 3.4 0.51 ng/L 1 Perfluoro 1. decid (PFPes) 355-464 PFAS by ID SOP ND 6.9 0.90 ng/L 1 Perfluoro-n-butancic acid (PFBA) 355-464 PFAS by ID SOP 7.1 3.4 0.48 ng/L 1 Perfluoro-n-decanolic acid (PFDA) 335-76-2 PFAS by ID SOP 1.0 J 3.4 0.41 ng/L 1 Perfluoro-n-decanolic acid (PFDA) 335-76-2 PFAS by ID SOP 1.0 J 3.4 0.41 ng/L 1 Perfluoro-n-hecanolic acid (PFIDA) 375-85-1 PFAS by ID SOP 1.5 3.4 0.43 ng/L 1 Perfluoro-n-nonanolic acid (PFIDA) 375-85-1 PFAS by ID SOP 1.5 3.4 0.40 ng/L 1 Perfluoro-n-nonanolic acid (PFIDA) 375-85-1 PFAS by ID SOP 9.6 3.4 0.41 ng/L 1 Perfluoro-n-nonanolic acid (PFIDA) 375-85-1 PFAS by ID SOP 9.6 3.4 0.40 ng/L 1 Perfluoro-n-ticradecanolic	Perfluoro-1-octanesulfonamide (PFOSA)		754-91-6	PFAS by ID S	SOP	4.2		3.4	0.53	na/L	1
Perfluoronic acid (PFDQ) 19780-39-5 PFAS by ID SOP ND 6.9 0.90 ng/L 1 Perfluoronexanesulfonic acid (PFDA) 355-46-4 PFAS by ID SOP 7.1 3.4 0.45 ng/L 1 Perfluoron-decancic acid (PFDA) 335-76-2 PFAS by ID SOP 7.1 3.4 0.45 ng/L 1 Perfluoron-decancic acid (PFDA) 3375-76-2 PFAS by ID SOP ND 3.4 0.41 ng/L 1 Perfluoron-n-decancic acid (PFDA) 307-55-1 PFAS by ID SOP ND 3.4 0.41 ng/L 1 Perfluoro-n-heptancic acid (PFHAA) 307-54-1 PFAS by ID SOP 15 3.4 0.59 ng/L 1 Perfluoro-n-nonancic acid (PFNA) 375-67-1 PFAS by ID SOP 2.0 3.4 0.40 ng/L 1 Perfluoro-n-pentancic acid (PFNA) 375-67-1 PFAS by ID SOP 2.0 3.4 0.47 ng/L 1 Perfluoro-n-pentancic acid (PFDA) 375-67-1 PFAS by ID SOP 2.0 3.4 0.47 <t< td=""><td>Perfluoro-1-pentanesulfonic acid (PFPeS)</td><td>2</td><td>706-91-4</td><td>PFAS by ID S</td><td>OP</td><td>ND</td><td></td><td>3.4</td><td>0.51</td><td>na/L</td><td>1</td></t<>	Perfluoro-1-pentanesulfonic acid (PFPeS)	2	706-91-4	PFAS by ID S	OP	ND		3.4	0.51	na/L	1
Perfluorbasedesultonic acid (PFbA) 375-86-4 PFAS by ID SOP 7.1 3.4 0.48 ng/L 1 Perfluoro-n-butanoic acid (PFDA) 335-76-2 PFAS by ID SOP 3.4 0.42 ng/L 1 Perfluoro-n-decanoic acid (PFDA) 335-76-2 PFAS by ID SOP 1.0 J 3.4 0.45 ng/L 1 Perfluoro-n-decanoic acid (PFDA) 335-76-2 PFAS by ID SOP 1.0 J 3.4 0.41 ng/L 1 Perfluoro-n-decanoic acid (PFHA) 375-85-1 PFAS by ID SOP 2.5 3.4 0.39 ng/L 1 Perfluoro-n-nonanoic acid (PFHA) 375-85-1 PFAS by ID SOP 2.2 J 3.4 0.40 ng/L 1 Perfluoro-n-pentancic acid (PFNA) 375-65-1 PFAS by ID SOP 2.0 3.4 0.47 ng/L 1 Perfluoro-n-tertadecanoic acid (PFNA) 2706-90-3 PFAS by ID SOP ND 3.4 0.47 ng/L 1 Perfluoro-n-indecanoic acid (PFNA) 2706-90-3 PFAS by ID SOP ND 3.4 0.46 ng/L 1 Perfluoro-n-indecanoic acid (Perfluorododecanesulfonic acid (PEDOS)	- 79	780-39-5	PFAS by ID S	OP	ND		6.9	0.90	na/L	1
Perfluoron-butanoic acid (PFBA) 375-22-4 PFAS by ID SOP 34 Q 3.4 0.52 ng/L 1 Perfluoron-decanoic acid (PFDA) 335-76-2 PFAS by ID SOP ND 3.4 0.45 ng/L 1 Perfluoron-hebranoic acid (PFDA) 307-55-1 PFAS by ID SOP ND 3.4 0.41 ng/L 1 Perfluoron-hebranoic acid (PFHA) 307-56-7 PFAS by ID SOP 15 3.4 0.59 ng/L 1 Perfluoron-neheranoic acid (PFHA) 375-85-7 PFAS by ID SOP 15 3.4 0.59 ng/L 1 Perfluoron-nehanoic acid (PFNA) 375-95-1 PFAS by ID SOP 2.2 J 3.4 0.40 ng/L 1 Perfluoron-nehanoic acid (PFOA) 376-6-7 PFAS by ID SOP ND 3.4 0.47 ng/L 1 Perfluoron-nehanoic acid (PFDA) 2058-94-8 PFAS by ID SOP ND 3.4 0.54 ng/L 1 Perfluoron-nudecanoic acid (PFDA) 2058-94-8 PFAS by ID SOP ND 3.4 0.54 ng/L 1 Perfluoron-nudecanoic acid (PFDS) <t< td=""><td>Perfluorohexanesulfonic acid (PFHxS)</td><td></td><td>355-46-4</td><td>PFAS by ID S</td><td>SOP</td><td>7.1</td><td></td><td>3.4</td><td>0.48</td><td>na/L</td><td>1</td></t<>	Perfluorohexanesulfonic acid (PFHxS)		355-46-4	PFAS by ID S	SOP	7.1		3.4	0.48	na/L	1
Perfluoro-n-decanoic acid (PFDA) 335-76-2 PFAS by ID SOP 1.0 J 3.4 0.45 ng/L 1 Perfluoro-n-decanoic acid (PFDA) 307-55-1 PFAS by ID SOP 25 3.4 0.39 ng/L 1 Perfluoro-n-heptanoic acid (PFHAA) 307-54-4 PFAS by ID SOP 25 3.4 0.40 ng/L 1 Perfluoro-n-nonanoic acid (PFHAA) 307-24-4 PFAS by ID SOP 2.2 J 3.4 0.40 ng/L 1 Perfluoro-n-nonanoic acid (PFDA) 335-67-1 PFAS by ID SOP 2.2 J 3.4 0.40 ng/L 1 Perfluoro-n-octanoic acid (PFDA) 335-67-7 PFAS by ID SOP 2.0 3.4 0.47 ng/L 1 Perfluoro-n-tetradecanoic acid (PFDA) 376-06-7 PFAS by ID SOP ND 3.4 0.46 ng/L 1 Perfluoro-n-undecanoic acid (PFTDA) 726-20-94-8 PFAS by ID SOP ND 3.4 0.46 ng/L 1 Perfluoro-n-undecanoic acid (PFUA) 2058-94-8 PFAS by ID SOP ND 3.4 0.40 ng/L 1 1302_6-2	Perfluoro-n-butanoic acid (PFBA)		375-22-4	PFAS by ID S	SOP	34	Q	3.4	0.52	ng/L	1
Perfluoro-n-dodecanoic acid (PFDA) 307:55:1 PFAS by ID SOP ND 3.4 0.41 ng/L 1 Perfluoro-n-heptanoic acid (PFHpA) 375:85:9 PFAS by ID SOP 25 3.4 0.39 ng/L 1 Perfluoro-n-heptanoic acid (PFHpA) 307:24:4 PFAS by ID SOP 22 J 3.4 0.40 ng/L 1 Perfluoro-n-bexanoic acid (PFNA) 335:67:1 PFAS by ID SOP 22 J 3.4 0.40 ng/L 1 Perfluoro-n-octanoic acid (PFNA) 335:67:1 PFAS by ID SOP 22 J 3.4 0.40 ng/L 1 Perfluoro-n-patanoic acid (PFNA) 2056:90:3 PFAS by ID SOP 20 3.4 0.47 ng/L 1 Perfluoro-n-tridecanoic acid (PFTDA) 7262:9:48 PFAS by ID SOP ND 3.4 0.46 ng/L 1 Perfluoro-n-tridecanoic acid (PFUA) 2058:9:48 PFAS by ID SOP ND 3.4 0.54 ng/L 1 Perfluoro-n-tridecanoic acid (PFUA) 2058:9:48 PFAS by ID SOP	Perfluoro-n-decanoic acid (PFDA)		335-76-2	PFAS by ID S	SOP	1.0	J	3.4	0.45	ng/L	1
Perfluoro-n-heptanoic acid (PFHzA) 375-85-9 PFAS by ID SOP 25 3.4 0.39 ng/L 1 Perfluoro-n-hexanoic acid (PFHxA) 307-24-4 PFAS by ID SOP 1 3.4 0.40 ng/L 1 Perfluoro-n-nonanoic acid (PFNA) 335-85-1 PFAS by ID SOP 2.2 J 3.4 0.40 ng/L 1 Perfluoro-n-catanoic acid (PFNA) 335-67-1 PFAS by ID SOP 2.2 J 3.4 0.40 ng/L 1 Perfluoro-n-pentanoic acid (PFOA) 335-67-1 PFAS by ID SOP 9.0 3.4 0.47 ng/L 1 Perfluoro-n-tetradecanoic acid (PFTDA) 2706-90-3 PFAS by ID SOP ND ND 4.4 0.46 ng/L 1 Perfluoro-n-tetradecanoic acid (PFUdA) 2058-94-8 PFAS by ID SOP ND 3.4 0.46 ng/L 1 Perfluoro-n-undecanoic acid (PFUdA) 2058-94-8 PFAS by ID SOP ND 3.4 0.54 ng/L 1 Perfluoro-n-undecanoic acid (PFUGA) 2058-94-8 PFAS by ID SOP ND 3.4 0.54 ng/L 1	Perfluoro-n-dodecanoic acid (PFDoA)		307-55-1	PFAS by ID S	OP	ND		3.4	0.41	ng/L	1
Perfluoro-n-hexanoic acid (PFNA) 307-24-4 PFAS by ID SOP 15 3.4 0.59 ng/L 1 Perfluoro-n-nonanoic acid (PFNA) 375-95-1 PFAS by ID SOP 2.2 J 3.4 0.40 ng/L 1 Perfluoro-n-noctanoic acid (PFOA) 335-67-1 PFAS by ID SOP 9.6 3.4 0.47 ng/L 1 Perfluoro-n-pentanoic acid (PFTeDA) 375-06-7 PFAS by ID SOP 20 3.4 0.47 ng/L 1 Perfluoro-n-tetradecanoic acid (PFTeDA) 376-06-7 PFAS by ID SOP ND ND 0.46 ng/L 1 Perfluoro-n-tetradecanoic acid (PFTeDA) 72629-94.8 PFAS by ID SOP ND 3.4 0.46 ng/L 1 Perfluoro-n-tedecanoic acid (PFTeDA) 72629-94.8 PFAS by ID SOP ND 3.4 0.54 ng/L 1 Perfluoro-n-tedecanoic acid (PFOS) 1763-23.1 PFAS by ID SOP ND 3.4 0.54 ng/L 1 13C2_4:2FTS N 199 25.150 HN 219	Perfluoro-n-heptanoic acid (PFHpA)		375-85-9	PFAS by ID S	SOP	25		3.4	0.39	ng/L	1
Perfluoron-n-nonanoic acid (PFNA) 375-95-1 PFAS by ID SOP 2.2 J 3.4 0.40 ng/L 1 Perfluoron-n-octanoic acid (PFOA) 335-67-1 PFAS by ID SOP 9.6 3.4 0.71 ng/L 1 Perfluoron-n-tetradecanoic acid (PFTeDA) 376-06-7 PFAS by ID SOP 20 3.4 0.47 ng/L 1 Perfluoron-n-tetradecanoic acid (PFTeDA) 376-06-7 PFAS by ID SOP ND N 0.46 ng/L 1 Perfluoron-n-tetradecanoic acid (PFTDA) 72629-94-8 PFAS by ID SOP ND 3.4 0.46 ng/L 1 Perfluoron-nudecanoic acid (PFUdA) 2058-94-8 PFAS by ID SOP ND 3.4 0.46 ng/L 1 Perfluoron-nudecanoic acid (PFUdA) 1763-23-1 PFAS by ID SOP ND 3.4 0.46 ng/L 1 Perfluoro-n-udecanoic acid (PFUdA) 163-23-1 PFAS by ID SOP ND 3.4 0.46 ng/L 1 1302_e1:75 N 199 25-150 HN 21	Perfluoro-n-hexanoic acid (PFHxA)		307-24-4	PFAS by ID S	SOP	15		3.4	0.59	na/L	1
Perfluoro-n-octanoic acid (PFPeA) 335-67-1 PFAS by ID SOP 9.6 3.4 0.71 ng/L 1 Perfluoro-n-pentanoic acid (PFTeA) 2706-90-3 PFAS by ID SOP 20 3.4 0.47 ng/L 1 Perfluoro-n-tetradecanoic acid (PFTeDA) 376-06-7 PFAS by ID SOP ND HQ 3.6 0.55 ng/L 2 Perfluoro-n-tetradecanoic acid (PFTDA) 72629-94-8 PFAS by ID SOP ND A.4 0.46 ng/L 1 Perfluoro-n-undecanoic acid (PFUdA) 2058-94-8 PFAS by ID SOP ND 3.4 0.46 ng/L 1 Perfluoro-n-undecanoic acid (PFOS) 1763-23-1 PFAS by ID SOP ND 3.4 0.54 ng/L 1 Surrogate Q Run 1 Acceptance Limits Run 2 Acceptance % Recovery Limits Limits 1 1 13C2_4:2FTS N 199 25-150 HN 219 25-150 1 1 1 13C2_9:2FTS N 182 25-150 HN 23 25-150 1 32 25-150 1 <t< td=""><td>Perfluoro-n-nonanoic acid (PFNA)</td><td></td><td>375-95-1</td><td>PFAS by ID S</td><td>SOP</td><td>2.2</td><td>J</td><td>3.4</td><td>0.40</td><td>na/L</td><td>1</td></t<>	Perfluoro-n-nonanoic acid (PFNA)		375-95-1	PFAS by ID S	SOP	2.2	J	3.4	0.40	na/L	1
Perfluoro-n-pentanoic acid (PFPeA) 2706-90-3 PFAS by ID SOP 20 3.4 0.47 ng/L 1 Perfluoro-n-tetradecanoic acid (PFTeDA) 376-06-7 PFAS by ID SOP ND 4.4 0.46 ng/L 1 Perfluoro-n-tridecanoic acid (PFTrDA) 72629-94-8 PFAS by ID SOP ND 3.4 0.46 ng/L 1 Perfluoro-n-undecanoic acid (PFUdA) 2058-94-8 PFAS by ID SOP ND 3.4 0.54 ng/L 1 Perfluoro-n-undecanoic acid (PFUdA) 2058-94-8 PFAS by ID SOP ND 3.4 0.54 ng/L 1 Perfluoro-n-undecanoic acid (PFUdA) 2058-94-8 PFAS by ID SOP ND 3.4 0.54 ng/L 1 Perfluoro-n-undecanoic acid (PFOS) 1763-23-1 PFAS by ID SOP ND 3.4 0.54 ng/L 1 13C2_4:2FTS N 199 25-150 HN 219 25-150 1372 25-150 1372 25-150 1372 25-150 1372 25-150 1372 25-150 1372 25-150 1372 25-150 1372 25-150 <t< td=""><td>Perfluoro-n-octanoic acid (PFOA)</td><td></td><td>335-67-1</td><td>PFAS by ID S</td><td>SOP</td><td>9.6</td><td></td><td>3.4</td><td>0.71</td><td>na/L</td><td>1</td></t<>	Perfluoro-n-octanoic acid (PFOA)		335-67-1	PFAS by ID S	SOP	9.6		3.4	0.71	na/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA) 376-06-7 PFAS by ID SOP ND HQ 3.6 0.55 ng/L 2 Perfluoro-n-tridecanoic acid (PFTrDA) 72629-94-8 PFAS by ID SOP ND 3.4 0.46 ng/L 1 Perfluoro-n-undecanoic acid (PFUdA) 2058-94-8 PFAS by ID SOP ND 3.4 0.54 ng/L 1 Perfluoro-n-undecanoic acid (PFOS) 1763-23-1 PFAS by ID SOP ND 3.4 0.54 ng/L 1 Surrogate Q % Recovery Limits Q % Recovery Limits 1 1 13C2_4:2FTS N 199 25-150 HN 219 25-150 1 1 1 13C2_6:2FTS N 182 25-150 HN 225 25-150 1 1 25-150 1	Perfluoro-n-pentanoic acid (PEPeA)	2	706-90-3	PFAS by ID S	SOP	20		3.4	0.47	na/L	1
Perfluoro-n-tridecanoic acid (PFTrDA) 72629-94-8 PFAS by ID SOP ND 3.4 0.46 ng/L 1 Perfluoro-n-undecanoic acid (PFUdA) 2058-94-8 PFAS by ID SOP ND 3.4 0.54 ng/L 1 Perfluorooctanesulfonic acid (PFOS) 1763-23-1 PFAS by ID SOP 29 3.4 1.7 ng/L 1 Surrogate Q % Recovery Limits Q % Recovery Limits 25-150 HN 219 25-150 1763-23-10 1763-23-10 1763-23-10 1 <td>Perfluoro-n-tetradecanoic acid (PFTeDA)</td> <td>_</td> <td>376-06-7</td> <td>PFAS by ID S</td> <td>OP</td> <td>ND</td> <td>HQ</td> <td>3.6</td> <td>0.55</td> <td>ng/L</td> <td>2</td>	Perfluoro-n-tetradecanoic acid (PFTeDA)	_	376-06-7	PFAS by ID S	OP	ND	HQ	3.6	0.55	ng/L	2
Perfluoro-n-undecanoic acid (PFUdA) 2058-94-8 PFAS by ID SOP ND 3.4 0.54 ng/L 1 Perfluorooctanesulfonic acid (PFOS) 1763-23-1 PFAS by ID SOP 29 3.4 1.7 ng/L 1 Surrogate Q % Recovery Limits Q % Recovery Limits 0 % 0 1 1 13C2_4:2FTS N 244 25-150 HN 235 25-150 13C2_8:2FTS N 182 25-150 HN 201 25-150 13C3_9:150 13C3_9:150 13C3_9:150 13C3_9:150 13C3_9:150 14 70 25-150 13C3_9:150 13C3_9:150 14 158 25-150 14 <td< td=""><td>Perfluoro-n-tridecanoic acid (PFTrDA)</td><td>72</td><td>629-94-8</td><td>PFAS by ID S</td><td>OP</td><td>ND</td><td></td><td>3.4</td><td>0.46</td><td>ng/L</td><td>1</td></td<>	Perfluoro-n-tridecanoic acid (PFTrDA)	72	629-94-8	PFAS by ID S	OP	ND		3.4	0.46	ng/L	1
Perfluorooctanesulfonic acid (PFOS) 1763-23-1 PFAS by ID SOP 29 3.4 1.7 ng/L 1 Surrogate Q % Recovery Limits Q % Recovery Limits Acceptance 13C2_4:2FTS N 199 25-150 HN 219 25-150 Limits Acceptance Imits Imits <t< td=""><td>Perfluoro-n-undecanoic acid (PFUdA)</td><td>2</td><td>058-94-8</td><td>PFAS by ID S</td><td>OP</td><td>ND</td><td></td><td>3.4</td><td>0.54</td><td>ng/L</td><td>1</td></t<>	Perfluoro-n-undecanoic acid (PFUdA)	2	058-94-8	PFAS by ID S	OP	ND		3.4	0.54	ng/L	1
Surrogate Q Run 1 Acceptance Q Run 2 Acceptance 13C2_4:2FTS N 199 25-150 HN 219 25-150 13C2_6:2FTS N 244 25-150 HN 235 25-150 13C2_8:2FTS N 182 25-150 HN 201 25-150 13C2_PFDoA 50 25-150 H 51 25-150 13C2_PFTeDA N 22 25-150 H 23 25-150 13C3_PFBS 59 25-150 H 61 25-150 25-150 13C3_PFHxS 80 25-150 H 70 25-150 25-150 13C3_PFHxS 55 25-150 H 58 25-150 25-150 13C3_PFHxS 55 25-150 H 58 25-150 <t< td=""><td>Perfluorooctanesulfonic acid (PFOS)</td><td>1</td><td>763-23-1</td><td>PFAS by ID S</td><td>SOP</td><td>29</td><td></td><td>3.4</td><td>1.7</td><td>ng/L</td><td>1</td></t<>	Perfluorooctanesulfonic acid (PFOS)	1	763-23-1	PFAS by ID S	SOP	29		3.4	1.7	ng/L	1
SurrogateQ% RecoveryLimitsQ% RecoveryLimits13C2_4:2FTSN19925-150HN21925-15013C2_6:2FTSN24425-150HN23525-15013C2_8:2FTSN18225-150HN20125-15013C2_PFDoA5025-150H5125-15013C2_PFTeDAN2225-150H2325-15013C3_PFBS5925-150H6125-15013C3_PFHxS8025-150H7025-15013C3_HFPO-DA5525-150H5825-150LOQ = Limit of QuantitationB = Detected in the method blankE = Quantitation of compound exceeded the calibration rangeDL = Detection LimitQ = Surrogate failurND = Not detected at or above the DLN = Recovery is out of criteriaP = The RPD between two GC columns exceeds 40%J = Estimated result < LOQ and >DLC = LicS/LCSD failur		D 1	A		D	0 4-					
13C2_4:2FTS N 199 25.150 HN 219 25.150 13C2_6:2FTS N 244 25.150 HN 235 25.150 13C2_8:2FTS N 182 25.150 HN 201 25.150 13C2_PFDoA 50 25.150 H 51 25.150 13C2_PFTeDA N 22 25.150 H 23 25.150 13C3_PFBS 59 25.150 H 61 25.150 13C3_PFHxS 80 25.150 H 70 25.150 13C3_PFHxS 80 25.150 H 70 25.150 13C3_PFHxS 80 25.150 H 70 25.150 13C3_PFHxS 80 25.150 H 58 25.150 E Q = Surrogate failut Q = Surrogate failut LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit Q = Surrogate failut ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and \geq DL	Surrogate Q	Run I % Recove	ry Lir	nits Q	% Reco	2 AC overy	Limits				
13C2_6:2FTS N 244 25-150 HN 235 25-150 13C2_8:2FTS N 182 25-150 HN 201 25-150 13C2_PFDoA 50 25-150 H 51 25-150 13C2_PFTeDA N 22 25-150 HN 23 25-150 13C3_PFBS 59 25-150 H 61 25-150 13C3_PFHxS 80 25-150 H 70 25-150 13C3_PFHxS 80 25-150 H 58 25-150 13C3_PFHxS 80 25-150 H 58 25-150 13C3_PFHxS 80 25-150 H 58 25-150 13C3_HFPO-DA 55 25-150 H 58 25-150 ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeded the calibration range DL = Detection Limit Q = Surrogate failur N = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and $_2$ DL L = LCS/LCSD failu <td>13C2_4:2FTS N</td> <td>199</td> <td>25</td> <td>-150 HN</td> <td>21</td> <td>9</td> <td>25-150</td> <td></td> <td></td> <td></td> <td></td>	13C2_4:2FTS N	199	25	-150 HN	21	9	25-150				
13C2_8:2FTS N 182 25.150 HN 201 25.150 13C2_PFDoA 50 25.150 H 51 25.150 13C2_PFTeDA N 22 25.150 HN 23 25.150 13C3_PFBS 59 25.150 H 61 25.150 13C3_PFHxS 80 25.150 H 70 25.150 13C3_PFPO-DA 55 25.150 H 58 25.150 13C3_PFHxS 80 25.150 H 58 25.150 13C3_PFD-DA 55 25.150 H 58 25.150 N 8 Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit Q = Surrogate failur ND = Not detected at or above the DL N = Recovery is out of critteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and \ge DL L = LCS/LCSD failur L = LCS/LCSD failur L = LCS/LCSD failur L = LCS/LCSD failur L = LCS/LCSD failur	13C2_6:2FTS N	244	25	-150 HN	23	5	25-150				
13C2_PFDoA 50 25-150 H 51 25-150 13C2_PFTeDA N 22 25-150 HN 23 25-150 13C3_PFBS 59 25-150 H 61 25-150 13C3_PFHxS 80 25-150 H 70 25-150 13C3_PFD-DA 55 25-150 H 58 25-150 13C3_HFPO-DA 55 25-150 H 58 25-150 13C3_HFPO-DA B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit Q = Surrogate failur ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and \ge DL L = LCS/LCSD failur	13C2_8:2FTS N	182	25	-150 HN	20	1	25-150				
13C2_PFTeDA N 22 25-150 HN 23 25-150 13C3_PFBS 59 25-150 H 61 25-150 13C3_PFHxS 80 25-150 H 70 25-150 13C3_HFPO-DA 55 25-150 H 58 25-150 LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit Q = Surrogate failur ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL	13C2_PFDoA	50	25	-150 H	51		25-150				
13C3_PFBS5925-150H6125-15013C3_PFHxS8025-150H7025-15013C3-HFPO-DA5525-150H5825-150LOQ = Limit of QuantitationND = Not detected at or above the DLN = Recovery is out of criteriaP = The RPD between two GC columns exceeds 40%J = Estimated result < LOQ and \geq DLQ = Surrogate failurL = Uctor Limit of Log and L = Locs/LCSD failurP = The RPD between two GC columns exceeds 40%J = Estimated result < LOQ and \geq DLC = Columna Colu	13C2_PFTeDA N	22	25	-150 HN	23		25-150				
13C3_PFHxS 80 25-150 H 70 25-150 13C3_HFPO-DA 55 25-150 H 58 25-150 LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit Q = Surrogate failure ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL	13C3_PFBS	59	25	-150 H	61		25-150				
13C3-HFPO-DA 55 25-150 H 58 25-150 LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit Q = Surrogate failur ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and ≥ DL	13C3_PFHxS	80	25	-150 H	70		25-150				
LOQ = Limit of Quantitation B = Detected in the method blank E = Quantitation of compound exceeded the calibration range DL = Detection Limit Q = Surrogate failur ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and \geq DL L = LCS/LCSD failur W Reported on web weight basic W Reported on web weight basic C = VICP (CS)	13C3-HFPO-DA	55	25	-150 H	58		25-150				
LOQ = Limit of QuantitationB = Detected in the method blankE = Quantitation of compound exceeded the calibration rangeDL = Detection LimitQ = Surrogate failurND = Not detected at or above the DLN = Recovery is out of criteriaP = The RPD between two GC columns exceeds 40%J = Estimated result < LOQ and \geq DLL = LCS/LCSD failurHOut of holding timeWRecovery the visit basisCCC											
ND = Not detected at or above the DL N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% J = Estimated result < LOQ and \ge DL L = LCS/LCSD failu	LOQ = Limit of Quantitation B = Detected in the method b	olank E = C	Quantitation	of compound excee	eded the ca	alibration r	ange DL =	Detection Lir	nit	Q = Surro	ogate failur
C = MOMON Failure VV = REPORTED ON WEI WEITH DASIS	ND = Not detected at or above the DL $N = \text{Recovery is out of criteria}$ H = Out of holding time $W = \text{Reported on wet weight}$	a P=T basis	ne RPD bet	ween two GC colur	mns excee	ds 40%	J = E:	stimated resu	ult < LOQ and \geq DL	L = LCS/I S = MS/N	LCSD failur ISD failure

Client: Pace Analytical Services, LLC	>					Labo	pratory ID: WH11069-006
Description: MW-3							Matrix: Aqueous
Date Sampled:08/05/2021 0915		Project N	lame: 6255 Sc	buth	Milwaukee		
Date Received:08/11/2021		Project Nur	mber: 4023133	35			
Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 A % Recovery	cceptance Limits	
13C4_PFBA	Ν	24	25-150	Н	27	25-150	
13C4_PFHpA		72	25-150	Н	67	25-150	
13C5_PFHxA		58	25-150	Н	60	25-150	
13C5_PFPeA		40	25-150	Н	44	25-150	
13C6_PFDA		83	25-150	Н	84	25-150	
13C7_PFUdA		76	25-150	Н	84	25-150	
13C8_PFOA		76	25-150	Н	74	25-150	
13C8_PFOS		81	25-150	Н	75	25-150	
13C8_PFOSA		86	10-150	Н	83	10-150	
13C9_PFNA		85	25-150	Н	87	25-150	
d-EtFOSA		28	10-150	Н	33	10-150	
d5-EtFOSAA		90	25-150	Н	89	25-150	
d9-EtFOSE		23	10-150	Н	28	10-150	
d-MeFOSA		38	10-150	Н	43	10-150	
d3-MeFOSAA		95	25-150	Н	100	25-150	
d7-MeFOSE		30	10-150	Н	34	10-150	

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and \geq DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

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Client: Pace Analytical Services, LLC						Laboratory I	D: WH11069-0	07		
Description: SUMP		Matrix: Aqueous								
Date Sampled:08/05/2021 1245	Project Na	ame: 6	255 South Milv	vaukee						
Date Received:08/11/2021 Pr	oject Nun	nber: 4	0231335							
RunPrep MethodAnalytical Method1SOP SPEPFAS by ID SOP2SOP SPEPFAS by ID SOP	Dilution 1 1	Analy 09/02 09/09	ysis Date Ana /2021 1642 JJ /2021 2242 JJ	lyst Pre G 09/0 G 09/0	p Date 1/2021 13 3/2021 12	Batch 09 14070 29 14719				
	(CAS	Analytical	_						
Parameter	Num	ber	Method	Resu	lt Q	LOQ	MDL	Units	Rur	
9-chlorohexadecatluoro-3-oxanone-1-sultonic acid (9CI-PF3ONS)	756426	-58-1	PFAS by ID SOP	N)	7.0	0.42	ng/L	1	
11-chloroeicosatluoro-3-oxaundecane-1-sultonic acid (11CI-PF3	.) /63051-	.92-9	PFAS by ID SOP	N		7.0	0.58	ng/L	1	
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-	-34-4	PFAS by ID SOP	N		7.0	1.4	ng/L	1	
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619	-97-2	PFAS by ID SOP	N	ЭН	6.9	1.7	ng/L	2	
IH, IH, 2H, 2H-perfluoronexane sulfonic acid (4:2 FTS)	/5/124-	-72-4	PFAS by ID SOP	N		7.0	0.76	ng/L	1	
Hexafluoropropylene oxide dimer acid (GenX)	13252	-13-6	PFAS by ID SOP	N)	7.0	1.8	ng/L	1	
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005	-14-4	PFAS by ID SOP	N		7.0	0.42	ng/L	1	
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-	50-2	PFAS by ID SOP	N		7.0	1.2	ng/L	1	
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-	50-6	PFAS by ID SOP	N)	7.0	0.66	ng/L	1	
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-	99-2	PFAS by ID SOP	N)	7.0	0.83	ng/L	1	
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506	-32-8	PFAS by ID SOP	N)	14	1.1	ng/L	1	
N-methylpertluoro-1-octanesultonamidoacetic acid (MeFOSAA)	2355-	31-9	PFAS by ID SOP	N)	7.0	0.81	ng/L	1	
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448	-09-7	PFAS by ID SOP	N)	7.0	1.1	ng/L	1	
Perfluoro-I-butanesulfonic acid (PFBS)	3/5-	/3-5	PFAS by ID SOF	, 6. N		3.5	0.36	ng/L	1	
Perfluoro-1-decanesultonic acid (PFDS)	335-	//-3	PFAS by ID SOP	N		3.5	0.68	ng/L	1	
Perfluoro- I-neptanesultonic acid (PFHpS)	3/5-	92-8	PFAS by ID SOP	N		3.5	0.44	ng/L	1	
Perfluoro-1-nonanesulfonic acid (PENS)	68259	-12-1	PFAS by ID SOP	N		3.5	0.62	ng/L	1	
Perfluoro-1-octanesulfonamide (PFOSA)	/54-	91-6	PFAS by ID SOP	N) 	3.5	0.54	ng/L	1	
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-	91-4	PFAS by ID SOF	, 1.	IJ	3.5	0.52	ng/L	1	
Perfluorododecanesultonic acid (PFDOS)	/9/80-	-39-5	PFAS by ID SOP	N	, ,	7.0	0.91	ng/L	1	
Perfluorohexanesulfonic acid (PFHxS)	355-	46-4	PFAS by ID SOF	, 3. . 1) J	3.5	0.48	ng/L	1	
Periluoro-n-butanoic acid (PEBA)	3/5-	22-4	PFAS by ID SOF		3	3.5	0.52	ng/L	1	
Periluoro-n-decanoic acid (PFDA)	335-	/0-2	PFAS by ID SOP	IN N		3.5	0.46	ng/L	1	
Periluoro-n-dodecanoic acid (PFDoA)	307-	55-1 05-0	PFAS by ID SOP) 1 1	3.5	0.41	ng/L	1	
Perfluoro-n-heptanoic acid (PEHpA)	3/5-	85-9	PFAS by ID SOF	, 2.	J	3.5	0.39	ng/L	1	
Perfluoro-n-nexanoic acid (PFHXA)	307-	24-4	PFAS by ID SOF	5.	1 	3.5	0.60	ng/L	1	
Periluoro-n-nonanoic acid (PENA)	3/5-	95-I	PFAS by ID SOF	0.4	5 J	3.5	0.40	ng/L	1	
Periluoro-n-octanoic acid (PFOA)	335-	0/-1	PFAS by ID SOF	y 4.	5	3.5	0.72	ng/L	1	
Perfluoro-n-pentanoic acid (PEPeA)	2706-	90-3 04 7	PEAS by ID SOF	, 8. N	2 	3.5 2 E	0.48	ng/L	1	
Perhuoro n tridecanois acid (PETrDA)	370-	04.0	PFAS by ID SOP	IN N		3.0 2 E	0.52	ng/L	1	
	72029· 20E0	04.0	PFAS by ID SOP	IN N		3.0 2 E	0.46	ng/L	1	
Perfluorooctanesulfonic acid (PEOS)	2058-	94-8 22-1	PFAS by ID SOP	ы р Б	2	3.5	0.55	ng/L	1	
	1705-	23-1	11 AS BY 10 301	5.	7	5.5	1.7	ng/L	1	
Surrogate Q % Re	Run 1 A ecovery	Accept Lim	tance its Q %	Run 2 Recovery	Acceptan Limits	ice S				
13C2_4:2FTS	101	25-1	150 H	128	25-150)				
13C2_6:2FTS	103	25-1	150 H	118	25-150)				
13C2_8:2FTS	77	25-1	150 H	96	25-150)				
13C2_PFDoA	63	25-1	150 H	70	25-150)				
13C2_PFTeDA	68	25-1	150 H	87	25-150)				
13C3_PFBS	87	25-1	150 H	107	25-150)				
13C3_PFHxS	98	25-1	150 H	106	25-150)				
13C3-HFPO-DA	92	25-1	150 H	101	25-150)				
00 - Limit of Quantitation P - Detected in the method black	F - Ouart	itation of	compound overeday	the calibration	n rango D	L - Detection Lin	nit	0 - 50	nato fo ^{li}	
$D_{2} = Limit of Quantitation = Detected in the method blank = Detected in the method in the method blank = Detected in the method blank = Detected in th$	E = Quant	nation of PD hetw	compound exceeded		irrange Di	E = Detection Lin = Estimated recursion	III.		yate faili CSD fail	
ID = Not detected at or above the DL N = Recovery is out of criteria I = Out of holding time W = Reported on wet weight basis	P = The R	PD betw	een two GC columns	exceeds 40%	J	= Estimated resu	ult < LOQ and \ge DL	L = LCS/I S = MS/N	LCS /ISD	

Client: Pace Analytical Services, LLC						Labora	atory ID: WH11069-007
Description: SUMP							Matrix: Aqueous
Date Sampled:08/05/2021 1245		Project Na	me: 6255 So	outh	Milwaukee		
Date Received: 08/11/2021		Project Num	ber: 402313	35			
Surrogate	Q	Run 1 A % Recovery	cceptance Limits	Q	Run 2 Ao % Recovery	cceptance Limits	
13C4_PFBA		94	25-150	Н	106	25-150	
13C4_PFHpA		93	25-150	Н	101	25-150	
13C5_PFHxA		89	25-150	Н	110	25-150	
13C5_PFPeA		90	25-150	Н	106	25-150	
13C6_PFDA		77	25-150	Н	102	25-150	
13C7_PFUdA		65	25-150	Н	91	25-150	
13C8_PFOA		89	25-150	Н	106	25-150	
13C8_PFOS		84	25-150	Н	88	25-150	
13C8_PFOSA		96	10-150	Н	104	10-150	
13C9_PFNA		84	25-150	Н	97	25-150	
d-EtFOSA		68	10-150	Н	74	10-150	
d5-EtFOSAA		75	25-150	Н	93	25-150	
d9-EtFOSE		62	10-150	Н	79	10-150	
d-MeFOSA		65	10-150	Н	74	10-150	
d3-MeFOSAA		88	25-150	Н	106	25-150	
d7-MeFOSE		67	10-150	Н	80	10-150	

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and \ge DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Client: Pace Analytical Services, LLC				Laboratory II	D: WH11069-00	8	
Description: EFFLUENT				Matri	x: Aqueous		
Date Sampled:08/05/2021 1330	Project Nam	ne: 6255 South Milwau	kee		.1		
Date Received: 08/11/2021	Project Numb	er [.] 40231335					
RunPrep MethodAnalytical Method1SOP SPEPFAS by ID SOP	Dilution A	nalysis Date Analyst 9/02/2021 1653 JJG	Prep Date 09/01/2021	Batch 1309 14070			
Parameter	CA Numbe	S Analytical er Method	Result Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9CI-PF3ONS	5) 756426-58	I-1 PFAS by ID SOP	ND	6.7	0.40	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3.) 763051-92	P-9 PFAS by ID SOP	ND	6.7	0.56	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34	-4 PFAS by ID SOP	ND	6.7	1.3	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97	-2 PFAS by ID SOP	ND L	6.7	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72	P-4 PFAS by ID SOP	ND	6.7	0.73	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13	-6 PFAS by ID SOP	ND	6.7	1.7	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14	-4 PFAS by ID SOP	ND	6.7	0.41	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50	-2 PFAS by ID SOP	ND	6.7	1.1	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50	-6 PFAS by ID SOP	ND	6.7	0.63	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99	-2 PFAS by ID SOP	ND	6.7	0.80	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32	-8 PFAS by ID SOP	ND	13	1.1	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31	-9 PFAS by ID SOP	ND	6.7	0.78	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09	P-7 PFAS by ID SOP	ND	6.7	1.1	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73	-5 PFAS by ID SOP	ND	3.4	0.35	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77	-3 PFAS by ID SOP	ND	3.4	0.65	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92	-8 PFAS by ID SOP	ND	3.4	0.42	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12	-1 PFAS by ID SOP	ND	3.4	0.60	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91	-6 PFAS by ID SOP	ND	3.4	0.51	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91	-4 PFAS by ID SOP	ND	3.4	0.50	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39	-5 PFAS by ID SOP	ND	6.7	0.88	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46	-4 PFAS by ID SOP	ND	3.4	0.46	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22	-4 PFAS by ID SOP	ND	3.4	0.50	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76	-2 PFAS by ID SOP	ND	3.4	0.44	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55	-1 PFAS by ID SOP	ND	3.4	0.40	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85	-9 PFAS by ID SOP	ND	3.4	0.38	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24	-4 PFAS by ID SOP	ND	3.4	0.58	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95	-1 PFAS by ID SOP	ND	3.4	0.39	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67	-1 PFAS by ID SOP	ND	3.4	0.70	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90	-3 PFAS by ID SOP	ND	3.4	0.46	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06	-7 PFAS by ID SOP	ND	3.4	0.50	na/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94	-8 PFAS by ID SOP	ND	3.4	0.44	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94	-8 PFAS by ID SOP	ND	3.4	0.53	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23	-1 PFAS by ID SOP	ND	3.4	1.7	ng/L	1
Surrogate 0 % r	Run 1 Ac	ceptance					
13C2 4:2FTS	95	25-150					
13C2 6:2FTS	125	25-150					
13C2 8:2FTS	78	25-150					
13C2 PEDoA	74	25-150					
13C2 PFTeDA	78	25-150					
13C3 PEBS	90	25-150					
13C3_PEHxS	90	25-150					
13C3-HEPO-DA	93	25-150					
13C4_PFBA	92	25-150					
LOQ = Limit of Quantitation B = Detected in the method blank ND = Not detected at or above the DL N = Recovery is out of criteria	E = Quantitat P = The RPD	ion of compound exceeded the between two GC columns exce	calibration range eeds 40%	DL = Detection Lin J = Estimated resu	nit IIt < LOQ and ≥ DL	Q = Surroot L = LCS/1000000000000000000000000000000000000	ogate failu _CSD failu

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Client: Pace Analytical Services, LL	С			Laboratory ID: WH11069-008
Description: EFFLUENT				Matrix: Aqueous
Date Sampled:08/05/2021 1330		Project Na	ame: 6255 South Milwaukee	
Date Received: 08/11/2021		Project Num	nber: 40231335	
Surrogate	Q	Run 1 A % Recovery	Acceptance Limits	
13C4_PFHpA		91	25-150	
13C5_PFHxA		87	25-150	
13C5_PFPeA		93	25-150	
13C6_PFDA		77	25-150	
13C7_PFUdA		69	25-150	
13C8_PFOA		94	25-150	
13C8_PFOS		89	25-150	
13C8_PFOSA		99	10-150	
13C9_PFNA		86	25-150	
d-EtFOSA		65	10-150	
d5-EtFOSAA		85	25-150	
d9-EtFOSE		76	10-150	
d-MeFOSA		63	10-150	
d3-MeFOSAA		86	25-150	
d7-MeFOSE		74	10-150	

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and \ge DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Client: Pace Analytical Services,	LLC				Laboratory	ID: WH11069-00	9	
Description: EQUIP BLANK					Mat	trix: Aqueous		
Date Sampled:08/04/2021 1145	Proiec	t Name:	6255 South Milwauk	kee		1		
Date Received: 08/11/2021	Project I	Number	40231335					
RunPrep MethodAnalyi1SOP SPEPFA	AS by ID SOP 1	on Ana 09/0	Iysis Date Analyst 1/2021 1918 JJG	Prep 08/31/2	Date Batch 021 1810 14001			
Parameter	Ν	CAS lumber	Analytical Method	Result	Q LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic ac	id (9CI-PF3ONS) 756	426-58-1	PFAS by ID SOP	ND	8.2	0.49	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic	acid (11Cl-PF3) 763	051-92-9	PFAS by ID SOP	ND	8.2	0.68	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:	:2 FTS) 39	108-34-4	PFAS by ID SOP	ND	8.2	1.6	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid	(6:2 FTS) 27	619-97-2	PFAS by ID SOP	2.2	J 8.2	2.0	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2	FTS) 757	124-72-4	PFAS by ID SOP	ND	8.2	0.90	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13	252-13-6	PFAS by ID SOP	ND	8.2	2.1	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919	005-14-4	PFAS by ID SOP	ND	8.2	0.50	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	41	151-50-2	PFAS by ID SOP	ND	8.2	1.4	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid	I (EtFOSAA) 29	991-50-6	PFAS by ID SOP	ND	8.2	0.77	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol	(EtFOSE) 16	591-99-2	PFAS by ID SOP	ND	8.2	0.98	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOS	SA) 31	506-32-8	PFAS by ID SOP	ND	16	1.3	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic ac	cid (MeFOSAA) 23	355-31-9	PFAS by ID SOP	ND	8.2	0.96	ng/L	1
2-N-methylperfluoro-1-octanesultonamido-ethan	ol (MeFOSE) 24	448-09-7	PFAS by ID SOP	ND	8.2	1.3	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)		3/5-/3-5	PFAS by ID SOP	ND	4.1	0.42	ng/L	1
Perliuoro-1-decanesulionic acid (PFDS)		335-77-3	PFAS by ID SOP		4.1	0.80	ng/L	1
Periluoro-1-neptanesulionic acid (PEHPS)	· · · · · · · · · · · · · · · · · · ·	0/0-92-0	PFAS by ID SOP		4.1	0.51	ng/L	1
Perliuoro-1-nonanesulionic acid (PENS)	- -	259-12-1 754-01-4	PFAS by ID SOP		4.1	0.73	ng/L	1
Periluoro-1-octanesullonamide (PFOSA)		704-91-0	PFAS by ID SOP		4.1	0.63	ng/L	1
Perfluerededeceneculferic acid (PEPOS)	2.	790 20 5	PEAS by ID SOP		4.1	0.61	ng/L	1
Perfluorododecarlesullonic acid (PFDOS)	19	780-39-5 DEE 44 4	PEAS by ID SOP		8.2	1.1	ng/L	1
Perfluoro p butancia acid (PERA)		000-40-4	PEAS by ID SOP		4.1	0.57	ng/L	1
Perfluoro-n-decanoic acid (PEDA)		375-76-2	PEAS by ID SOP		4.1	0.61	ng/L	1
Perfluoro-n-dodecanoic acid (PEDoA)		307-55-1	PEAS by ID SOP	ND	4.1	0.54	ng/L	1
Perfluoro-n-bentanoic acid (PEHpA)		375-85-9	PEAS by ID SOP	ND	4.1	0.46	ng/L	1
Perfluoro-n-bexanoic acid (PEHxA)		307-24-4	PEAS by ID SOP	ND	4 1	0.40	ng/L	1
Perfluoro-n-nonanoic acid (PENA)		375-95-1	PEAS by ID SOP	ND	4 1	0.70	ng/L	1
Perfluoro-n-octanoic acid (PEOA)		335-67-1	PEAS by ID SOP	ND	4 1	0.47	ng/L	1
Perfluoro-n-pentanoic acid (PEPeA)	2	706-90-3	PEAS by ID SOP	ND	4 1	0.56	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)		376-06-7	PEAS by ID SOP	ND	4.1	0.61	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72	629-94-8	PFAS by ID SOP	ND	4.1	0.54	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	20)58-94-8	PFAS by ID SOP	ND	4.1	0.64	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	17	763-23-1	PFAS by ID SOP	ND	4.1	2.1	ng/L	1
Surrogata	Run 1	Accep	otance					
		y Lir	-150					
13C2_4.2FTS	72 101	20 25	-150					
13C2_8:2FTS	۱۵۱ ۵۵	20 25	-150					
13C2_PEDoA	104	20 25	-150					
13C2_PFTeDA	95	25 25	-150					
13C3 PEBS	92	25	-150					
13C3 PFHxS	87	25	-150					
13C3-HEPO-DA	88	25	-150					
13C4_PFBA	94	25	-150					
	the method blank E	uontitation	of compound every ded the	oolibration		imit	0 0	goto fallers
ND = Not detected at or above the DL N = Recoverv i	s out of criteria P = T	uantitation on ne RPD bet	or compound exceeded the ween two GC columns exce	calibration ra eds 40%	J = Estimated re	∟imit esult < LOQ and > DL	Q = Surro L = LCS/L	gate tailure .CSD failur
H = Out of holding time W = Reported e	on wet weight basis						S = MS/N	ISD failure

			3	
Client: Pace Analytical Services, L	LC			Laboratory ID: WH11069-009
Description: EQUIP BLANK				Matrix: Aqueous
Date Sampled:08/04/2021 1145		Milwaukee		
Date Received: 08/11/2021		Project Nu	mber: 40231335	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits	
13C4_PFHpA		87	25-150	
13C5_PFHxA		97	25-150	
13C5_PFPeA		90	25-150	
13C6_PFDA		96	25-150	
13C7_PFUdA		103	25-150	
13C8_PFOA		91	25-150	
13C8_PFOS		91	25-150	
13C8_PFOSA		96	10-150	
13C9_PFNA		91	25-150	
d-EtFOSA		82	10-150	
d5-EtFOSAA		108	25-150	
d9-EtFOSE		102	10-150	
d-MeFOSA		95	10-150	

25-150

10-150

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96

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and \ge DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

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d3-MeFOSAA

d7-MeFOSE
PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC					Laborate	ory ID: WH1106	9-010	
Description: FIELD BLANK					Ν	Matrix: Aqueous	5	
Date Sampled:08/04/2021 1145	Project N	lame:	6255 South Milwauk	kee				
Date Received: 08/11/2021	Project Nu	mber:	40231335					
RunPrep MethodAnalytical Method1SOP SPEPFAS by ID SOI	Dilution	Ana 09/0	Ilysis Date Analyst 1/2021 1929 JJG	Prep 08/31/2	Date Bato 2021 1810 1400	ch)1]
Parameter	Nur	CAS	Analytical Method	Result	0 L00	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9CI-PF3ON	IS) 756426	-58-1	PFAS by ID SOP	ND	8.6	0.52	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF	3) 763051	-92-9	PFAS by ID SOP	ND	8.6	0.71	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108	8-34-4	PFAS by ID SOP	ND	8.6	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619	9-97-2	PFAS by ID SOP	ND	8.6	2.2	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124	-72-4	PFAS by ID SOP	ND	8.6	0.94	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252	2-13-6	PFAS by ID SOP	ND	8.6	2.2	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005	5-14-4	PFAS by ID SOP	ND	8.6	0.52	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151	-50-2	PFAS by ID SOP	ND	8.6	1.5	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991	-50-6	PFAS by ID SOP	ND	8.6	0.81	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691	-99-2	PFAS by ID SOP	ND	8.6	1.0	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506	-32-8	PFAS by ID SOP	ND	17	1.4	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA) 2355	-31-9	PFAS by ID SOP	ND	8.6	1.0	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448	8-09-7	PFAS by ID SOP	ND	8.6	1.4	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375	-73-5	PFAS by ID SOP	ND	4.3	0.45	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335	-77-3	PFAS by ID SOP	ND	4.3	0.84	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375	-92-8	PFAS by ID SOP	ND	4.3	0.54	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259	9-12-1	PFAS by ID SOP	ND	4.3	0.77	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754	-91-6	PFAS by ID SOP	ND	4.3	0.66	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706	-91-4	PFAS by ID SOP	ND	4.3	0.64	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780)-39-5	PFAS by ID SOP	ND	8.6	1.1	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355	-46-4	PFAS by ID SOP	ND	4.3	0.59	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375	-22-4	PFAS by ID SOP	ND	4.3	0.65	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335	-76-2	PFAS by ID SOP	ND	4.3	0.57	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307	-55-1	PFAS by ID SOP	ND	4.3	0.51	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375	-85-9	PFAS by ID SOP	ND	4.3	0.48	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307	-24-4	PFAS by ID SOP	ND	4.3	0.74	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375	-95-1	PFAS by ID SOP	ND	4.3	0.50	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335	-67-1	PFAS by ID SOP	ND	4.3	0.89	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706	-90-3	PFAS by ID SOP	ND	4.3	0.59	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376	-06-7	PFAS by ID SOP	ND	4.3	0.65	ng/L	1
Perfluoro-n-tridecanoic acid (PF1rDA)	72629	-94-8	PFAS by ID SOP	ND	4.3	0.57	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058	-94-8	PFAS by ID SOP	ND	4.3	0.67	ng/L	1
Periluorooctanesuironic acid (PFOS)	1/63	-23-1	PFAS by ID SOP	ND	4.3	2.2	ng/L	I
Currente	Run 1	Acce	otance					
	Recovery	LI	nits					
13C2_4:2F15	104	25	-150					
1302_6:2F15	113	25	-150					
13C2_8:2F15	84 102	20	150					
	103 96	20	- 150					
13C2_FF TebA	90 07	25	-150					
13C3 PEHrS	03 21	20 25	-150					
13C3-HEPO-DA	93	25	-150					
13C4_PFBA	98	25	-150					
LOQ = Limit of Quantitation B = Detected in the method blai ND = Not detected at or above the DL N = Recovery is out of criteria	nk E = Quar P = The F	titation RPD bet	of compound exceeded the of ween two GC columns exce	calibration r eds 40%	ange DL = Detecti J = Estimate	on Limit d result < LOQ and ≥	Q = Surro DL L = LCS/	ogate failur LCSD failur

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PFAS by LC/MS/MS

Client: Pace Analytical Service	es, LLC		Laboratory ID: WH11069-010
Description: FIELD BLANK			Matrix: Aqueous
Date Sampled:08/04/2021 1145	Project N	Name: 6255 South Milwaukee	
Date Received: 08/11/2021	Project Nu	mber: 40231335	
Surrogate	Run 1 Q % Recovery	Acceptance Limits	
13C4_PFHpA	92	25-150	
13C5_PFHxA	99	25-150	
13C5_PFPeA	97	25-150	
13C6_PFDA	99	25-150	
13C7_PFUdA	91	25-150	
13C8_PFOA	97	25-150	
13C8_PFOS	89	25-150	
13C8_PFOSA	92	10-150	
13C9_PFNA	94	25-150	
d-EtFOSA	87	10-150	
d5-EtFOSAA	98	25-150	

10-150

10-150

25-150

10-150

104

75

94

100

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and \ge DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

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d9-EtFOSE

d-MeFOSA

d3-MeFOSAA

d7-MeFOSE

QC Summary

PFAS by LC/MS/MS - MB

Sample ID: WQ14001-001 Batch: 14001 Analytical Method: PFAS by ID SOP Matrix: Aqueous Prep Method: SOP SPE

Prep Date: 08/31/2021 1810

Parameter	Result	Q Dil	LOQ	MDL	Units	Analysis Date
9CI-PF3ONS	ND	1	8.0	0.48	ng/L	09/01/2021 1814
11CI-PF3OUdS	ND	1	8.0	0.66	ng/L	09/01/2021 1814
8:2 FTS	ND	1	8.0	1.6	ng/L	09/01/2021 1814
6:2 FTS	ND	1	8.0	2.0	ng/L	09/01/2021 1814
4:2 FTS	ND	1	8.0	0.87	ng/L	09/01/2021 1814
GenX	ND	1	8.0	2.1	ng/L	09/01/2021 1814
ADONA	ND	1	8.0	0.48	ng/L	09/01/2021 1814
EtFOSA	ND	1	8.0	1.4	ng/L	09/01/2021 1814
EtFOSAA	ND	1	8.0	0.75	ng/L	09/01/2021 1814
EtFOSE	ND	1	8.0	0.95	ng/L	09/01/2021 1814
MeFOSA	ND	1	16	1.3	ng/L	09/01/2021 1814
MeFOSAA	ND	1	8.0	0.93	ng/L	09/01/2021 1814
MeFOSE	ND	1	8.0	1.3	ng/L	09/01/2021 1814
PFBS	ND	1	4.0	0.41	ng/L	09/01/2021 1814
PFDS	ND	1	4.0	0.78	ng/L	09/01/2021 1814
PFHpS	ND	1	4.0	0.50	ng/L	09/01/2021 1814
PFNS	ND	1	4.0	0.71	ng/L	09/01/2021 1814
PFOSA	ND	1	4.0	0.61	ng/L	09/01/2021 1814
PFPeS	ND	1	4.0	0.59	ng/L	09/01/2021 1814
PFDOS	ND	1	8.0	1.0	ng/L	09/01/2021 1814
PFHxS	ND	1	4.0	0.55	ng/L	09/01/2021 1814
PFBA	ND	1	4.0	0.60	ng/L	09/01/2021 1814
PFDA	ND	1	4.0	0.52	ng/L	09/01/2021 1814
PFDoA	ND	1	4.0	0.47	ng/L	09/01/2021 1814
PFHpA	ND	1	4.0	0.45	ng/L	09/01/2021 1814
PFHxA	ND	1	4.0	0.69	ng/L	09/01/2021 1814
PFNA	ND	1	4.0	0.46	ng/L	09/01/2021 1814
PFOA	ND	1	4.0	0.83	ng/L	09/01/2021 1814
PFPeA	ND	1	4.0	0.54	ng/L	09/01/2021 1814
PFTeDA	ND	1	4.0	0.60	ng/L	09/01/2021 1814
PFTrDA	ND	1	4.0	0.53	ng/L	09/01/2021 1814
PFUdA	ND	1	4.0	0.63	ng/L	09/01/2021 1814
PFOS	ND	1	4.0	2.0	ng/L	09/01/2021 1814
Surrogate	Q % Red	Acceptance Limit				
13C2_4:2FTS	102	25-150				
13C2_6:2FTS	96	25-150				
13C2_8·2FTS	94	25-150				
13C2 PEDoA	95	25-150 25-150				
13C2_FT DOA	<i>7</i> 5	25-150				
13C2_PFTEDA	90	25-150				
13C3_PFBS	90	25-150				
13C3_PFHxS	81	25-150				
13C3-HFPO-DA	88	25-150				
LOQ = Limit of Quantitation	ND = N	ot detected at or above the DL	N = F	Recovery is out of	criteria	
DL = Detection Limit	J = Esti	mated result < LOQ and \ge DL	P = T	he RPD between	two GC columns exe	ceeds 40%
	* = RSI) is out of criteria	+ = R	PD is out of criter	ia	
Note: Calculations are perform	ned before rounding to	avoid round-off errors in	calculated resu	Its		
Pace Analytical Services, LLC (form	erly Shealy Environmental	Services, Inc.)			QC Data f	or Lot Number: WH11069
106 Vantage Point Drive West Colu	imbia, SC 29172 (803) 7	91-9700 Fax (803) 791-9111	www.pacelabs.coi	m		Page 33 of 51

PFAS by LC/MS/MS - MB

				5		
Sample ID: WQ14001-001 Batch: 14001 Analytical Method: PFAS by ID SOP					Matrix: Prep Method: Prep Date:	: Aqueous SOP SPE 08/31/2021 1810
Surrogate	Q	% Rec	Acce L	eptance imit		
13C4_PFBA		90	2!	5-150		
13C4_PFHpA		87	2	5-150		
13C5_PFHxA		95	2	5-150		
13C5_PFPeA		90	2	5-150		
13C6_PFDA		92	2	5-150		
13C7_PFUdA		93	2	5-150		
13C8_PFOA		89	2	5-150		
13C8_PFOS		90	2	5-150		
13C8_PFOSA		92	1(D-150		
13C9_PFNA		89	2	5-150		
d-EtFOSA		78	1(D-150		
d5-EtFOSAA		94	2	5-150		
d9-EtFOSE		99	1(D-150		
d-MeFOSA		91	1(D-150		
d3-MeFOSAA		87	2!	5-150		
d7-MeFOSE		93	1(D-150		

 LOQ = Limit of Quantitation
 ND = Not detected at or above the DL
 N = Recovery is out of criteria

 DL = Detection Limit
 J = Estimated result < LOQ and ≥ DL</td>
 P = The RPD between two GC columns exceeds 40%

 * = RSD is out of criteria
 + = RPD is out of criteria

 Note: Calculations are performed before rou-U-ing to avoid round-off errors in calculated results

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PFAS by LC/MS/MS - LCS

Sample ID: WQ14001-002 Batch: 14001

Analytical Method: PFAS by ID SOP

Matrix: Aqueous Prep Method: SOP SPE

Prep Date: 08/31/2021 1810

9CI-PF3ONS 15 11CI-PF3OUdS 15 8:2 FTS 15 6:2 FTS 15 4:2 FTS 15 GenX 32 ADONA 15 EtFOSA 16 EtFOSA 16 MeFOSA 16 MeFOSA 16 MeFOSE 16 PFBS 14 PFDS 15 PFNS 15 PFNS 15 PFNS 15 PFNS 15 PFNS 15 PFDOS 15 PFBA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFNA 16 PFDA 16	15 14 12 25 14 15 15 14 19 15 14 19 15 14 11 17 11 15 14 15 13 14 15 13 14 15 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100 95 76 108 83 79 93 91 93 88 122 96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-1	09/01/2021 1825 09/01/2021 1825
11CI-PF3OUdS 15 8:2 FTS 15 6:2 FTS 15 4:2 FTS 15 GenX 32 ADONA 15 EtFOSA 16 EtFOSA 16 MeFOSA 16 MeFOSA 16 MeFOSA 16 PFBS 14 PFDS 15 PFNS 15 PFNS 15 PFDOS 15 PFDOS 15 PFDA 16 PFNA 16 PFNA 16 PFNA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16 P	14 12 25 14 15 15 14 19 15 14 11 17 11 15 14 15 13 14 15 13 14 15 16 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	95 76 108 83 79 93 91 93 88 122 96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-1	09/01/2021 1825 09/01/2021 1825
8:2 FTS 15 6:2 FTS 15 4:2 FTS 15 GenX 32 ADONA 15 EtFOSA 16 EtFOSA 16 EtFOSA 16 MeFOSA 16 MeFOSA 16 MeFOSE 16 PFBS 14 PFDS 15 PFNS 15 PFNS 15 PFDOS 15 PFDOS 15 PFDA 16 PFNA 16 PFNA 16 PFNA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16	12 16 12 25 14 15 15 14 19 15 14 11 15 14 15 13 14 15 13 14 15 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	76 108 83 79 93 91 93 88 122 96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-1	09/01/2021 1825 09/01/2021 1825
6:2 FTS 15 4:2 FTS 15 GenX 32 ADONA 15 EtFOSA 16 EtFOSA 16 EtFOSE 16 MeFOSA 16 MeFOSA 16 PFDS 16 PFBS 14 PFDS 15 PFNS 15 PFNS 15 PFDOS 15 PFDOS 15 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFNA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFNA 16 PFNA 16 PFDA 16 P	16 12 25 14 15 15 14 19 15 14 11 17 11 15 14 15 13 14 15 16 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	108 83 79 93 91 93 88 122 96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-1	09/01/2021 1825 09/01/2021 1825
4:2 FTS 15 GenX 32 ADONA 15 EtFOSA 16 EtFOSA 16 EtFOSA 16 MeFOSE 16 PFBS 14 PFDS 15 PFHpS 15 PFNS 15 PFOSA 16 PFPeS 15 PFDOS 15 PFDOS 15 PFDA 16 PFDA 16 PFHpA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFNA 16 PFTDA 16 PFTDA 16 PFUdA 16 PFOS 15 <td< td=""><td>12 25 14 15 15 14 19 15 14 11 17 11 15 14 15 13 14 15 16 16 16 16 14 14 15</td><td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td><td>83 79 93 91 93 88 122 96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96</td><td>50-150 50-1</td><td>09/01/2021 1825 09/01/2021 1825</td></td<>	12 25 14 15 15 14 19 15 14 11 17 11 15 14 15 13 14 15 16 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	83 79 93 91 93 88 122 96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-1	09/01/2021 1825 09/01/2021 1825
GenX 32 ADONA 15 EtFOSA 16 EtFOSA 16 EtFOSE 16 MeFOSA 16 MeFOSA 16 MeFOSA 16 PFDS 16 PFBS 14 PFDS 15 PFNS 15 PFNS 15 PFOSA 16 PFPeS 15 PFDOS 15 PFDA 16 PFDA 16 PFDA 16 PFNA 16 PFDA 16 PFDA 16 PFDA 16 PFNA 16 PFNA 16 PFNA 16 PFNA 16 PFNA 16 PFDA 16 PFNA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFTDA 16 PFU	25 14 15 14 19 15 14 11 17 11 15 14 15 13 14 15 13 14 15 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	79 93 91 93 88 122 96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-1	09/01/2021 1825 09/01/2021 1825
ADONA 15 EIFOSA 16 EIFOSE 16 MeFOSA 16 MeFOSA 16 MeFOSA 16 MeFOSE 16 PFBS 14 PFDS 15 PFHpS 15 PFNS 15 PFOSA 16 PFPeS 15 PFDOS 15 PFDA 16 PFDA 16 PFHpA 16 PFHpA 16 PFDA 16 PFDA 16 PFHpA 16 PFHpA 16 PFNA 16 PFNA 16 PFNA 16 PFNA 16 PFDA 16 PFDA 16 PFNA 16 PFNA 16 PFDA 16 PFUA 16 PFUA 16 PFUA 16 PFUA 16 <td< td=""><td>14 15 14 19 15 14 11 17 11 15 14 15 13 14 15 16 16 16 16 14 14 15</td><td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td><td>93 91 93 88 122 96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96</td><td>50-150 50-1</td><td>09/01/2021 1825 09/01/2021 1825</td></td<>	14 15 14 19 15 14 11 17 11 15 14 15 13 14 15 16 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	93 91 93 88 122 96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-1	09/01/2021 1825 09/01/2021 1825
EtFOSA 16 EtFOSE 16 MeFOSA 16 MeFOSA 16 MeFOSA 16 MeFOSE 16 PFBS 14 PFDS 15 PFHpS 15 PFNS 15 PFOSA 16 PFPeS 15 PFDOS 15 PFDOS 15 PFDA 16 PFDA 16 PFDA 16 PFHAX 16 PFHAX 16 PFNA 16 PFDA 16 PFUA 16 P	15 15 14 19 15 14 11 17 11 15 14 15 13 14 15 16 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	91 93 88 122 96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-1	09/01/2021 1825 09/01/2021 1825
EIFOSAA 16 EIFOSE 16 MeFOSA 16 MeFOSA 16 MeFOSE 16 PFBS 14 PFDS 15 PFHpS 15 PFNS 15 PFOSA 16 PFPeS 15 PFDOS 15 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFHAS 15 PFBA 16 PFDA 16 PFHAA 16 PFHAA 16 PFNA 16 PFNA 16 PFNA 16 PFNA 16 PFNA 16 PFDA 16 PFUAA 16 PFUAA 16	15 14 19 15 14 11 17 11 15 14 15 13 14 15 16 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	93 88 122 96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-1	09/01/2021 1825 09/01/2021 1825
EtFOSE 16 MeFOSA 16 MeFOSA 16 MeFOSE 16 PFBS 14 PFDS 15 PFHpS 15 PFNS 15 PFOSA 16 PFPeS 15 PFDOS 15 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFNA 16 PFDA 16 PFNA 16 PFDA 16 PFUA 16 PFOS <td>14 19 15 14 11 17 11 15 14 15 13 14 15 16 16 16 14 14 15</td> <td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td> <td>88 122 96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96</td> <td>50-150 50-1</td> <td>09/01/2021 1825 09/01/2021 1825</td>	14 19 15 14 11 17 11 15 14 15 13 14 15 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	88 122 96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-1	09/01/2021 1825 09/01/2021 1825
MeFOSA 16 MeFOSE 16 PFBS 14 PFDS 15 PFHpS 15 PFNS 15 PFOSA 16 PFPeS 15 PFDOS 15 PFDOS 15 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFNA 16 PFDA 16 PFUA 16 PFOS	19 15 14 11 17 11 15 14 15 13 14 15 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	122 96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-1	09/01/2021 1825 09/01/2021 1825
MeFOSAA 16 MeFOSE 16 PFBS 14 PFDS 15 PFHpS 15 PFNS 15 PFOSA 16 PFPeS 15 PFDOS 15 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFNA 16 PFUA 16 PFUGA 16 PFUGA 16 PFUGA <td>15 14 11 17 11 15 14 15 13 14 15 16 16 16 14 14 15</td> <td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td> <td>96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96</td> <td>50-150 50-1</td> <td>09/01/2021 1825 09/01/2021 1825</td>	15 14 11 17 11 15 14 15 13 14 15 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	96 86 81 112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-1	09/01/2021 1825 09/01/2021 1825
MeFOSE 16 PFBS 14 PFDS 15 PFHpS 15 PFNS 15 PFOSA 16 PFPeS 15 PFDOS 15 PFDA 16 PFDA 16 PFDA 16 PFNA 16 PFNA 16 PFNA 16 PFPA 16 PFNA 16 PFNA 16 PFNA 16 PFNA 16 PFNA 16 PFNA 16 PFVA 16 PFVA 16 PFVA 16 PFVA 16 PFUA	14 11 17 11 15 14 15 13 14 15 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	86 81 112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-1	09/01/2021 1825 09/01/2021 1825
PFBS 14 PFDS 15 PFHpS 15 PFNS 15 PFOSA 16 PFPeS 15 PFDOS 15 PFDA 16 PFDA 16 PFDA 16 PFNA 16 PFNA 16 PFPA 16 PFNA 16 PFNA 16 PFPA 16 PFNA 16 PFNA 16 PFVA 16 PFOS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	11 17 11 15 14 15 13 14 15 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1 1	81 112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-1	09/01/2021 1825 09/01/2021 1825
PFDS 15 PFNS 15 PFOSA 16 PFPeS 15 PFDOS 15 PFDOS 15 PFDA 16 PFHpA 16 PFHAA 16 PFNA 16 PFNA 16 PFPAA 16 PFNA 16 PFDA 16 PFNA 16 PFNA 16 PFDA 16 PFNA 16 PFNA 16 PFDA 16 PFNA 16 PFNA 16 PFDA 16 PFDA 16 PFTcDA 16 PFUdA 16 PFOS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	17 11 15 14 15 13 14 15 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1 1	112 75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-150 50-150 50-150 50-150 50-150 50-150 50-150 50-150 50-150 50-150	09/01/2021 1825 09/01/2021 1825
PFHpS 15 PFNS 15 PFOSA 16 PFPeS 15 PFDOS 15 PFBA 16 PFDA 16 PFHpA 16 PFHxA 16 PFNA 16 PFNA 16 PFPAA 16 PFNA 16 PFDA 16 PFNA 16 PFNA 16 PFPA 16 PFNA 16 PFNA 16 PFNA 16 PFNA 16 PFNA 16 PFNA 16 PFDA 16 PFUAA 16 PFUAA 16 PFUAA 16 PFUAA 16 PFUA 16 PFOS 15 Surrogate Q 13C2_6:2FTS 9	11 15 14 15 13 14 15 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1 1	75 100 85 98 86 96 94 97 103 90 87 96	50-150 50-150 50-150 50-150 50-150 50-150 50-150 50-150 50-150 50-150	09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825
PFNS 15 PFOSA 16 PFPeS 15 PFDOS 15 PFNXS 15 PFBA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFNA 16 PFNA 16 PFPeA 16 PFPeA 16 PFTeDA 16 PFTeDA 16 PFUdA 16 PFUdA 16 PFUS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	15 14 15 13 14 15 16 16 16 14 14 15	1 1 1 1 1 1 1 1 1 1 1	100 85 98 86 96 94 97 103 90 87 96	50-150 50-150 50-150 50-150 50-150 50-150 50-150 50-150 50-150	09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825
PFOSA 16 PFPeS 15 PFDOS 15 PFHxS 15 PFBA 16 PFDA 16 PFDA 16 PFDA 16 PFDA 16 PFNA 16 PFNA 16 PFPAA 16 PFNA 16 PFPA 16 PFPA 16 PFNA 16 PFOA 16 PFPOA 16 PFOS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	14 15 13 14 15 16 16 14 14 14	1 1 1 1 1 1 1 1 1	85 98 86 96 94 97 103 90 87 96	50-150 50-150 50-150 50-150 50-150 50-150 50-150 50-150	09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825
PFPeS 15 PFDOS 15 PFHxS 15 PFBA 16 PFDA 16 PFDA 16 PFDA 16 PFHpA 16 PFNA 16 PFNA 16 PFPeA 16 PFPeA 16 PFTeDA 16 PFTeDA 16 PFUdA 16 PFUS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	15 13 14 15 16 16 14 14 14	1 1 1 1 1 1 1 1 1	98 86 96 94 97 103 90 87 96	50-150 50-150 50-150 50-150 50-150 50-150 50-150 50-150	09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825
PFDOS 15 PFHxS 15 PFBA 16 PFDA 16 PFDoA 16 PFHpA 16 PFNA 16 PFNA 16 PFPeA 16 PFPeA 16 PFTeDA 16 PFTeDA 16 PFTvDA 16 PFUdA 16 PFUS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	13 14 15 16 16 14 14 15	1 1 1 1 1 1 1	86 96 94 97 103 90 87 96	50-150 50-150 50-150 50-150 50-150 50-150 50-150	09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825
PFHxS 15 PFBA 16 PFDA 16 PFDoA 16 PFDoA 16 PFHpA 16 PFNA 16 PFOA 16 PFPA 16 PFNA 16 PFOA 16 PFPeA 16 PFTeDA 16 PFTrDA 16 PFOS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	14 15 16 16 14 14 15	1 1 1 1 1 1 1	96 94 97 103 90 87 96	50-150 50-150 50-150 50-150 50-150 50-150	09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825
PFBA 16 PFDA 16 PFDoA 16 PFDoA 16 PFHpA 16 PFNA 16 PFOA 16 PFOA 16 PFOA 16 PFOA 16 PFPAA 16 PFOA 16 PFTeDA 16 PFTrDA 16 PFOS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	15 16 16 14 14 15	1 1 1 1 1 1	94 97 103 90 87 96	50-150 50-150 50-150 50-150 50-150	09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825
PFDA 16 PFDoA 16 PFHpA 16 PFHxA 16 PFNA 16 PFOA 16 PFOA 16 PFPA 16 PFPA 16 PFPA 16 PFPA 16 PFTeDA 16 PFTrDA 16 PFUdA 16 PFOS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	16 16 14 14 15	1 1 1 1 1	97 103 90 87 96	50-150 50-150 50-150 50-150 50-150	09/01/2021 1825 09/01/2021 1825 09/01/2021 1825 09/01/2021 1825
PFDoA 16 PFHpA 16 PFHxA 16 PFNA 16 PFOA 16 PFPeA 16 PFTeDA 16 PFTrDA 16 PFUdA 16 PFUdA 16 PFS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	16 14 14 15	1 1 1 1	103 90 87 96	50-150 50-150 50-150	09/01/2021 1825 09/01/2021 1825 09/01/2021 1825
PFHpA 16 PFHxA 16 PFNA 16 PFOA 16 PFPeA 16 PFTeDA 16 PFTvDA 16 PFUdA 16 PFUdA 16 PFUdA 16 PFU3 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	14 14 15	1 1 1	90 87 96	50-150 50-150	09/01/2021 1825 09/01/2021 1825
PFHxA 16 PFNA 16 PFOA 16 PFPeA 16 PFTcDA 16 PFTrDA 16 PFUdA 16 PFOS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	14 15	1 1	87 96	50-150	09/01/2021 1825
PFNA 16 PFOA 16 PFPeA 16 PFTeDA 16 PFTrDA 16 PFUdA 16 PFOS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	15	1	96	50 150	0//01/2021 1020
PFOA 16 PFPeA 16 PFTeDA 16 PFTrDA 16 PFUdA 16 PFOS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	15			50-150	09/01/2021 1825
PFPeA 16 PFTeDA 16 PFTrDA 16 PFUdA 16 PFOS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	15	1	94	50-150	09/01/2021 1825
PFTeDA 16 PFTrDA 16 PFUdA 16 PFOS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	15	1	94	50-150	09/01/2021 1825
PFTrDA 16 PFUdA 16 PFOS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	15	1	94 01	50 150	09/01/2021 1825
PFUdA 16 PFOS 15 Surrogate Q 13C2_4:2FTS 9 13C2_6:2FTS 9	13	1	91 81	50 150	09/01/2021 1825
PFOS 15 Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	13	1	85	50 150	09/01/2021 1825
Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	14	1	00	50-150	09/01/2021 1025
Surrogate Q % 13C2_4:2FTS 9 13C2_6:2FTS 9	13 Accontance	I	89	50-150	09/01/2021 1825
13C2_4:2FTS 9 13C2_6:2FTS 9	Rec Limit	U Contraction of the second se			
13C2_6:2FTS 9	2 25-150				
	0 25-150				
13C2 8:2FTS 9	3 25-150				
13C2 PFDoA 9	0 25-150				
13C2 PFTeDA 9	6 25-150				
13C3 PFBS 9	2 25-150				
13C3 PEHxS	7 25-150				
	23-130				
13С3-ПГРО-DA 9	2 25-150				
LOQ = Limit of Quantitation ND	= Not detected at or above the	DL	N = Recovery is ou	It of criteria	
DL = Detection Limit J =	Estimated result < LOQ and \geq	DL	P = The RPD betw	een two GC columns ex	ceeds 40%
* =	RSD is out of criteria		+ = RPD is out of c	riteria	
Note: Calculations are performed before roundin		rrors in calcula	ted results		

PFAS by LC/MS/MS - LCS

		3		
Sample ID: WQ14001-002 Batch: 14001 Analytical Method: PFAS by ID SOP			Matrix: Prep Method: Prep Date:	Aqueous SOP SPE 08/31/2021 1810
Surrogate	Q % Rec	Acceptance Limit		
13C4_PFBA	92	25-150		
13C4_PFHpA	91	25-150		
13C5_PFHxA	97	25-150		
13C5_PFPeA	91	25-150		
13C6_PFDA	92	25-150		
13C7_PFUdA	94	25-150		
13C8_PFOA	89	25-150		
13C8_PFOS	92	25-150		
13C8_PFOSA	95	10-150		
13C9_PFNA	91	25-150		
d-EtFOSA	75	10-150		
d5-EtFOSAA	91	25-150		
d9-EtFOSE	104	10-150		
d-MeFOSA	81	10-150		
d3-MeFOSAA	90	25-150		
d7-MeFOSE	91	10-150		

 LOQ = Limit of Quantitation
 ND = Not detected at or above the DL
 N = Recovery is out of criteria

 DL = Detection Limit
 J = Estimated result < LOQ and ≥ DL</td>
 P = The RPD between two GC columns exceeds 40%

 * = RSD is out of criteria
 + = RPD is out of criteria

 Note: Calculations are performed before rourbing to avoid round-off errors in calculated results

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PFAS by LC/MS/MS - MB

Sample ID: WQ14070-001 Batch: 14070 Analytical Method: PFAS by ID SOP

Matrix: Aqueous Prep Method: SOP SPE

Prep Date: 09/01/2021 1309

Parameter	Resu	ult	Q	Dil		LOQ	MDL	Units	Analysis Date
9CI-PF3ONS	ND			1		8.0	0.48	ng/L	09/02/2021 1517
11CI-PF3OUdS	ND			1		8.0	0.66	na/L	09/02/2021 1517
8:2 FTS	ND			1		8.0	1.6	ng/L	09/02/2021 1517
6:2 FTS	4.0		J	1		8.0	2.0	na/L	09/02/2021 1517
4:2 FTS	ND			1		8.0	0.87	ng/l	09/02/2021 1517
GenX	ND			1		8.0	2.1	ng/L	09/02/2021 1517
	ND			1		8.0	0.48	ng/L	09/02/2021 1517
EtFOSA	ND			1		8.0	1.4	ng/L	09/02/2021 1517
EtFOSAA	ND			1		8.0	0.75	na/L	09/02/2021 1517
EtFOSE	ND			1		8.0	0.95	ng/L	09/02/2021 1517
MeEOSA	ND			1		16	1.3	ng/l	09/02/2021 1517
MeFOSAA	ND			1		8.0	0.93	ng/l	09/02/2021 1517
MeFOSE	ND			1		8.0	1.3	ng/L	09/02/2021 1517
PERS	ND			1		4.0	0.41	ng/L	09/02/2021 1517
PEDS	ND			1		4.0	0.78	ng/L	09/02/2021 1517
PFHnS	ND			1		4.0	0.70	ng/L	09/02/2021 1517
PENS	ND			1		4.0	0.00	ng/L	09/02/2021 1517
PEOSA	ND			1		4.0	0.61	ng/L	09/02/2021 1517
PFPoS	ND			1		10	0.59	ng/L	09/02/2021 1517
PEDOS				1		9.0 8.0	1.0	ng/L	09/02/2021 1517
DEHVS				1		4.0	0.55	ng/L	09/02/2021 1517
DEBA				1		4.0	0.55	ng/L	09/02/2021 1517
				1		4.0	0.50	ng/L	09/02/2021 1517
PEDoA	ND			1		4.0	0.32	ng/L	09/02/2021 1517
PFHnA	ND			1		4.0	0.45	ng/L	09/02/2021 1517
ΡΕΗχΔ	ND			1		4.0	0.69	ng/L	09/02/2021 1517
PENA				1		4.0 1 0	0.07	ng/L	09/02/2021 1517
DECA				1		4.0	0.40	ng/L	09/02/2021 1517
				1		4.0	0.03	ng/L	09/02/2021 1517
				1		4.0	0.54	ng/L	09/02/2021 1517
				1		4.0	0.00	ng/L	09/02/2021 1517
				1		4.0	0.53	ng/L	09/02/2021 1517
PFUUA				1		4.0	0.03	ng/L	09/02/2021 1517
FF03	ND					4.0	2.0	Hg/L	09/02/2021 1517
Surrogate	Q	% Rec	А	Limit					
13C2_4:2FTS		101		25-150					
13C2_6:2FTS		89		25-150					
13C2 8:2FTS		77		25-150					
		83		25-150					
1202 DETODA		45		25 150					
		40		25-150					
13C3_PFBS		80		25-150					
13C3_PFHxS		92		25-150					
13C3-HFPO-DA		91		25-150					
LOQ = Limit of Quantitation		ND = Not det	ected a	t or above the DL		N =	Recovery is out of crit	eria	
DL = Detection Limit		J = Estimated	d result	< LOQ and \geq DL		P =	The RPD between two	o GC columns e	exceeds 40%
		* = RSD is ou	ut of crit	leria		+ =	RPD is out of criteria		
Note: Calculations are performed befo	re rour	nding to ave	oid ro	ound-off errors i	n calcula	ted res	ults		
Pace Analytical Services, LLC (formerly Sheal	y Enviro	nmental Servi	ices, li			oolet		QC Data	a for Lot Number: WH11069
vest Columbia, SC	29172	(803) /91-9	100	гах (ŏU3) /91-911	www.pa	ceiabS.C	UIII		Page 37 of 51

PFAS by LC/MS/MS - MB

			3			
Sample ID: WQ14070-001 Batch: 14070 Analytical Method: PFAS by ID SOP				Matrix: Prep Method: Prep Date:	 Aqueous SOP SPE 09/01/2021 1309 	
Surrogate	Q	% Rec	Acceptanc Limit	e		
13C4_PFBA		91	25-150			
13C4_PFHpA		83	25-150			
13C5_PFHxA		84	25-150			
13C5_PFPeA		87	25-150			
13C6_PFDA		81	25-150			
13C7_PFUdA		79	25-150			
13C8_PFOA		87	25-150			
13C8_PFOS		86	25-150			
13C8_PFOSA		94	10-150			
13C9_PFNA		92	25-150			
d-EtFOSA		80	10-150			
d5-EtFOSAA		99	25-150			
d9-EtFOSE		92	10-150			
d-MeFOSA		79	10-150			
d3-MeFOSAA		95	25-150			
d7-MeFOSE		88	10-150			

 LOQ = Limit of Quantitation
 ND = Not detected at or above the DL
 N = Recovery is out of criteria

 DL = Detection Limit
 J = Estimated result < LOQ and ≥ DL</td>
 P = The RPD between two GC columns exceeds 40%

 * = RSD is out of criteria
 + = RPD is out of criteria

 Note: Calculations are performed before rourding to avoid round-off errors in calculated results

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PFAS by LC/MS/MS - LCS

Sample ID: WQ14070-002
Batch: 14070

Analytical Method: PFAS by ID SOP

Matrix: Aqueous Prep Method: SOP SPE

Prep Date: 09/01/2021 1309

Parameter	Spike Amour (ng/L)	nt Result) (ng/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
9CI-PF3ONS	15	16		1	108	50-150	09/02/2021 1528
11CI-PF3OUdS	15	16		1	103	50-150	09/02/2021 1528
8:2 FTS	15	16		1	102	50-150	09/02/2021 1528
6:2 FTS	15	25	Ν	1	165	50-150	09/02/2021 1528
4:2 FTS	15	15		1	97	50-150	09/02/2021 1528
GenX	32	29		1	91	50-150	09/02/2021 1528
ADONA	15	17		1	116	50-150	09/02/2021 1528
EtFOSA	16	20		1	126	50-150	09/02/2021 1528
EtFOSAA	16	15		1	93	50-150	09/02/2021 1528
EtFOSE	16	16		1	102	50-150	09/02/2021 1528
MeFOSA	16	16		1	102	50-150	09/02/2021 1528
MeFOSAA	16	18		1	110	50-150	09/02/2021 1528
MeFOSE	16	15		1	92	50-150	09/02/2021 1528
PFBS	14	14		1	96	50-150	09/02/2021 1528
PFDS	15	16		1	101	50-150	09/02/2021 1528
PFHpS	15	14		1	91	50-150	09/02/2021 1528
PFNS	15	16		1	105	50-150	09/02/2021 1528
PFOSA	16	15		1	93	50-150	09/02/2021 1528
PFPeS	15	16		1	110	50-150	09/02/2021 1528
PFDOS	15	13		1	82	50-150	09/02/2021 1528
PFHxS	15	15		1	104	50-150	09/02/2021 1528
PFBA	16	17		1	105	50-150	09/02/2021 1528
PFDA	16	17		1	106	50-150	09/02/2021 1528
PFDoA	16	17		1	104	50-150	09/02/2021 1528
PFHpA	16	16		1	102	50-150	09/02/2021 1528
PFHxA	16	16		1	102	50-150	09/02/2021 1528
PFNA	16	19		1	119	50-150	09/02/2021 1528
PFOA	16	16		1	101	50-150	09/02/2021 1528
PFPeA	16	16		1	103	50-150	09/02/2021 1528
PFTeDA	16	17		1	105	50-150	09/02/2021 1528
PETrDA	16	14		1	89	50-150	09/02/2021 1528
PFUdA	16	17		1	107	50-150	09/02/2021 1528
PEOS	15	15		1	98	50-150	09/02/2021 1528
Surrogate	0	Acce	eptance	·			0,102,2021 1020
			- 150				
1302_4:2F15		96 23	5-150				
13C2_6:2FTS		94 25	o-150				
13C2_8:2FTS		76 25	5-150				
13C2_PFDoA		82 25	5-150				
13C2_PFTeDA		68 25	5-150				
13C3_PFBS		81 25	5-150				
13C3_PFHxS		84 25	5-150				
13C3-HFPO-DA		91 25	5-150				
LOQ = Limit of Quantitation		ND = Not detected at or a	above the DL		N = Recovery is out	of criteria	
DL = Detection Limit		J = Estimated result < LC	Q and ≥ DL		P = The RPD betwee	en two GC columns ex	ceeds 40%
Note: Calculations are performe	d before round	ing to avoid round	d-off errors i	in calculat	ed results	nonta	
Pace Analytical Services, LLC (formerl 106 Vantage Point Drive West Columi	y Shealy Environr pia, SC 29172 (nental Services, Inc.) (803) 791-9700 Fax	(803) 791-911	1 www.pac	celabs.com	QC Data	for Lot Number: WH11069 Page 39 of 51

PFAS by LC/MS/MS - LCS

			3			
Sample ID: WQ14070-002 Batch: 14070 Analytical Method: PFAS by ID SOP				Matrix: Prep Method: Prep Date:	Aqueous SOP SPE 09/01/2021	1309
Surrogate	Q	% Rec	Acceptance Limit			
13C4_PFBA		88	25-150			
13C4_PFHpA		84	25-150			
13C5_PFHxA		86	25-150			
13C5_PFPeA		88	25-150			
13C6_PFDA		81	25-150			
13C7_PFUdA		76	25-150			
13C8_PFOA		87	25-150			
13C8_PFOS		82	25-150			
13C8_PFOSA		89	10-150			
13C9_PFNA		83	25-150			
d-EtFOSA		69	10-150			
d5-EtFOSAA		95	25-150			
d9-EtFOSE		99	10-150			
d-MeFOSA		80	10-150			
d3-MeFOSAA		95	25-150			
d7-MeFOSE		83	10-150			

 LOQ = Limit of Quantitation
 ND = Not detected at or above the DL
 N = Recovery is out of criteria

 DL = Detection Limit
 J = Estimated result < LOQ and ≥ DL</td>
 P = The RPD between two GC columns exceeds 40%

 * = RSD is out of criteria
 + = RPD is out of criteria

 Note: Calculations are performed before rourbing to avoid round-off errors in calculated results

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PFAS by LC/MS/MS - MS

Sample ID: WH11069-008MS Batch: 14070

Analytical Method: PFAS by ID SOP

Matrix: Aqueous Prep Method: SOP SPE

Prep Date: 09/01/2021 1309

Parameter	Sample Amount (ng/L)	Spike Amour (ng/L)	nt Result (ng/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
9CI-PF3ONS	ND	12	12		1	97	50-150	09/02/2021 1703
11CI-PF3OUdS	ND	13	10		1	83	50-150	09/02/2021 1703
8:2 FTS	ND	13	12		1	93	50-150	09/02/2021 1703
6:2 FTS	ND	13	13		1	102	50-150	09/02/2021 1703
4:2 FTS	ND	12	12		1	100	50-150	09/02/2021 1703
GenX	ND	27	27		1	100	50-150	09/02/2021 1703
ADONA	ND	13	13		1	105	50-150	09/02/2021 1703
EtFOSA	ND	13	16		1	123	50-150	09/02/2021 1703
EtFOSAA	ND	13	12		1	90	50-150	09/02/2021 1703
EtFOSE	ND	13	13		1	100	50-150	09/02/2021 1703
MeFOSA	ND	13	13		1	98	50-150	09/02/2021 1703
MeFOSAA	ND	13	12		1	91	50-150	09/02/2021 1703
MeFOSE	ND	13	13		1	95	50-150	09/02/2021 1703
PFBS	ND	12	11		1	97	50-150	09/02/2021 1703
PFDS	ND	13	10		1	81	50-150	09/02/2021 1703
PFHpS	ND	13	10		1	80	50-150	09/02/2021 1703
PFNS	ND	13	11		1	86	50-150	09/02/2021 1703
PFOSA	ND	13	12		1	91	50-150	09/02/2021 1703
PFPeS	ND	13	13		1	100	50-150	09/02/2021 1703
PFDOS	ND	13	11		1	88	50-150	09/02/2021 1703
PFHxS	ND	12	13		1	105	50-150	09/02/2021 1703
PFBA	ND	13	14		1	102	50-150	09/02/2021 1703
PEDA	ND	13	14		1	106	50-150	09/02/2021 1703
PFDoA	ND	13	13		1	101	50-150	09/02/2021 1703
PFHpA	ND	13	12		1	91	50-150	09/02/2021 1703
PFHxA	ND	13	13		1	96	50-150	09/02/2021 1703
PFNA	ND	13	15		1	109	50-150	09/02/2021 1703
PFOA	ND	13	13		1	100	50-150	09/02/2021 1703
PFPeA	ND	13	14		1	103	50-150	09/02/2021 1703
PFTeDA	ND	13	15		1	109	50-150	09/02/2021 1703
PFTrDA	ND	13	13		1	97	50-150	09/02/2021 1703
PFUdA	ND	13	12		1	91	50-150	09/02/2021 1703
PFOS	ND	12	12		1	95	50-150	09/02/2021 1703
Surrogate	0 % R	/			·		00.00	0//02/2021 1/00
13C2_4:2F1S	95		25-150					
13C2_6:2FTS	109		25-150					
13C2_8:2FTS	77		25-150					
13C2_PFDoA	76		25-150					
13C2_PFTeDA	75		25-150					
13C3_PFBS	86		25-150					
13C3_PFHxS	92		25-150					
13C3-HFPO-DA	91		25-150					
OQ = Limit of Quantitation PL = Detection Limit	ND = J = Es	Not detected stimated resul	at or above the DL $t < LOQ$ and $\ge DL$		N = Rec P = The	overy is out of criteri RPD between two C	a GC columns excee	eds 40%
	* = R\$	SD is out of cr	iteria		+ = RPD) is out of criteria		

PFAS by LC/MS/MS - MS

Sample ID: WH11069-008MS Batch: 14070			Matrix: Prep Method:	Aqueous SOP SPE	
Analytical Method: PFAS by ID SOP			Prep Date:	09/01/2021 1309	•
Surrogate	Q % Rec	Acceptance Limit			
13C4_PFBA	87	25-150			
13C4_PFHpA	90	25-150			
13C5_PFHxA	90	25-150			
13C5_PFPeA	89	25-150			
13C6_PFDA	76	25-150			
13C7_PFUdA	71	25-150			
13C8_PFOA	90	25-150			
13C8_PFOS	92	25-150			
13C8_PFOSA	104	10-150			
13C9_PFNA	81	25-150			
d-EtFOSA	45	10-150			
d5-EtFOSAA	85	25-150			
d9-EtFOSE	84	10-150			
d-MeFOSA	71	10-150			
d3-MeFOSAA	90	25-150			
d7-MeFOSE	74	10-150			

 LOQ = Limit of Quantitation
 ND = Not detected at or above the DL
 N = Recovery is out of criteria

 DL = Detection Limit
 J = Estimated result < LOQ and ≥ DL</td>
 P = The RPD between two GC columns exceeds 40%

 * = RSD is out of criteria
 + = RPD is out of criteria

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PFAS by LC/MS/MS - MB

Sample ID: WQ14719-001
Batch: 14719
Analytical Method: PEAS by ID SOP

Matrix: Aqueous Prep Method: SOP SPE Prep Date: 09/08/2021 1229

Parameter	Result	C	2 Dil	LOC	2	MDL	Units	Analysis Date
6:2 FTS	ND		1	8.0		2.0	ng/L	09/09/2021 1816
PFTeDA	ND		1	4.0		0.60	ng/L	09/09/2021 1816
Surrogate	Q % R	ec	Acceptance Limit					
13C2_4:2FTS	11	9	25-150					
13C2_6:2FTS	10	9	25-150					
13C2_8:2FTS	92		25-150					
13C2_PFDoA	89		25-150					
13C2_PFTeDA	97		25-150					
13C3_PFBS	10	5	25-150					
13C3_PFHxS	10	3	25-150					
13C3-HFPO-DA	10	1	25-150					
13C4_PFBA	10	ō	25-150					
13C4_PFHpA	96		25-150					
13C5_PFHxA	10	7	25-150					
13C5_PFPeA	10	9	25-150					
13C6_PFDA	10	4	25-150					
13C7_PFUdA	93		25-150					
13C8_PFOA	10	3	25-150					
13C8_PFOS	88		25-150					
13C8_PFOSA	10	1	10-150					
13C9_PFNA	10	1	25-150					
d-EtFOSA	91		10-150					
d5-EtFOSAA	96		25-150					
d9-EtFOSE	10	9	10-150					
d-MeFOSA	90		10-150					
d3-MeFOSAA	11	D	25-150					
d7-MeFOSE	10	4	10-150					

LOQ = Limit of Quantitation	ND = Not detected at or above the DL	N = Recovery is out of criteria
DL = Detection Limit	J = Estimated result < LOQ and \geq DL	P = The RPD between two GC columns exceeds 40%
	* = RSD is out of criteria	+ = RPD is out of criteria
Note: Calculations are performed	I before rounding to avoid round-off errors in cal	culated results

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PFAS by LC/MS/MS - LCS

Sample ID: WQ14719-002 Batch: 14719 Analytical Method: PFAS by ID SOP					Matrix Prep Method Prep Date	: Aqueous : SOP SPE : 09/08/2021 122	9	
	Spi	ke	Decult		!		%Rec	
Parameter	(ng	/L)	(ng/L)	Q	Dil	% Rec	Limit	Analysis Date
6:2 FTS	15		13		1	85	50-150	09/09/2021 1827
PFTeDA	16		15		1	92	50-150	09/09/2021 1827
Surrogate	Q	% Rec	Accepta Limit	nce				
13C2_4:2FTS		109	25-15	0				
13C2_6:2FTS		111	25-15	0				
13C2_8:2FTS		105	25-15	0				
13C2_PFDoA		88	25-15	0				
13C2_PFTeDA		101	25-15	0				
13C3_PFBS		95	25-15	0				
13C3_PFHxS		97	25-15	0				
13C3-HFPO-DA		103	25-15	0				
13C4_PFBA		104	25-15	0				
13C4_PFHpA		105	25-15	0				
13C5_PFHxA		103	25-15	0				
13C5_PFPeA		99	25-15	0				
13C6_PFDA		99	25-15	0				
13C7_PFUdA		91	25-15	0				
13C8_PFOA		101	25-15	0				
13C8_PFOS		90	25-15	0				
13C8_PFOSA		102	10-15	0				
13C9_PFNA		97	25-15	0				
d-EtFOSA		88	10-15	0				
d5-EtFOSAA		95	25-15	0				
d9-EtFOSE		112	10-15	0				
d-MeFOSA		95	10-15	0				
d3-MeFOSAA		110	25-15	0				
d7-MeFOSE		111	10-15	0				

LOQ = Limit of Quantitation	ND = Not detected at or above the DL	N = Recovery is out of criteria
DL = Detection Limit	J = Estimated result < LOQ and \geq DL	P = The RPD between two GC columns exceeds 40%
	* = RSD is out of criteria	+ = RPD is out of criteria
Note: Calculations are performed before round	ding to avoid round-off errors in calculated	results

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Chain of Custody and Miscellaneous Documents

Pace Analytical " www.reales.com tesults Requested By: 8/31/2021	WH11069	KLC2	LAB USE ONLY									Comments		ompound list		Samples Intact () or N	on this COC document.	v:00 240/arch:2009 Page 1 of 1
Yes No tes 8/10/2021 R Requested A													WI water sample:	Need the WI 33 o		V or N	may not be provided	FMT-ALL-C-002re
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Internal Transfer Cl	Kriport To Steven Mileczko Pace Anslyf cal Green Bay 1241 Ballevue Sfreet Suite S	Green Say, WI 54302 Phone (820)469-2438	ttem Sample 10	1 MW41	2 MW2	3 MW-201	4 20250 5 MV24	6 MW3	7 SUMP	6 EFFLUENT	9 ECUIP BLANK	10 FIELD BLANK	Transfers Roleased BV	1 all all			Cooler Temperature on Koce ***In order to maintain client co This chain of oustody is con	Tuesday, Augus: 10, 2021 10 41 15 A

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111		Document Name:	Document Revised: 26Mer2020
Pace Analytical	Sample Co	ndition Upon Receipt (SCUR)	Document Revised. Zowarzozo
	ENDER	Document No.:	Author
1241 Bellevuc Street, Green Bay, WI 543	302 ENV-F	RM-GBAY-0014-Rev.00	Pace Green Bay Quality Office
Sample	e Condition	Upon Receipt Form (S	SCUR)
lient Name: DAL Fox		Project#:	0#:40004000
		N.	0# 40231335
Client Client Client	ease I UPS	1 vvaitco	
Tracking #:		402	31335
Custody Seal on Cooler/Box Present: 🕅 yes	no Seals	intact: 📈 yes 🦵 no	
Custody Seal on Samples Present: T yes .	🕅 Seals	intact: 💟 yes 🛄 no	
Packing Material: 🕅 Bubble Wrap 🗆 Bu	ubble Bags 🗌	None C Other	
Thermometer Used SR - 107	Type of Ice:	Web Blue Dry None 🛛 🕅	Samples on icc, cooling process has begun
Cooler Temperature Uncorr: 🔪 /Corr:	1		Person examining contents:
femp Blank Present: 🏹 yes 🦵 no	Biolog	gical Tissue is Frozen: 🦵 ye	est no Date: 8/10/2/initials: A21
femp should be above freezing to 6°C. Bote Semples may be received of < 0°C if abinned or	Doctor		Labeled Distriction
Chain of Custody Prevent:	Myrce.		Labeled By Initials:
Chain of Custody Flesent		Division a att and	11
Chain of Cuttody Palipoviabod:		Data 2.10 Jatr 190	Think into TITples one
Samplar Name & Singatum on COO:			
Sampler Name & Signature on COC:	tx res ⊔No	LIN/A 14,	
Samples Arrived within Hold Time:	βA(γes ∐No	5.	
 VOA Samples frozen upon receipt 	OYes DNo	Date/Time;	
Short Hold Time Analysis (<72hr);	Xires ⊡No	5.	
Rush Turn Around Time Requested:	Dires Xilo	7.	307 411
Sufficient Volume:		в,	
For Analysis X Yes ONe MS/M	SD: 🗆 Yes 🕅 No		
Correct Containers Used:	XYes DNo	0.000+0100	aded to Cal per PM, received
-Pace Containers Used:	Tres Deto	Trismaria ni ANNO	Shous ASI
-Pace IR Containers Used:	Yes No	TXN/A	0.012(1).0
Containers Intert:	*New CiNo	10	in the second
Filtered volume received for Dissolved tests	ElVes EiNo	XN/A 11	······
Sample Labele metch COC	Uver Minia	THE IS ODH AN H	ma 8/10/22 012
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Client Notification/ Resolution:	-	li shaok	ed, see allached form for additional commands
Person Contacted:		Date/Time:	ee, ees accorrectionn for additional comments 🖵
Commontel Resolution:			
CONTRACTOR RESOLUTION.			

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample login

Page 2 of 2



Samples Receipt Checklist (SRC) (ME0018C-15) Issuing Authority: Pace ENV - WCOL

Revised:9/29/2020 Page 1 of 1

Sample Receipt Checklist (SRC)

Client: Pace	Cooler Inspected by/date: JRG2 / D8/11/2021 Lot #: WH11069
Means of receipt: Pa	acc Client 🗸 UPS FedEx Other:
Yes No	1. Were custody seals present on the cooler?
Yes No NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: NA	Chlorine Strip ID: NA Tested by: NA
Original temperature upor 2.3 /2.3 °C NA /N	a receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID; NA
Method: Temperature	Blank Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C
Method of coolant:	Wet Ice Dice Packs Dry Ice None
Yes No NA	 If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / furn-ta-free (circle one)
Yes No NA	4. Is the commercial courier's nacking slin attached to this form?
Ves No	5. Were proper custody procedures (relinquished/received) followed?
VYes No	6. Were sample IDs listed on the COC?
VYes No	7. Were sample IDs listed on all sample containers?
Ves No	8. Was collection date & time listed on the COC?
Ves No	9. Was collection date & time listed on all sample containers?
Ves No	10. Did all container label information (ID, date, time) agree with the COC?
VYes No	11. Were tests to be performed listed on the COC?
Z Yes No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
	12 Was adapted a second a second
Z Vac No	15. Was adequate sample volume available?
	 Were any camples contained within /2 the holding time of 48 hours, whichever comes first? Were any camples contained within /2 the holding time of 48 hours, whichever comes first?
	16. For VOA and RSK-175 earaplas, were hubble interent place since (Ullice form in discusse)
	in any of the VOA vials?
Ycs No VNA	 Were all DRO/metals/nutrient samples received at a pH of < 2?
Yes No VINA	18. Were all cyanide samples received at a $pH > 12$ and sulfide samples received at a $pH > 9?$
Yes No ZNA	residual chlorinc?
□Yes □No ☑NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc) correctly transcribed from the COC into the comment section in LIMS?
Yes V No	21. Was the quote number listed on the container label? If use, Quote #
Sample Preservation (A	furt he completed for one complete() incompation matching discussion (1000 #
Sample Preservation (viust de completed for any sample(s) incorrectly preserved or with neadspace.)
Sample(s) m	were received incorrectly preserved and were adjusted accordingly
Time of preservation NA	The of circle one: H2SO4, HNO3, HCI, NAOH using SR $\# \frac{343}{2}$.
The of preservation	. If more than one preservative is needed, please note in the comments below.
Sample(s)	were received with bubbles >6 mm in diameter.
Samples(s) NA adjusted accordingly in sa	were received with TRC > 0.5 mg/L (If #19 is $n\sigma$) and were mple receiving with sodium thiosulfate (Na ₂ S ₂ O ₃) with Shealy ID: NA
SR barcode labels applied	by: JSM Date: 08/11/2021
Comments;	

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.) 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

APPENDIX C.1.F EMERGING CONTAMINANT HISTORICAL USE RESEARCH

Chris Cailles

From:	Jennifer Rovzar
Sent:	Friday, September 24, 2021 3:22 PM
То:	Chris Cailles
Subject:	FW: [EXTERNAL] Open Records Request
Attachments:	06-009336.pdf; 03-010087.pdf; 19-023241.pdf; FD19-002113.pdf; 12-018250.pdf;
	11-003804.pdf

Email chain from S. Milwaukee.

Jennífer Rovzar

DAI Environmental, Inc.

27834 N. Irma Lee Circle Lake Forest, IL 60045 Ph: (847) 573-8900 x579 Cell: (847) 445-7461 Fax: (847) 573-8953 Email: <u>rovzar@daienv.com</u>

From: Dan Margetta [mailto:margettad@smwi.org]
Sent: Thursday, July 15, 2021 2:22 PM
To: Jennifer Rovzar <rovzar@daienv.com>
Subject: RE: [EXTERNAL] Open Records Request

The attached reports are what I was able to locate regarding fire calls to the property at 2410-2424 10th Avenue and 1009 Marquette Avenue. I would also suggest filing a request with the South Milwaukee Fire Department as they may have more detailed records regarding fire incidents.

Thank You,

Dan Margetta Police IT/Records Custodian South Milwaukee Police Department 2424 15th Avenue South Milwaukee, WI 53172 (414) 768-8060 Ext. 172 margettad@smwi.org

From: Jennifer Rovzar <<u>rovzar@daienv.com</u>> Sent: Wednesday, July 14, 2021 4:30 PM To: Dan Margetta <<u>margettad@smwi.org</u>> Subject: [EXTERNAL] Open Records Request

Mr. Margetta,

I am submitting this email to request any fire records you have pertaining to the properties located at 2410-2424 10th Avenue and 1009 Marquette Avenue (also known as Sunrise Shopping Center). I am looking for any historical as well as current records of any possible fires that may have occurred at these locations. Please feel free to contact me with any questions or if you require any further information to process my request.

Sincerely,

Jennífer Rovzar

DAI Environmental, Inc.

27834 N. Irma Lee Circle Lake Forest, IL 60045 Ph: (847) 573-8900 x579 Cell: (847) 445-7461 Fax: (847) 573-8953 Email: <u>rovzar@daienv.com</u>

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 https://www.oakcreekwi.gov/home/showdocument?id=15262&t=637568444423093058

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Chris Cailles

From:	Jennifer Rovzar
Sent:	Friday, September 24, 2021 3:21 PM
То:	Chris Cailles
Subject:	FW: [EXTERNAL] Fwd: Open Records Request

Email chain from South Milwaukee fire chief.

Jennífer Rovzar

DAI Environmental, Inc.

27834 N. Irma Lee Circle Lake Forest, IL 60045 Ph: (847) 573-8900 x579 Cell: (847) 445-7461 Fax: (847) 573-8953 Email: rovzar@daienv.com

From: Joe Knitter [mailto:knitter@smwi.org]
Sent: Thursday, July 15, 2021 10:48 AM
To: Jennifer Rovzar <rovzar@daienv.com>
Cc: Shannon Hrdlicka <shrdlicka@smwi.org>
Subject: RE: [EXTERNAL] Fwd: Open Records Request

Our software goes back until January of 1999. By City Policy, we are only obligated to maintain this type of record for seven years. Unfortunately, we do not archive records not entered into our software.

Chief Knitter

From: Jennifer Rovzar [mailto:rovzar@daienv.com]
Sent: Thursday, July 15, 2021 10:40 AM
To: Joe Knitter
Cc: Shannon Hrdlicka
Subject: RE: [EXTERNAL] Fwd: Open Records Request

Hi Chief Knitter,

Thank you for your quick response. Do you know how far back the software keeps records from? Do you know where I could find/look for historical fire data, such as from the 1960's-80's?

Thank you, Jennifer

Jennífer Rovzar

DAI Environmental, Inc. 27834 N. Irma Lee Circle

Lake Forest, IL 60045 Ph: (847) 573-8900 x579 Cell: (847) 445-7461 Fax: (847) 573-8953 Email: rovzar@daienv.com

From: Joe Knitter [mailto:knitter@smwi.org]
Sent: Thursday, July 15, 2021 10:32 AM
To: Jennifer Rovzar <rovzar@daienv.com>
Cc: Shannon Hrdlicka <shrdlicka@smwi.org>
Subject: RE: [EXTERNAL] Fwd: Open Records Request

Ms. Rovzar:

A query of our record management software revealed the records attached to this email. Since you did not specify a timeframe, this is for all responses that were NOT medical-response related going back as far as the software would allow.

Chief Knitter

From: Joe Knitter Sent: Thursday, July 15, 2021 9:25 AM To: 'rovzar@daienv.com' Subject: RE: [EXTERNAL] Fwd: Open Records Request

Ms. Rovzar:

I have forwarded your message to my department email address and will be responding from here going forward. I will query our records and get that information to you as quickly as possible.

Chief Knitter

From: SMFD Website [mailto:smfd929@gmail.com] Sent: Wednesday, July 14, 2021 6:43 PM To: Joe Knitter; Shannon Hrdlicka Subject: [EXTERNAL] Fwd: Open Records Request

Joseph Knitter

Please excuse any typos, grammatical errors, or indication of brevity... This was sent from my iPhone.

Begin forwarded message:

From: Jennifer Rovzar <<u>rovzar@daienv.com</u>> Date: July 14, 2021 at 4:36:37 PM CDT

Mr. Kitter

I am submitting this email to request any fire records you have pertaining to the properties located at 2410-2424 10th Avenue and 1009 Marquette Avenue (also known as Sunrise Shopping Center). I am looking for any historical as well as current records of any possible fires that may have occurred at these locations. Please feel free to contact me with any questions or if you require any further information to process my request.

Sincerely,

Jennífer Rovzar

DAI Environmental, Inc.

27834 N. Irma Lee Circle Lake Forest, IL 60045 Ph: (847) 573-8900 x579 Cell: (847) 445-7461 Fax: (847) 573-8953 Email: <u>rovzar@daienv.com</u>

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Call Detail

X

.010087	2500 10th Ave (Sunrise Village)		Fire-Other (FI2)		
Reported Priority Case# Stacked Dispatched Arrived	6/20/03 20:4 1 03-010029 20:49:48	19:48	Units,			
Finished Disposition	21:52:00					
Names		Conversion				
	Involved Person	Smith,Issachar BI 1050 Marion Ave, 106 South Milwaukee, WI 53172		Sex> Male Race> Black/African American DOB> 11/18/87		
	Involved Person	Zoric, Damir 1511 Nicholson #3 South Milwaukee, WI 53172		Sex> Male Race> White DOB> 09/04/87		
	Involved Person	Zoric, Damir 1511 Nicholson #3 South Milwaukee, WI 53172		Sex> Male Race> White DOB> 09/04/87		
	Involved Person	Zoric, Damir 1511 Nicholson #3 South Milwaukee, WI 53172		Sex> Male Race> White DOB> 09/04/87		
Summary	Several Callers Report Youths Who Stated Th	: A Youth Just Set A Fire On The T ey Didn't Have Anything To Do W	racks And Fled Nb Officer ith The Fire Fire Was Put	Spoke With Several Out		



Call Detail

.009336	Ace	e Hardwa	are (Ace	e Hardware)			Fire-Other (FI2)		
Reported Priority	6/15 1	5/06	20:44:2	3	Uni	ts 1019 828 1698) - 1019 - Siefert, Nathan A - 828 - Vinohradsky, Todd J 3P - 1698 - FIRE DEPARTMENT, FD		
Stacked Dispatched	20:4 20:4	l6:55 l6:55							
Arrived	20:4	18:27							
Finished Disposition	21:0 Clea)2:35 red/No Rej	oort						
Notes	6/15	/06 20:44		FD walk in reports a	group started	l a fire behin	d ace.		
	6/15 6/15	/06 20:58 /06 20:58		Names Added : Trea	cy Michael A;				
Names	Cont	tact		Treacy, Michael A 2309 12th Ave,LF South Milwaukee, WI	53172		Sex> Male Race> White DOB> 11/03/76		
Unit History	СС	Date/Tim	e	Unit	Officer	Operator	Disposition		
	DI	06/15/06	20:46:55	1019	1019	1001			
	DI	06/15/06	20:46:55	1698P	1698	1001			
	os	06/15/06	20:48:27	1698P	1698	1001			
	os	06/15/06	20:48:48	1019	1019	1001			
	DI	06/15/06	20:51:51	828	828	1001			
	os	06/15/06	20:58:00	828	828	1001			
	FI	06/15/06	20:58:41	1698P	1698	1001	Cleared/No Report		
	FI	06/15/06	21:02:23	828	828	1001	Finish		
	FI	06/15/06	21:02:34	1019	1019	1001	Finish		

Summary Michael Treacy warned on fire regulations after he was observed with a campfire behind ace hardware.



Call Detail

03804	241	8 10th A	ve (Sun	rise Restaura	nt)		Fire-Other (FI2)
Reported Priority	2/24 1	/11	18:50:03	3	Uni	ts 1663F	2 - 1663 - FIRE DEPARTMENT, FD
Stacked	18:5	50:39					
Dispatched	18:5	3:05					
Arrived	18:5	64:05					
Finished	19:0	8:19					
Disposition	Clea	red/No Re	port				
Notes	2/24	/11 18:53		Update reviewed by	dispatcher- D	anek, Jesse J	
	2/24	/11 18:53		Dispatched: 1663			
Unit History	СС	Date/Tim	е	Unit	Officer	Operator	Disposition
	DI	02/24/11	18:53:05	1663P	1663	1001	
	os	02/24/11	18:54:05	1663P	1663	1001	
	FI	02/24/11	19:08:18	1663P	1663	421	Cleared/No Report

nursday, July 15, 2021 14:15:42 * For official use only **				South M Call I	ilwaukee Detail	
018250	2418 10th A	ve (Sunrise	Restauran	t)		Fire-Other (FI2)
Reported Priority	8/26/12 1	6:30:15		Uni	ts 53 - 53 373 - 3 1663F	3 - Dews, William E 373 - Fleming, Brian J 2 - 1663 - FIRE DEPARTMENT, FD
Stacked Dispatched	6:31:04 6:31:05					
Arrived	6:33:13					
Finished Disposition	6:47:58 Cleared/No Rej	port				
Notoo						
notes	8/26/12 6:30	Fire o	n the grill			
Names	8/26/12 6:30 Caller	Fire o Resta	urant Sunrise			
Names	8/26/12 6:30	Fire o Resta South	n the grill urant Sunrise Milwaukee, Wl	53172	<u> </u>	
Notes Names Unit History	CC Date/Time	Fire o Resta South	n the grill urant Sunrise Milwaukee, WI Unit	53172 Officer	Operator	Disposition
Notes Names Unit History	8/26/12 6:30 Caller CC Date/Time DI 08/26/12	Fire o Resta South 06:31:05	n the grill urant Sunrise Milwaukee, WI Unit 373	53172 Officer 373	Operator 674	Disposition
Notes Names Unit History	8/26/12 6:30 Caller CC Date/Time DI 08/26/12 DI 08/26/12	Fire o Resta South 06:31:05 06:31:05	n the grill urant Sunrise Milwaukee, WI Unit 373 53	53172 Officer 373 53	Operator 674 674	Disposition
Notes Names Unit History	8/26/12 6:30 Caller CC Date/Tim DI 08/26/12 DI 08/26/12 DI 08/26/12 DI 08/26/12	Fire o Resta South e 06:31:05 06:32:54	n the grill urant Sunrise Milwaukee, WI Unit 373 53 1663P	53172 Officer 373 53 1663	Operator 674 674 674	Disposition
Notes Names Unit History	8/26/12 6:30 Caller CC Date/Time DI 08/26/12 DI 08/26/12 DI 08/26/12 OS 08/26/12	Fire o Resta South e 06:31:05 06:32:54 06:33:13	n the grill urant Sunrise Milwaukee, WI Unit 373 53 1663P 1663P	53172 Officer 373 53 1663 1663	Operator 674 674 674 674	Disposition
Notes Names Unit History	8/26/12 6:30 Caller CC Date/Tim DI 08/26/12 DI 08/26/12 DI 08/26/12 OS 08/26/12 OS 08/26/12	Fire o Resta South 06:31:05 06:32:54 06:33:13 06:33:40	n the grill urant Sunrise Milwaukee, WI Unit 373 53 1663P 1663P 53	53172 Officer 373 53 1663 1663 53	Operator 674 674 674 674 674 674	Disposition
Notes Names Unit History	8/26/12 6:30 Caller CC Date/Time DI 08/26/12 DI 08/26/12 DI 08/26/12 OS 08/26/12 OS 08/26/12 OS 08/26/12 OS 08/26/12 OS 08/26/12	Fire o Resta South e 06:31:05 06:32:54 06:33:13 06:33:40 06:35:38	n the grill urant Sunrise Milwaukee, WI Unit 373 53 1663P 1663P 53 373	53172 Officer 373 53 1663 1663 53 373	Operator 674 674 674 674 674 674	Disposition
Notes Names Unit History	8/26/12 6:30 Caller C Date/Tim DI 08/26/12 DI 08/26/12 DI 08/26/12 OS 08/26/12	Fire o Resta South e 06:31:05 06:32:54 06:33:13 06:33:40 06:35:38 06:35:41	n the grill urant Sunrise Milwaukee, WI Unit 373 53 1663P 1663P 53 373 373	53172 Officer 373 53 1663 1663 53 373 373 373	Operator 674 674 674 674 674 674 674 674	Disposition Finish
Notes Names Unit History	8/26/12 6:30 Caller CC Date/Time DI 08/26/12 DI 08/26/12 OS 08/26/12 OS 08/26/12 OS 08/26/12 OS 08/26/12 FI 08/26/12 FI 08/26/12	Fire o Resta South e 06:31:05 06:32:54 06:33:13 06:33:40 06:35:38 06:35:41 06:47:57	n the grill urant Sunrise Milwaukee, WI Unit 373 53 1663P 1663P 53 373 373 373 1663P	53172 Officer 373 53 1663 1663 53 373 373 373 1663	Operator 674 674 674 674 674 674 674 674	Disposition Finish Finish

Call Detail



.023241	2418 10th A	Ave (Sunrise Restaurant)		Fire-Other (FI2)
Reported Priority	8/31/19 1	14:12:52	Units	798 - 798 - Hesse, Steven K 414 - 414 - Jaske, Peter P 828 - 828 - Vinohradsky, Todd J
Stacked Dispatched	14:13:10 14:13:10			833 - 833 - Wentz, Robert G 1040 - 1040 - Lewison, Timothy
Arrived	14:18:50			1226 - 1226 - Doering, Daniel
Finished Disposition	15:38:54 Miscellaneous	Service Perf		
Notes	8/31/19 14:13	Dispatched: 828		
	8/31/19 14:17	16-11		
	8/31/19 14:18	Dispatched: 798, 1040		
	8/31/19 14:21	Dispatched: 414		
	8/31/19 14:22	West alley being blocked		
	8/31/19 14:23	No fire chief from cudahy		
	8/31/19 14:23	Oak creek chief responding	g	
	8/31/19 14:27	Dispatched: 833		
	8/31/19 14:28	Greendale med 44 to char	nge of quarte	ers
	8/31/19 14:29	Cudahy chief in route		
	8/31/19 14:30	Dispatched: 1226		
	8/31/19 14:45	Plates Added : 2691439{}	•	
	8/31/19 14:45	Plates Updated : 2691439	;	
	8/31/19 15:30	Keyholder called back and	was advised	d of the information/
	8/31/19 15:30	Names Added : Dang, Hur	ng K;	
Names	Contact	Dang, Hung K 3915 E MARTIN AV CUDAHY, WI 53110		Sex> Male Race> Asian DOB> 09/30/62



Call Detail

Unit History	CC	Date/Time		Unit	Officer	Operator	Disposition
	DI	08/31/19 1	L4:13:10	828	828	1432	
	DI	08/31/19	L4:18:45	1040	1040	1432	
	DI	08/31/19	L4:18:45	798	798	1432	
	os	08/31/19	L4:18:50	828	828	1432	
	os	08/31/19	L4:19:44	798	798	1432	
	DI	08/31/19	L4:21:08	414	414	1432	
	os	08/31/19	14:22:46	414	414	1432	
	DI	08/31/19	14:27:28	833	833	1432	
	os	08/31/19	L4:27:30	1040	1040	1432	
	AC	08/31/19	L4:27:35	833	833	833	
	os	08/31/19	14:28:23	833	833	1432	
	DI	08/31/19	L4:30:05	1226	1226	1432	
	AC	08/31/19	L4:30:11	1226	1226	1226	
	os	08/31/19	14:35:54	1226	1226	1432	
	NC	08/31/19	L4:44:50	1040	1040		
	FI	08/31/19	L4:49:39	1226	1226	1432	Finish
	FI	08/31/19	L4:49:39	833	833	1432	Finish
	FI	08/31/19	14:52:34	414	414	1432	Finish
	FI	08/31/19	15:38:54	1040	1040	1432	Finish
	FI	08/31/19	15:38:54	798	798	1432	Finish
	FI	08/31/19 1	15:38:54	828	828	1432	Miscellaneous Service Performed

Summary Fd advised of smoke coming from roof ref 19.002113 fd call

Incident Details Report

Printed On: 07/15/21 14:12

South Milwaukee

Incident#	: 19-002113		
Location	: 2418 10th Ave;SM	CFSCode	: FI2 - Fire-Other
	SouthMilwaukee, WI 53172	Prime Unit#	: 1663
Reported	: 08/31/19 14:12:52	Call Taker	: 1432 - Champeau, Kelly
Priority	: 1	Dispatcher	: 1432 - Champeau, Kelly
Stacked	: 08/31/19 14:13:10	District	:
Dispatched	: 08/31/19 14:15:19	Onscene	: 08/31/19 14:19:02
Enroute	:	Cleared	: 08/31/19 15:37:05
Finished	: 08/31/19 15:37:06		

Units

Activity	Operator	Comments
DI - Dispatch	1432 - Champeau, Kelly	Prime Unit Units Recommended: (Not able to recommend); Dispatched: 1663
OS - On-Scene	1432 - Champeau, Kelly	
IN - In Station	1432 - Champeau, Kelly	
EHICLE		
DI - Dispatch	1432 - Champeau, Kelly	Dispatched: CH16
OS - On-Scene	1432 - Champeau, Kelly	
IN - In Station	1432 - Champeau, Kelly	
	Activity DI - Dispatch OS - On-Scene IN - In Station EHICLE DI - Dispatch OS - On-Scene IN - In Station	ActivityOperatorDI - Dispatch1432 - Champeau, KellyOS - On-Scene1432 - Champeau, KellyIN - In Station1432 - Champeau, KellyEHICLEI1432 - Champeau, KellyOS - On-Scene1432 - Champeau, KellyOS - On-Scene1432 - Champeau, KellyIN - In Station1432 - Champeau, KellyIN - In Station1432 - Champeau, Kelly

Notes

Date	Unit	PFCode	Notes
08/31/2019 14:15:19		1432	Units Recommended: (Not able to recommend); Dispatched: 1663
08/31/2019 14:17:30		1432	Dispatched: CH16
08/31/2019 14:18:30	CH16	1432	Cudahy truck in route
08/31/2019 14:19:21	1663	1432	St Francis engine
08/31/2019 14:19:39	1663	1432	Oakk creek chief responsing
08/31/2019 14:20:29	1663	1432	Full evacation
08/31/2019 14:20:58	1663	1432	ARW responding
08/31/2019 14:22:00	1663	1432	Stage east of building
08/31/2019 14:22:42	1663	1432	Milwaukee als responding
08/31/2019 14:25:36	1663	1432	Oak creek on scene
08/31/2019 14:25:53	1663	1432	ARW on scene oak creek engine on scene
08/31/2019 14:26:09	1663	1432	Battalion chief responding
08/31/2019 14:26:19	1663	1432	From cudahy
08/31/2019 14:27:01	1663	1432	St francis not engine
08/31/2019 14:32:29	1663	1432	St francis chief is responding
08/31/2019 14:33:21	1663	1432	Cudahy battalion chief on scene
08/31/2019 14:33:37	1663	1432	Greendale med 44 to change of quarters at 14:28
08/31/2019 14:37:15	1663	1432	Oc(med) on scene


Incident Details Report

Printed On: 07/15/21 14:12

08/31/2019 14	4:42:50	CH16	1432	Cudahy Chief cleared
08/31/2019 14	4:47:26	CH16	1432	St francis chief is clear returning
08/31/2019 1	5:13:47	1663	1432	Leave property over to electrical contractor on scene
08/31/2019 1	5:20:04			Update reviewed by dispatcher- Champeau, Kelly
Unit Report N	Narrative	2		
Unit#	: 1663 -	ENGINES		
Unit#	: CH16 -	COMMAND VEHIC	LE	

APPENDIX C.1.G LOW-FLOW DEVELOPMENT FIELD LOGS (EMERGING CONTAMINANT SAMPLING)

Low-Flow Groundwater Sampling: Field Data Sheet

Well Number:	mw-1					Site: 6258	5 S. A	Ailwar R	e		1	
Field Staff: 🕅	Staff: MG					Date: 8-4-21 Project #:						
Well depth (ft b	gs): 11.	72				Purge equipme	ent:		Diameter	Gal per ft	1	
Depth to water	(ft bTOC):	3.94			1	1 and fly			(2")	0.163		
Water Column D	Depth (ft):					Pump Intake Depth: 3" 0.						
Well Diameter (i	in): 71	I.				16	0.653					
Well Volume (ga	al):					Water quality	meter:		6"	1.469		
Screened Interva	al (ft bgs): 🛛 🗧	5-15'							8"	2.611		
				Fie	eld Parameter	rs					1	
Time	Depth to Water (ft bgs)	Flow Rate (mL/min)	Total Volume (gal)	Temp (deg C)	Dissolved Oxygen (mg/i)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)	Color/Odor		
Stabilization	<0.3 ft	100 to 500	10-1	+/- 1 deg C	+/- 10%	+/- 3%	+/- 0.1	+/- 10 mV	+/- 10%	de	No	
1:335	3.84	400		21.5	7.47	6.95	7.99	22.5	-	cland	NO	
11:40	5.35	100		20.5	4.85	6.79	9.20	29.7	/	cler		
11245	5.38	200		21.7	4.40	6.80	8.24	29.3	(Clear	NO	
11:50	5.64	500		21.3	4.00	6.28	8.27	28.3	-	Uppel	No	
11:55	6.33	500		21.7	3.47	4.81	8134	30-1		Clear	No	
12:00	6.59	400		21-8	3.37	7.05	8.38	30.0)	clear	No	
12:05	6.83	400		21.5	3.11	7.19	8.38	29.5		Clerr	NA	
12:10	7.19	500		21.9	3.07	7.16	8.37	29.1		Clear	NO	
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					comments							
											ί. Έ	
Donth to Mich	or Defr ?	م سميما ا			Sampling							
Sample Math	er berore S	ampling:	_									
Sample Merro	udology:											
Sample Name	Time:										0	
Sample Date/	rime:								_			
Sampler:		a <u>vr</u> /a-		How Class		_						
Sample Obcar	is collected	. ¥/N	Fi	iter Size:							2	
Darametere	varions											
arameters:											t	

Low-Flow Groundwater Sampling: Field Data Sheet

Well Number:	Mw-2					Site: (1255	5 5. M	11 wave	el		1	
Field Staff:	Field Staff: Mb						Date: Project #: 6 25 5					
Well depth (ft b	gs): 12.0	10				Purge equipme	ent:	Diameter	Gal per ft	1		
Depth to water	(ft bTOC): 🔗	.20				Low FI	low		(2")	0.163		
Water Column	Depth (ft):					Pump Intake D	Pump Intake Depth: 3"					
Well Diameter (in): 7,4				1	10	11) a"					
Well Volume (ga	al):					Water quality	meter:		6"	1,469		
Screened Intervi	al (ft bgs): 🗳	-151				151			8"	2.611		
				Fie	d Parameter	rs					1	
Time	Depth to Water	Flow Rate (mL/min)	Total Volume	Temp (deg C)	Dissolved Oxygen	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)	Color/Odor		
Stabilization	<0.3 ft	100 to 500	(Bai)	+/-1 deg ((mg/L)	+/ 29/	+/ 01	+/ 10	1/ 109/		ł	
11:15	902	400		IG H	4 5/ 4	000	T/- 0.1	- TO IIIA	+/- 10%	1.1.4	115	
17:30	8104	200		19.2	440	0.90	4.6F	110		Clear	100	
12:25	9.27	400	1	1.9	7.40	S TO	4.46	00.7		Licar	No	
12110	961	4(2)	·	10.7	207	8.99	4.77	28.7		lear	100	
12,40	9 25	500		1916	210	0.80	LIG	48.T	_	Ucar		
12.77	1010	600		10.4	2 24	9 46	4.47	24.7	-	clear	NO	
12:30	10,10	400		10.7	2:17	0.77	7.27	270		clear	No	
12.39	10.93	400		18,2	3.69	8-68	1.57	27.9		Cherr	No	
1:00	10.50	700		17-0	2.60	378	1.20	28.1	-	clear	NO	
1205				·							ļ	
					0					ļ		
						£	s					
											Į	
							1					
				(Comments						1	
3	12											
					Sampling						1	
Depth to Wat	er Before S	ampling:									1	
Sample Meth	odology:										1	
Sample Name	:										1	
Sample Date/	Time:										1	
Sampler:											i	
Filtered Meta	ls Collected	l: Y/N	Fil	ter Size:								
Sample Obser	rvations											
Parameters:												
					_						1	

12:55

Low-Flow Groundwater Sampling: Field Data Sheet

Well Number:	MUNI-L	1			1	Site: S. Mil	have	4			1
Field Staff: Mb						Date: 8-5-	21	Project #: 6	255		1
Well depth (ft b	gs): 14	39				Purge equipme	ent:		Diameter	Gal per ft	-
Depth to water	(ft bTOC):	180			1	Low F	low		(2)	0 163	
Water Column	Pepth (ft):					Pump Intake D	epth:		3"	0.367	
Well Diameter (in): 2."				1	is			4"	0.653	
Well Volume (ga	il):					Water quality	meter:		6"	1.469	
Screened Interva	1	YSI			8"	2.611					
				Fie	eld Parameter	rs					1
Time	Depth to Water (ft bgs)	Flow Rate (mL/min)	Total Volume (gal)	Temp (deg C)	Dissolved Oxygen (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)	Color/Odor	z. Laloum
Stabilization	<0.3 ft	100 to 500		+/- 1 deg C	+/- 10%	+/- 3%	+/- 0.1	+/- 10 mV	+/- 10%		retroided
11:20	7.82	400		18.00	4.15	2.94	8.09	-8.1	1	LIRGY	
11:25	8.66	400		17.90	2.74	3.11	8.39	12.2		Clar	编辑 /
11:30	9.08	400		18.00	2.49	336	8.54	15.9	-	clear	4個主 (
11:35	10.00	400		18.1	2.42	3.55	8.98	16.3		Clear	
11:40	10.24	400		18.3	2.72	3.59	8.78	13.6		Clear	The last
11.45	Samp	ed									1 1 1 N
11:50		- K									
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					Comments						1
					Sampling						
Depth to Wat	er Before S	ampling:]
Sample Meth	odology:										1
Sample Name	:										
Sample Date/	Time:										1
Sampler:											1
Filtered Meta	ls Collected	: Y/N	Fil	ter Size:							1
Sample Obser	vations										1
Parameters:									_		

2

matt.nottelmann@pacelabs.com

Well Number:	MW-5	,				Site: S. M.	Insuke	r			1
Field Staff: MG						Date: 8-5-	21	Project #: /	2255		1
Well depth (ft b	gs): 14,-	24				Purge equipme	ent:		Diameter	Gal per ft	
Depth to water	(ft bTOC):	35				Low F	low		(2")	0.163	
Water Column	Depth (ft):					Pump Intake D	epth:	3"	0.367		
Well Diameter (in): 2*	1			1	10'	•	4"	0.653		
Well Volume (g	al):					Water quality	meter:		6"	1.469	
Screened Interv	al (ft bgs): 🗧	5'-10'			1	YSI			8"	2.611	
				Fie	eld Paramete	rs					1
	Depth to	Flow Pate	Total	Tomp	Dissolved	Conductivity		000			1
Time	Water (ft bgs)	(mL/min)	Volume (gal)	(deg C)	Oxygen (mg/L)	(mS/cm)	(SU)	(mV)	(NTU)	Color/Odor	
Stabilization	<0.3 ft	100 to 500		+/- 1 deg C	+/- 10%	+/- 3%	+/- 0.1	+/- 10 mV	+/- 10%		1
10:05	Q.35	400		18.6	4.51	6.14	6.77	27.3	-	Clear	10
10:10	6.73	400		19.7	3.03	6.36	6.82	16.4	-	clear	NO
10:15	6.93	400		18.8	2.18	6.33	6.84	9.7		Clear	No
10:20	7.19	400		19.1	1.92	4.23	6.84	7.7	-	clear	NO
10:25	7.35	200		19.5	1.86	6.11	6.81	6.0	-	Clay	No
10:30	7.92	300		19.4	1.71	5.84	6.80	4.8	-	Urar	NO
10:35	8.09	200		19.2	1.94	5.35	691	5.9		CLOV	No
10:40	8.37	300		19.5	1.57	5.57	6.91	6.1	1	Clear	No
10:45	8.73	300		18.8	1.48	5.56	6.98	5.1		1/201	No
10:50	9.36	400		19.0	1.43	5.8)	6.79	4.9		clear	Not
10:55	Sample	4								CULA	
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Donth to 14/-+	or Dofe C	amalian			Sampling						
Sample Math	er before S	amping:				_					
Sample Merry	odology:										
Sample Name	Time										
Sample Date/	i ime:										
Sampler:											
Filtered Meta	is Collected	: Y/N	Fi	iter Size:							
Sample Obser	vations										
rarameters:											

Well Number:	NW.21	21			r	Site: S. Mi	1. waske	٤.			ĩ
Field Staff: MC						Date: 8-4-2 Project #: 6 255					
Well depth (ft b	s): 14.4	4				Purge equipme	ent:	u u	Diameter	Gal per ft	1
Depth to water	ft bTOC): 8	41			1	Low FI	low		6.)	0.163	
Water Column D	epth (ft):					Pump Intake D	3"	0.367			
Well Diameter (i	in): 7 ¹¹				1	10			4"	0.653	
Well Volume (ga	il):					Water quality (meter:		6"	1 469	
Screened Interva	al (ft bgs);	5-151	-			YSI			8"	2 611	
	, .,			Fie	l eld Parameter	~				2.011	ł
Time	Depth to Water (ft bgs)	Flow Rate (mL/min)	Total Volume (gal)	Temp (deg C)	Dissolved Oxygen (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)	Color/Odor	
Stabilization	<0.3 ft	100 to 500		+/- 1 deg C	+/- 10%	+/- 3%	+/- 0.1	+/- 10 mV	+/- 10%		1
1.20	8.75	400		18.7	4.03	1.58	6.69	30.6	-	clear	NA
125	9.02	300		12.4	3.57	1.51	11.68	23.4)	1/001	NG
1:30	9.64	500		19.2	2.98	1.43	Leiel	12.5	~	ilear	No
1:35	10.09	500		19.8	2.46	1.45	4.65	9.4	-	Klear	No
1:40	10'39	500		20.1	2.13	1.47	6.68	9.1		lear	NIA
1:45	11.00	500		19.1	1.98	1.46	6.69	8.7		Clear	A
1:50					1.00		V V I	a /		Clear	1000
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					Comments						
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Depth to Wat	er Before S	ampling:									
Sample Metho	odology:										
Sample Name	:										
Sample Date/	Time:										
Sampler:											
Filtered Meta	Is Collected	: Y/N	Fi	ter Size:							
Sample Obser	vations			L.1							1
Parameters:											