GILES
ENGINEERING ASSOCIATES, INC.
GEOTECHNICAL, ENVIRONMENTAL & CONSTRUCTION MATERIALS CONSULTANTS

• Dallas, TX
• Los Angeles, CA
• Manassas, VA
• Milwaukee, WI

October 31, 2023

Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
1027 W. St. Paul Avenue
Milwaukee, WI 53233

Attention: Ms. Jennifer Meyer
Environmental Program Associate

Project: Status Report - First Groundwater Monitoring Event (PFAS)
Pershing Plaza Shopping Center
Former Lakeside Cleaners Lease Space
7536 Pershing Boulevard
Kenosha, Wisconsin
WDNR BRRTS #: 02-30-582211; WDNR FID #: 230007690
Project No. 1E-1902007

Dear Ms. Meyer:

Giles has prepared the following Status Report to summarize the First Groundwater Monitoring Event for Per- and Polyfluorinated Substances (PFAS) in accordance with the Wisconsin Department of Natural Resources (WDNRs) written request (WDNR, September 16, 2022). The property is located at 7536 Pershing Boulevard, Kenosha, Kenosha County, Wisconsin (the "Site"). Background information, scope of services, groundwater analytical results, conclusions/recommendations and closing are detailed below.

BACKGROUND INFORMATION

Jomblee, Inc. (Jomblee) operated Lakeside Cleaners, which provided dry cleaning services at the Site for at least 15 years, and ceased operations in late 2011. Ener-Con Companies, Inc. (Ener-Com), the owner of Pershing Plaza, retained The Sigma Group (Sigma) to collect soil samples at the former dry cleaning facility in March 2018. Chlorinated volatile organic compounds (VOCs) were detected at concentrations exceeding the Wisconsin Administrative Code Natural Resources Chapter (NR Ch.) 720 Residual Contaminant Levels (RCLs) for groundwater protection in the three soil samples collected within the building. On September 11, 2018, based on the soil sampling results, attorneys for the Site owner notified the WDNR of a spill or release of dry-cleaning solvent at the Pershing Plaza Shopping Center (former Lakeside Cleaners).

The former Lakeside lease space is currently occupied by FASTSIGNS sign shop (Unit 7536). Paladin Protection Academy (Unit 7532), a concealed carry training, firearms and ammunition facility is located in the lease space to the north. Julie Nails and Spa is located in the lease space (Unit 7540) to the south, with a Piggly Wiggly grocery store beyond (Unit 7600).

Based on the findings of the site assessment, Sigma reported a release to the WDNR, who issued a "Responsible Party" (RP) letter to Jomblee dated September 13, 2018. The RP letter stated that a Site Investigation would need to be conducted to define the degree and extent of impacted soil and groundwater at the Site, and a vapor intrusion assessment would also need to be conducted.

A letter dated September 16, 2022, from the WDNR stated that additional groundwater samples must be collected from all wells (MW-1 through MW-5) for PFAS analysis to confirm the presence of these contaminants of concern at the Site and to assess plume stability.

Groundwater flow direction has a concentric low centered around MW-1 as indicated on Figure 1. A groundwater elevation table is presented as Table 1.

SCOPE OF SERVICES

The following scope of services for the First Groundwater Monitoring Event (PFAS) was completed for the Site. Field activities were conducted on September 19-20, 2023.

- Coordinated the field activities performed on the Site, client/owner communications, and scheduling.
- Collected five groundwater grab samples from monitoring wells MW-1 through MW-5 and submitted them to a State-certified analytical laboratory for analysis of PFAS by ID standard operating procedure (SOP) method.
- Completed data verification and data reduction.
- Evaluated the information collected and prepared this Status Report.
- Project management and peer review.

Groundwater Sampling & Results

Giles collected 5 groundwater grab samples on September 19-20, 2023, from MW-1 through MW-5. The well locations are shown on Figure 2. Groundwater was encountered between 3.71 and 7.80 feet below ground surface (bgs). A peristaltic pump and disposable polyethylene tubing were used to purge groundwater and to fill the groundwater sample containers. The groundwater samples were then submitted to Pace Analytical Laboratory, LLC for PFAS analysis located in West Columbia, South Carolina . The groundwater analytical results are summarized in Table 2. The laboratory report and chain-of-custody documentation are included in Attachment A.

Groundwater Analytical Results

Multiple PFAS compounds were detected in the groundwater samples.

- MW-1: Perfluorobutanoic acid (PFBA), Perfluorooctanesulfonic acid (PFOS), Perfluorooctanioc acid (PFOA) were detected above the Proposed NR 140 Preventative Action Limit (PAL).
- MW-2: PFBA was detected above the Proposed NR 140 Enforcement Standard (ES).
- MW-3: PFBA was detected above the Proposed NR 140 PAL.
- MW-4: Perfluorohexanesulfonic acid (PFHxS) and PFOA were detected above the Proposed NR 140 PAL. PFBA was detected above the Proposed NR 140 ES.
- MW-5: PFBA and PFOA were detected above the Proposed NR 140 PAL.

CONCLUSIONS AND RECOMMENDATIONS

Multiple PFAS compounds were detected in MW-1 through MW-5 above the Proposed NR 140 PAL and/or ES. Based on these results additional monitoring wells may need to be installed on Site to delineate the extent of the PFAS plume. The next sampling event (2 of 2) will occur in December, 2023.

CLOSING

We appreciate the opportunity to be of service on this project. If there are any questions regarding the information contained herein, or if we can be of any additional service, please contact the undersigned at your convenience.

Respectfully submitted,

GILES ENGINEERING ASSOCIATES, INC.

Cody L. Reich
Staff Environmental Professional

Dan Pelczar, C.P.G., P.G.
Senior Project Manager

FIGURES

Figure 1 Groundwater Flow Direction (September 19, 2023)
Figure 2 Groundwater Isoconcentration Map (PFAS)

TABLES

Table 1 Groundwater Elevations
Table 2 Groundwater Analytical Results (PFAS)

ATTACHMENTS

Attachment A Groundwater Analytical Laboratory Report & Chain-of Custody Documentation

Distribution: Wisconsin Department of Natural Resources
Attn: Mr. Paul Grittner (1 via email: paul.grittner@wisconsin.gov)
Attn.: Ms. Jennifer Meyer (email: jennifer.meyer1@wisconsin.gov)

Jomblee, Inc.
Attn: Mr. Robert Reuschlein (1 via email: bobreuschlein@gmail.com)

KRT, LLC
Attn: Ms. Carlee Beier (1 via email: cbeier@ener-con.com)
Attn: Ms. Alicia Hurst Alexander (1 via email: ahurst@ener-con.com)

FIGURES

LEGEND:

- 91.5 — GROUNDWATER CONTOUR INTERVAL = 0.5'
- GROUNDWATER FLOW DIRECTION
- 93.39 — GROUNDWATER ELEVATION (IN FEET REFERENCED TO ARBITRARY BENCHMARK)
- MW-1 — GROUNDWATER MONITORING WELL
- FIRE HYDRANT
- CATCH BASIN
- MANHOLE
- BM — BENCHMARK: TOP OF FIRE HYDRANT. ASSUMED ELEVATION = 100.0'

VACANT

BATHROOM

VACANT (7532)

SIDEWALK / CANOPY

ASPHALT

PERSHING BLVD.

MW-2 91.20

MW-1 89.42

MW-4 90.54

MW-5 91.68

MW-3 93.39

FORMER DRY CLEANING MACHINE

FORMER LAKESIDE CLEANERS (7536 PERSHING BLVD.)

JULIE NAILS & SPA (7540)

SIDEWALK / CANOPY

ASPHALT

GAS METER

BM

DOCK DOOR

GARAGE / STORAGE

HALLWAY

DOOR

GAS METER

TRANSFORMER

PIGGLY WIGGLY (7600)

91 91.5 92 92.5 90.5 91

0 10' 20'

APPROXIMATE SCALE

N W E S

NOTES:

1.) EXISTING FEATURES ARE APPROXIMATE BASED ON AERIAL PHOTOGRAPHY AND FIELD OBSERVATIONS.

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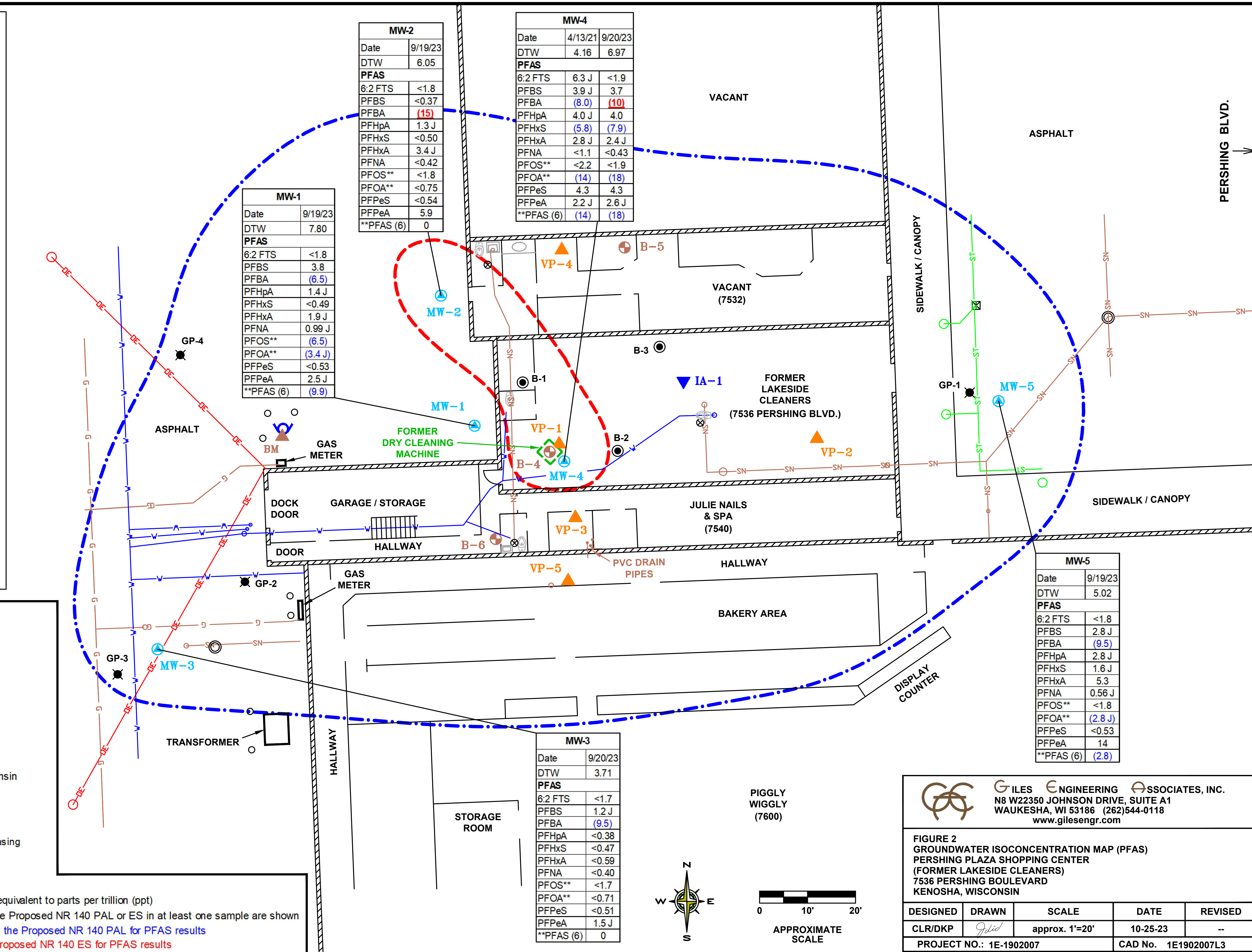
FIGURE 1
GROUNDWATER FLOW DIRECTION (9-19-2023)
PERSHING PLAZA SHOPPING CENTER
(FORMER LAKESIDE CLEANERS)
7536 PERSHING BOULEVARD
KENOSHA, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KMH	JDH	approx. 1'=20'	10-10-23	--
PROJECT NO.: 1E-1902007			CAD No.	1E1902007O

LEGEND:

- ESTIMATED EXTENT OF IMPACTED GROUNDWATER EXCEEDING NR 140 ENFORCEMENT STANDARDS
- ESTIMATED EXTENT OF IMPACTED GROUNDWATER EXCEEDING NR 140 PREVENTIVE ACTION LIMITS
- MW-1 GROUNDWATER MONITORING WELL
- VP-1 SUB-SLAB VAPOR POINT
- IA-1 INDOOR AIR SAMPLE
- B-4 SOIL BORING
- B-1 PREVIOUS HAND AUGER (BY SIGMA GROUP)
- GP-1 PREVIOUS GEOPROBE SOIL BORING (BY SIGMA GROUP)
- FIRE HYDRANT
- CATCH BASIN
- MANHOLE
- ELECTRIC POLE
- OE OVERHEAD ELECTRIC LINE
- G GAS LINE
- W WATER LINE
- SN SANITARY SEWER LINE
- ST STORM SEWER LINE
- FLOOR DRAIN
- BM BENCHMARK: TOP OF FIRE HYDRANT. ASSUMED ELEVATION = 100.0'



MW-2	
Date	9/19/23
DTW	6.05
PFAS	
6:2 FTS	<1.8
PFBS	<0.37
PFBA	(15)
PFHpA	1.3 J
PFHxS	<0.50
PFHxA	3.4 J
PFNA	<0.42
PFOS**	<1.8
PFOA**	<0.75
PFPeS	<0.54
PFPeA	5.9
**PFAS (6)	0

MW-4		
Date	4/13/21	9/20/23
DTW	4.16	6.97
PFAS		
6:2 FTS	6.3 J	<1.9
PFBS	3.9 J	3.7
PFBA	(8.0)	(10)
PFHpA	4.0 J	4.0
PFHxS	(5.8)	(7.9)
PFHxA	2.8 J	2.4 J
PFNA	<1.1	<0.43
PFOS**	<2.2	<1.9
PFOA**	(14)	(18)
PFPeS	4.3	4.3
PFPeA	2.2 J	2.6 J
**PFAS (6)	(14)	(18)

MW-1	
Date	9/19/23
DTW	7.80
PFAS	
6:2 FTS	<1.8
PFBS	3.8
PFBA	(6.5)
PFHpA	1.4 J
PFHxS	<0.49
PFHxA	1.9 J
PFNA	0.99 J
PFOS**	(6.5)
PFOA**	(3.4 J)
PFPeS	<0.53
PFPeA	2.5 J
**PFAS (6)	(9.9)

MW-5	
Date	9/19/23
DTW	5.02
PFAS	
6:2 FTS	<1.8
PFBS	2.8 J
PFBA	(9.5)
PFHpA	2.8 J
PFHxS	1.6 J
PFHxA	5.3
PFNA	0.56 J
PFOS**	<1.8
PFOA**	(2.8 J)
PFPeS	<0.53
PFPeA	14
**PFAS (6)	(2.8)

MW-3	
Date	9/20/23
DTW	3.71
PFAS	
6:2 FTS	<1.7
PFBS	1.2 J
PFBA	(9.5)
PFHpA	<0.38
PFHxS	<0.47
PFHxA	<0.59
PFNA	<0.40
PFOS**	<1.7
PFOA**	<0.71
PFPeS	<0.51
PFPeA	1.5 J
**PFAS (6)	0

Chemical key:

6:2 FTS: 1H, 1H, 2H, 2H-perfluorooctane sulfonic acid
PFBS: Perfluorobutanesulfonic acid
PFBA: Perfluorobutanoic acid
PFHpA: Perfluoroheptanoic acid
PFHxS: Perfluorohexanesulfonic acid
PFHxA: Perfluorohexanoic acid
PFNA: Perfluorononanoic acid
PFOS: Perfluorooctanesulfonic acid
PFOA: Perfluorooctanoic acid
PFPeS: Perfluoropentanesulfonic acid
PFPeA: Perfluoropentanoic acid
**PFAS (6): PFAS concentrations combined per Wisconsin Department of Health Services

Abbreviations:

PFAS: Per- and Poly-Fluoroalkyl Substances

DTW: Depth to Water, expressed in feet below top of casing
PAL: Preventative Action Limit
ES: Enforcement Standard

Notes:

PFAS results expressed in nanograms per liter (ng/L), equivalent to parts per trillion (ppt)
Only compounds with detected concentrations above the Proposed NR 140 PAL or ES in at least one sample are shown
Results indicated in blue and/or (parenthesized) exceed the Proposed NR 140 PAL for PFAS results
Results indicated in red and/or underlined exceed the Proposed NR 140 ES for PFAS results

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FIGURE 2
GROUNDWATER ISOCONCENTRATION MAP (PFAS)
PERSHING PLAZA SHOPPING CENTER
(FORMER LAKESIDE CLEANERS)
7536 PERSHING BOULEVARD
KENOSHA, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
CLR/DKP	[signature]	approx. 1'=20'	10-25-23	--
PROJECT NO.: 1E-1902007			CAD No. 1E1902007L3	

TABLES

TABLE 1
GROUNDWATER ELEVATION DATA
Pershing Plaza Shopping Center
(Former Lakeside Cleaners Lease Space)
7536 Pershing Boulevard
Kenosha, Wisconsin
Project Number 1E-1902007

Well Location (Feet/Direction to Former DCM)		Well Elevation		Well Construction		Date Groundwater Measured	Groundwater	
		TOC	Ground Surface	Depth to Bottom	Screen Length		Depth (TOC)	Calculated Elevation
Exterior West	**MW-1** (15' W)	97.22	97.43	13.00	10	7/26/19	6.58	90.64
						7/30/19	5.44	91.78
						8/2/19	6.78	90.44
						9/26/19	6.57	90.65
						5/7/20	6.91	90.31
						10/13/20	7.38	89.84
						12/3/20	7.65	89.57
						1/11/21	7.24	89.98
						4/13/21	7.12	90.10
						7/15/21	7.77	89.45
						10/19/21	--	--
						4/14/22	7.75	89.47
						9/19/23	7.80	89.42
	MW-2 (37' NW)	97.25	97.46	14.00	10	7/26/19	4.27	92.98
						7/30/19	4.25	93.00
						8/2/19	4.45	92.80
						9/26/19	4.79	92.46
						5/7/20	4.63	92.62
						10/13/20	4.50	92.75
						12/3/20	5.11	92.14
						1/11/21	5.16	92.09
						4/13/21	4.85	92.40
						7/15/21	4.66	92.59
						10/19/21	--	--
						4/14/22	5.01	92.24
						9/19/23	6.05	91.20
	MW-3 (85' SW)	97.10	97.28	13.00	10	7/26/19	12.08	85.02
						7/30/19	8.27	88.83
						8/2/19	10.11	86.99
						9/26/19	3.77	93.33
						5/7/20	3.91	93.19
						10/13/20	8.87	88.23
						12/3/20	6.19	90.91
						1/11/21	4.05	93.05
						4/13/21	3.75	93.35
						7/15/21	3.58	93.52
						10/19/21	--	--
						4/14/22	3.73	93.37
						9/19/23	3.71	93.39
Interior	**MW-4** (At Former DCM)	97.51	97.61	12.65	10	4/28/20	4.74	92.77
						5/7/20	6.60	90.91
						10/13/20	6.63	90.88
						12/3/20	7.21	90.30
						1/11/21	6.47	91.04
						4/13/21	4.16	93.35
						7/15/21	6.94	90.57
						10/19/21	--	--
						4/14/22	6.45	91.06
						9/19/23	6.97	90.54
Exterior East	**MW-5** (90' E)	96.70	97.13	11.97	10	4/28/20	10.04	86.66
						5/7/20	10.23	86.47
						10/13/20	4.78	91.92
						12/3/20	5.78	90.92
						1/11/21	4.80	91.90
						4/13/21	4.13	92.57
						7/15/21	4.55	92.15
						10/19/21	--	--
						4/14/22	4.23	92.47
						9/19/23	5.02	91.68

Notes:
TOC: Top of casing
All measurements are recorded in feet.
DCM: Dry Cleaning Machine (Distance to Former DCM is approximate)
Elevations of the wells MW-1 through MW-3 were surveyed on 8/2/19. Elevations of the wells MW-4 and MW-5 were surveyed on 4/28/2020. Survey measurements were tied to a local benchmark, the top of the fire hydrant located west of MW-1, which was assigned an elevation of 100 feet.
-- : not measured

TABLE 2
PFAS Groundwater Analytical Results

Pershing Plaza Shopping Center
(Former Lakeside Cleaners Lease Space)
7536 Pershing Boulevard
Kenosha, Wisconsin
Project Number 1E-1902007

Sample Location	**MW-1**	**MW-2**	**MW-3**	**MW-4** (At Former DCM)		**MW-5**	**Proposed NR 140 Standards* (ng/L)**	
Sample Date	9/19/23	9/19/23	9/20/23	4/13/21	9/20/23	9/19/23	**PAL**	**ES**
Depth to Water (Ft below TOC)	7.80	6.05	3.71	4.16	6.97	1/5/00		
6:2 FTS	<1.8	<1.8	<1.7	6.3 J	<1.9	<1.8	**NS**	**NS**
Perfluorobutanesulfonic acid (PFBS)	3.8	<0.37	1.2 J	3.9 J	3.7	2.8 J	**90**	**450**
Perfluorobutanoic acid (PFBA)	(6.5)	**(15)**	(9.5)	(8.0)	**(10)**	(9.5)	**2**	**10**
Perfluoroheptanoic acid (PFHpA)	1.4 J	1.3 J	<0.38	4.0 J	4.0	2.8 J	**NS**	**NS**
Perfluorohexanesulfonic acid (PFHxS)	<0.49	<0.50	<0.47	(5.8)	(7.9)	1.6 J	**4**	**40**
Perfluorohexanoic acid (PFHxA)	1.9 J	3.4 J	<0.59	2.8 J	2.4 J	5.3	**30**	**150**
Perfluorononanoic acid (PFNA)	0.99 J	<0.42	<0.40	<1.1	<0.43	0.56 J	**3**	**30**
Perfluorooctanesulfonic acid (PFOS)**	(6.5)	<1.8	<1.7	<2.2	<1.9	<1.8	**2**	**20**
Perfluorooctanoic acid (PFOA)**	(3.4 J)	<0.75	<0.71	(14)	(18)	(2.8 J)	**2**	**20**
Perfluoropentanesulfonic acid (PFPeS)	<0.53	<0.54	<0.51	4.3	4.3	<0.53	**NS**	**NS**
Perfluoropentanoic acid (PFPeA)	2.5 J	5.9	1.5 J	2.2 J	2.6 J	14	**NS**	**NS**
PFAS (6)**	(9.9)	0	0	(14)	(18)	(2.8)	**2****	**20****

Notes:
PFAS: Per- and Poly-fluoroalkyl Substances
ng/L: nanograms per Liter; equivalent to parts per trillion (ppt)

*Wisconsin Department of Health Services (DHS) recommended Groundwater Standards (Cycle 11) dated November 6, 2020

**DHS recommends a combined PAL of 2 ng/L and ES of 20 ng/L for FOSA, NEtFOSE, NEtFOSA, NEtFOSAA, PFOS, and PFOA.

DCM: Former Dry Cleaning Machine
TOC: Top of casing
PAL: Preventive Action Limit
ES: Enforcement Standard
J: Result is an estimate value (detected between the laboratory method detection limit and reporting limit)
NS: No Standard Established
<xx.x: Result concentration was detected below the method detection limit of x
(xx.x): Parenthesized results exceed the proposed NR 140 Preventive Action Limit
xx.x: Bold/underlined results exceed the proposed NR 140 Enforcement Standard

ATTACHMENT A

Groundwater Analytical Laboratory Report & Chain-of Custody Documentation

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

October 23, 2023

Dan Pelczar
Giles Engineering Associates, Inc.
N8 W22350 Johnson Road
Suite A1
Waukesha, WI 53186

RE: Project: IE-1902007 PERSHING PLAZA
Pace Project No.: 40268374

Dear Dan Pelczar:

Enclosed are the analytical results for sample(s) received by the laboratory on September 21, 2023. 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,

Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Michelle Peed, Giles Engineering Associates, Inc.
Cody Reich, Giles Engineering Associates, Inc.

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

SAMPLE SUMMARY

Project: IE-1902007 PERSHING PLAZA
Pace Project No.: 40268374

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40268374001	**MW-1**	Water	09/19/23 14:05	09/21/23 09:00
40268374002	**MW-2**	Water	09/19/23 12:55	09/21/23 09:00
40268374003	**MW-3**	Water	09/20/23 11:00	09/21/23 09:00
40268374004	**MW-4**	Water	09/20/23 10:00	09/21/23 09:00
40268374005	**MW-5**	Water	09/19/23 11:55	09/21/23 09:00

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 40268374

ALL SHADED AREAS are for LAB USE ONLY

Company: Giles Engineering Associates Inc	Billing Information: Kevin Bugel Gile Engineering Associates Inc N8 W22350 Johnson Road Waukesha, WI 53186
Address: N8 W22350 Johnson Road	
Report To: Kbugel@gilesengr.com	Email To: Kbugel@gilesengr.com
Copy To: dpelczar@gilesengr.com creich@gilesengr.com	Site Collection Info/Address:
Customer Project Name/Number: Pershing Plaza IE-1902007	State: / County/City: Time Zone Collected: [ ]PT [ ]MT [ ]CT [ ]ET
Phone: 262-544-0118 Email:	Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): Cody Reich	Purchase Order #: Quote #: DW PWS ID #: DW Location Code:
Collected By (signature): Cody L Reich	Turnaround Date Required: 10 business days Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) Field Filtered (if applicable): [ ] Yes [ ] No Analysis: _____

Container Preservative Type **: U

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Analyses: 537 Mod (WDNR 33) PFAS	Lab Profile/Line: Lab Sample # / Comments:
MW-1	GW	G	9-19-23	1405				2	X	001
MW-2			9-11-23	1255						002
MW-3			9-20-23	1100						003
MW-4			9-26-23	1000						004
MW-5			9-19-23	1155						005

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles Intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: _____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

SCURF 9/21/23

LAB USE ONLY:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: (Wet) Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2824122

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#: _____

Cooler 1 Temp Upon Receipt: _____ oC

Cooler 1 Therm Corr. Factor: 1 oC

Cooler 1 Corrected Temp: 1 oC

Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Cody L Reich Giles	9-20-23 1225		
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
CS Logistics	9/21/23 0900	Pace	9/21/23 0900
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s): YES / NO

Client Name: Giles Engineering

Sample Preservation Receipt Form

Project # 40268374

All containers needing preservation have been checked and noted below: ☐Yes ☐No ☒N/A

Lab Lot# of pH paper: Lab Std #ID of preservation (if pH adjusted): Initial when completed: Date/ Time:

Pace Lab #	Glass							Plastic						Vials						Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2							
001									2																								2.5 / 5
002									2																								2.5 / 5
003									2																								2.5 / 5
004									2																								2.5 / 5
005									2																								2.5 / 5
006																																	2.5 / 5
007																																	2.5 / 5
008																																	2.5 / 5
009																																	2.5 / 5
010																																	2.5 / 5
011																																	2.5 / 5
012																																	2.5 / 5
013																																	2.5 / 5
014																																	2.5 / 5
015																																	2.5 / 5
016																																	2.5 / 5
017																																	2.5 / 5
018																																	2.5 / 5
019																																	2.5 / 5
020																																	2.5 / 5

9/21/23 NK

Exceptions to preservation check VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : ☐Yes ☐No ☒N/A ***If yes look in headspace column**

AG1U	1 liter amber glass
BG1U	1 liter clear glass
AG1H	1 liter amber glass HCL
AG4S	125 mL amber glass H2SO4
AG5U	100 mL amber glass unpres
AG2S	500 mL amber glass H2SO4
BG3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4
BP2Z	500 mL plastic NaOH + Zn

VG9C	40 mL clear ascorbic w/ HCl
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN 1	
GN 2	

Page 1 of 2

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO# : 40268374

40268374

Client Name: Giles Engineering

Courier: ☒ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco ☐ Client ☐ Pace Other: _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

Thermometer Used SR - 134 **Type of Ice:** (Wet) Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr: 0.5 /Corr: 0.5

Temp Blank Present: ☐ yes ☒ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Person examining contents:
Date: 9/21/23 /Initials: NK

Labeled By Initials: SG

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	☒Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☒Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☒Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☒Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☒Yes	☐No		5.
- DI VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes	☒No		6.
Rush Turn Around Time Requested:	☐Yes	☒No		7.
Sufficient Volume:				8.
For Analysis: ☒Yes ☐No MS/MSD:	☐Yes	☒No	☐N/A	
Correct Containers Used:	☒Yes	☐No		9.
Correct Type: Pace Green Bay, Pace IR, Non-Pace				
Containers Intact:	☒Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☒N/A	11.
Sample Labels match COC:	☒Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W				
Trip 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: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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

Report of Analysis

Pace Analytical Services, LLC
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Attention: Dan Milewsky

Project Name: IE-1902007 Pershing Plaza

Project Number: 40268374

Lot Number:**YI22011**

Date Completed:10/06/2023

10/06/2023 6:17 PM
Approved and released by:
Project Coordinator 1: **Jenna S. Holliday**

Case Narrative
Pace Analytical Services, LLC
Lot Number: YI22011

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. Where sampling is conducted by the client, results relate to the accuracy of the information provided, and as the samples are received.

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.

Pace is a TNI accredited laboratory; however, the following analyses are currently not listed on our TNI scope of accreditation: Drinking Water: VOC (excluding BTEX, MTBE, Naphthalene, & 1,2-dichloroethane) EPA 524.2, E. coli and Total coliforms SM 9223 B-2004, Solid Chemical Material: TOC Walkley-Black, Biological Tissue: All, Non-Potable Water: SGT-HEM EPA 1664B, Silica EPA 200.7, Boron, Calcium, Silicon, Strontium EPA 200.8, Bicarbonate, Carbonate, and Hydroxide Alkalinity SM 2320 B-2011, SM 9221 C E-2006 & SM 9222D-2006, Strontium SW-846 6010D, VOC SM 6200 B-2011, Fecal Coliform Colilert-18, PFAS by Isotope Dilution SOP.

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

PFAS Analysis
Surrogate recovery for samples YI22011-001, -002, -003, -004, and -005 were outside the acceptance limits. These samples did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Sample Summary
Pace Analytical Services, LLC
Lot Number: YI22011
Project Name: IE-1902007 Pershing Plaza
Project Number: 40268374

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-1	Aqueous	09/19/2023 1405	09/22/2023
002	MW-2	Aqueous	09/19/2023 1255	09/22/2023
003	MW-3	Aqueous	09/20/2023 1100	09/22/2023
004	MW-4	Aqueous	09/20/2023 1000	09/22/2023
005	MW-5	Aqueous	09/19/2023 1155	09/22/2023

(5 samples)

Detection Summary

Pace Analytical Services, LLC

Lot Number: YI22011

Project Name: IE-1902007 Pershing Plaza

Project Number: 40268374

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-1	Aqueous	PFBS	PFAS by ID	3.8		ng/L	5
001	MW-1	Aqueous	PFBA	PFAS by ID	6.5		ng/L	5
001	MW-1	Aqueous	PFHpA	PFAS by ID	1.4	J	ng/L	5
001	MW-1	Aqueous	PFHxA	PFAS by ID	1.9	J	ng/L	5
001	MW-1	Aqueous	PFNA	PFAS by ID	0.99	J	ng/L	5
001	MW-1	Aqueous	PFOA	PFAS by ID	3.4	J	ng/L	5
001	MW-1	Aqueous	PFPeA	PFAS by ID	2.5	J	ng/L	5
001	MW-1	Aqueous	PFOS	PFAS by ID	6.5		ng/L	5
002	MW-2	Aqueous	PFBA	PFAS by ID	15		ng/L	7
002	MW-2	Aqueous	PFHpA	PFAS by ID	1.3	J	ng/L	7
002	MW-2	Aqueous	PFHxA	PFAS by ID	3.4	J	ng/L	7
002	MW-2	Aqueous	PFPeA	PFAS by ID	5.9		ng/L	7
003	MW-3	Aqueous	PFBS	PFAS by ID	1.2	J	ng/L	9
003	MW-3	Aqueous	PFBA	PFAS by ID	9.5		ng/L	9
003	MW-3	Aqueous	PFPeA	PFAS by ID	1.5	J	ng/L	9
004	MW-4	Aqueous	PFBS	PFAS by ID	3.7		ng/L	11
004	MW-4	Aqueous	PFPeS	PFAS by ID	4.3		ng/L	11
004	MW-4	Aqueous	PFHxS	PFAS by ID	7.9		ng/L	11
004	MW-4	Aqueous	PFBA	PFAS by ID	10		ng/L	11
004	MW-4	Aqueous	PFHpA	PFAS by ID	4.0		ng/L	11
004	MW-4	Aqueous	PFHxA	PFAS by ID	2.4	J	ng/L	11
004	MW-4	Aqueous	PFOA	PFAS by ID	18		ng/L	11
004	MW-4	Aqueous	PFPeA	PFAS by ID	2.6	J	ng/L	11
005	MW-5	Aqueous	PFBS	PFAS by ID	2.8	J	ng/L	13
005	MW-5	Aqueous	PFHxS	PFAS by ID	1.6	J	ng/L	13
005	MW-5	Aqueous	PFBA	PFAS by ID	9.5		ng/L	13
005	MW-5	Aqueous	PFHpA	PFAS by ID	2.8	J	ng/L	13
005	MW-5	Aqueous	PFHxA	PFAS by ID	5.3		ng/L	13
005	MW-5	Aqueous	PFNA	PFAS by ID	0.56	J	ng/L	13
005	MW-5	Aqueous	PFOA	PFAS by ID	2.8	J	ng/L	13
005	MW-5	Aqueous	PFPeA	PFAS by ID	14		ng/L	13

(31 detections)

PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YI22011-001**

Description: **MW-1** Matrix: **Aqueous**

Date Sampled: **09/19/2023 1405** Project Name: **IE-1902007 Pershing Plaza**

Date Received: **09/22/2023** Project Number: **40268374**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	10/03/2023 1650	ARC2	10/01/2023 2059	86250

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	0.43	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	0.59	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND	Q	7.1	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	Q	7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	7.1	0.78	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	0.43	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.2	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	0.67	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	0.85	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	1.1	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	0.83	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.1	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**3.8**		**3.5**	**0.37**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.69	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.44	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.63	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.54	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.53	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	0.93	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		3.5	0.49	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**6.5**		**3.5**	**0.53**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.47	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.42	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**1.4**	**J**	**3.5**	**0.40**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**1.9**	**J**	**3.5**	**0.61**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	**375-95-1**	**PFAS by ID SOP**	**0.99**	**J**	**3.5**	**0.41**	**ng/L**	**1**
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**3.4**	**J**	**3.5**	**0.74**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**2.5**	**J**	**3.5**	**0.48**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.53	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.47	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.56	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**6.5**		**3.5**	**1.8**	**ng/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	317	25-150
13C2_6:2FTS	N	271	25-150
13C2_8:2FTS	N	152	25-150
13C2_PFDoA		104	25-150
13C2_PFTeDA		96	25-150
13C3_PFBS		72	25-150
13C3_PFHxS		94	25-150
13C3-HFPO-DA		66	25-150
13C4_PFBA		36	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
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 Services, LLC** Laboratory ID: **YI22011-001**

Description: **MW-1** Matrix: **Aqueous**

Date Sampled: **09/19/2023 1405** Project Name: **IE-1902007 Pershing Plaza**

Date Received: **09/22/2023** Project Number: **40268374**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		91	25-150
13C5_PFHxA		81	25-150
13C5_PFPeA		64	25-150
13C6_PFDA		107	25-150
13C7_PFUdA		102	25-150
13C8_PFOA		103	25-150
13C8_PFOS		95	25-150
13C8_PFOSA		97	10-150
13C9_PFNA		107	25-150
d-EtFOSA		71	10-150
d5-EtFOSAA		103	25-150
d9-EtFOSE		77	10-150
d-MeFOSA		73	10-150
d3-MeFOSAA		108	25-150
d7-MeFOSE		82	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 ≥ 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 Services, LLC** Laboratory ID: **YI22011-002**

Description: **MW-2** Matrix: **Aqueous**

Date Sampled: **09/19/2023 1255** Project Name: **IE-1902007 Pershing Plaza**

Date Received: **09/22/2023** Project Number: **40268374**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	10/03/2023 1712	ARC2	10/01/2023 2059	86250

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	0.44	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	0.60	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	7.2	0.79	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	0.44	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.2	1.2	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	0.68	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.2	0.86	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	1.1	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	0.84	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.2	1.2	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		3.6	0.37	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.70	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.45	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.64	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.55	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.6	0.54	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.2	0.95	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		3.6	0.50	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**15**		**3.6**	**0.54**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.47	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.43	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**1.3**	**J**	**3.6**	**0.40**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**3.4**	**J**	**3.6**	**0.62**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.42	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.6	0.75	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**5.9**		**3.6**	**0.49**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.54	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.48	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.57	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.6	1.8	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	236	25-150
13C2_6:2FTS		103	25-150
13C2_8:2FTS		75	25-150
13C2_PFDoA		88	25-150
13C2_PFTeDA		91	25-150
13C3_PFBS		91	25-150
13C3_PFHxS		91	25-150
13C3-HFPO-DA		74	25-150
13C4_PFBA		57	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
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YI22011-002**

Description: **MW-2** Matrix: **Aqueous**

Date Sampled: **09/19/2023 1255** Project Name: **IE-1902007 Pershing Plaza**

Date Received: **09/22/2023** Project Number: **40268374**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		97	25-150
13C5_PFHxA		95	25-150
13C5_PFPeA		80	25-150
13C6_PFDA		90	25-150
13C7_PFUdA		81	25-150
13C8_PFOA		95	25-150
13C8_PFOS		90	25-150
13C8_PFOSA		86	10-150
13C9_PFNA		92	25-150
d-EtFOSA		69	10-150
d5-EtFOSAA		84	25-150
d9-EtFOSE		69	10-150
d-MeFOSA		69	10-150
d3-MeFOSAA		83	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 ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YI22011-003**

Description: **MW-3** Matrix: **Aqueous**

Date Sampled: **09/20/2023 1100** Project Name: **IE-1902007 Pershing Plaza**

Date Received: **09/22/2023** Project Number: **40268374**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	10/03/2023 1722	ARC2	10/01/2023 2059	86250

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	0.41	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	0.57	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	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	0.75	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	0.42	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.2	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	0.64	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	0.82	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	1.1	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	0.80	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.1	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**1.2**	**J**	**3.4**	**0.36**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.67	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.4	0.43	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-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.53	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.4	0.51	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.9	0.90	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		3.4	0.47	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**9.5**		**3.4**	**0.52**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.45	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	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	ND		3.4	0.38	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.4	0.59	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.4	0.40	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.4	0.71	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**1.5**	**J**	**3.4**	**0.47**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.51	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	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	0.54	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.4	1.7	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	265	25-150
13C2_6:2FTS		138	25-150
13C2_8:2FTS		87	25-150
13C2_PFDoA		87	25-150
13C2_PFTeDA		89	25-150
13C3_PFBS		89	25-150
13C3_PFHxS		97	25-150
13C3-HFPO-DA		76	25-150
13C4_PFBA		44	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
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YI22011-003**

Description: **MW-3** Matrix: **Aqueous**

Date Sampled: **09/20/2023 1100** Project Name: **IE-1902007 Pershing Plaza**

Date Received: **09/22/2023** Project Number: **40268374**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		97	25-150
13C5_PFHxA		92	25-150
13C5_PFPeA		75	25-150
13C6_PFDA		96	25-150
13C7_PFUdA		83	25-150
13C8_PFOA		95	25-150
13C8_PFOS		91	25-150
13C8_PFOSA		84	10-150
13C9_PFNA		96	25-150
d-EtFOSA		73	10-150
d5-EtFOSAA		87	25-150
d9-EtFOSE		78	10-150
d-MeFOSA		68	10-150
d3-MeFOSAA		80	25-150
d7-MeFOSE		79	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 ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YI22011-004**

Description: **MW-4** Matrix: **Aqueous**

Date Sampled: **09/20/2023 1000** Project Name: **IE-1902007 Pershing Plaza**

Date Received: **09/22/2023** Project Number: **40268374**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	10/03/2023 1733	ARC2	10/01/2023 2059	86250

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	0.45	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	0.61	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.5	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	7.4	0.81	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	0.45	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.3	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	0.69	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	0.88	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	1.2	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	0.86	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.2	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**3.7**		**3.7**	**0.38**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.72	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.46	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.66	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.57	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	**2706-91-4**	**PFAS by ID SOP**	**4.3**		**3.7**	**0.55**	**ng/L**	**1**
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	0.97	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**7.9**		**3.7**	**0.51**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**10**		**3.7**	**0.56**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.7	0.49	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.44	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**4.0**		**3.7**	**0.41**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**2.4**	**J**	**3.7**	**0.64**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.43	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**18**		**3.7**	**0.77**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**2.6**	**J**	**3.7**	**0.50**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.55	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.49	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.58	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.7	1.9	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	192	25-150
13C2_6:2FTS		113	25-150
13C2_8:2FTS		83	25-150
13C2_PFDoA		78	25-150
13C2_PFTeDA		73	25-150
13C3_PFBS		84	25-150
13C3_PFHxS		91	25-150
13C3-HFPO-DA		76	25-150
13C4_PFBA		64	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
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YI22011-004**

Description: **MW-4** Matrix: **Aqueous**

Date Sampled: **09/20/2023 1000** Project Name: **IE-1902007 Pershing Plaza**

Date Received: **09/22/2023** Project Number: **40268374**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		99	25-150
13C5_PFHxA		97	25-150
13C5_PFPeA		85	25-150
13C6_PFDA		86	25-150
13C7_PFUdA		76	25-150
13C8_PFOA		98	25-150
13C8_PFOS		87	25-150
13C8_PFOSA		83	10-150
13C9_PFNA		94	25-150
d-EtFOSA		50	10-150
d5-EtFOSAA		81	25-150
d9-EtFOSE		62	10-150
d-MeFOSA		62	10-150
d3-MeFOSAA		81	25-150
d7-MeFOSE		59	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 ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **Pace Analytical Services, LLC** Laboratory ID: **YI22011-005**

Description: **MW-5** Matrix: **Aqueous**

Date Sampled: **09/19/2023 1155** Project Name: **IE-1902007 Pershing Plaza**

Date Received: **09/22/2023** Project Number: **40268374**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	10/03/2023 1805	ARC2	10/01/2023 2059	86250

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	0.43	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	0.59	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	7.1	0.78	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	0.43	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.1	1.2	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	0.67	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.1	0.84	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	1.1	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	0.83	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.1	1.1	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**2.8**	**J**	**3.5**	**0.37**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.69	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.44	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.63	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.54	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.53	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.1	0.93	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**1.6**	**J**	**3.5**	**0.49**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**9.5**		**3.5**	**0.53**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.47	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.42	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**2.8**	**J**	**3.5**	**0.40**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**5.3**		**3.5**	**0.61**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	**375-95-1**	**PFAS by ID SOP**	**0.56**	**J**	**3.5**	**0.41**	**ng/L**	**1**
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**2.8**	**J**	**3.5**	**0.74**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**14**		**3.5**	**0.48**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.53	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.47	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.56	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.5	1.8	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	208	25-150
13C2_6:2FTS		134	25-150
13C2_8:2FTS		95	25-150
13C2_PFDoA		90	25-150
13C2_PFTeDA		91	25-150
13C3_PFBS		92	25-150
13C3_PFHxS		92	25-150
13C3-HFPO-DA		86	25-150
13C4_PFBA		71	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
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 Services, LLC** Laboratory ID: **YI22011-005**

Description: **MW-5** Matrix: **Aqueous**

Date Sampled: **09/19/2023 1155** Project Name: **IE-1902007 Pershing Plaza**

Date Received: **09/22/2023** Project Number: **40268374**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		101	25-150
13C5_PFHxA		93	25-150
13C5_PFPeA		90	25-150
13C6_PFDA		92	25-150
13C7_PFUdA		90	25-150
13C8_PFOA		102	25-150
13C8_PFOS		98	25-150
13C8_PFOSA		88	10-150
13C9_PFNA		94	25-150
d-EtFOSA		70	10-150
d5-EtFOSAA		88	25-150
d9-EtFOSE		69	10-150
d-MeFOSA		64	10-150
d3-MeFOSAA		89	25-150
d7-MeFOSE		75	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 ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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QC Summary

PFAS by LC/MS/MS - MB

Sample ID: YQ86250-001
Batch: 86250
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 10/01/2023 2059

Parameter	Result	Q	Dil	LOQ	MDL	Units	Analysis Date
9Cl-PF3ONS	ND		1	8.0	0.48	ng/L	10/03/2023 1412
11Cl-PF3OUdS	ND		1	8.0	0.66	ng/L	10/03/2023 1412
8:2 FTS	ND		1	8.0	1.6	ng/L	10/03/2023 1412
6:2 FTS	ND		1	8.0	2.0	ng/L	10/03/2023 1412
4:2 FTS	ND		1	8.0	0.87	ng/L	10/03/2023 1412
GenX	ND		1	8.0	2.1	ng/L	10/03/2023 1412
ADONA	ND		1	8.0	0.48	ng/L	10/03/2023 1412
EtFOSA	ND		1	8.0	1.4	ng/L	10/03/2023 1412
EtFOSAA	ND		1	8.0	0.75	ng/L	10/03/2023 1412
EtFOSE	ND		1	8.0	0.95	ng/L	10/03/2023 1412
MeFOSA	ND		1	16	1.3	ng/L	10/03/2023 1412
MeFOSAA	ND		1	8.0	0.93	ng/L	10/03/2023 1412
MeFOSE	ND		1	8.0	1.3	ng/L	10/03/2023 1412
PFBS	ND		1	4.0	0.41	ng/L	10/03/2023 1412
PFDS	ND		1	4.0	0.78	ng/L	10/03/2023 1412
PFHpS	ND		1	4.0	0.50	ng/L	10/03/2023 1412
PFNS	ND		1	4.0	0.71	ng/L	10/03/2023 1412
PFOSA	ND		1	4.0	0.61	ng/L	10/03/2023 1412
PFPeS	ND		1	4.0	0.59	ng/L	10/03/2023 1412
PFDOS	ND		1	8.0	1.0	ng/L	10/03/2023 1412
PFHxS	ND		1	4.0	0.55	ng/L	10/03/2023 1412
PFBA	ND		1	4.0	0.60	ng/L	10/03/2023 1412
PFDA	ND		1	4.0	0.52	ng/L	10/03/2023 1412
PFDoA	ND		1	4.0	0.47	ng/L	10/03/2023 1412
PFHpA	ND		1	4.0	0.45	ng/L	10/03/2023 1412
PFHxA	ND		1	4.0	0.69	ng/L	10/03/2023 1412
PFNA	ND		1	4.0	0.46	ng/L	10/03/2023 1412
PFOA	ND		1	4.0	0.83	ng/L	10/03/2023 1412
PFPeA	ND		1	4.0	0.54	ng/L	10/03/2023 1412
PFTeDA	ND		1	4.0	0.60	ng/L	10/03/2023 1412
PFTrDA	ND		1	4.0	0.53	ng/L	10/03/2023 1412
PFUdA	ND		1	4.0	0.63	ng/L	10/03/2023 1412
PFOS	ND		1	4.0	2.0	ng/L	10/03/2023 1412

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		93	25-150
13C2_6:2FTS		95	25-150
13C2_8:2FTS		94	25-150
13C2_PFDoA		98	25-150
13C2_PFTeDA		98	25-150
13C3_PFBS		98	25-150
13C3_PFHxS		100	25-150
13C3-HFPO-DA		105	25-150

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

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

PFAS by LC/MS/MS - MB

Sample ID: YQ86250-001
Batch: 86250
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 10/01/2023 2059

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		102	25-150
13C4_PFHpA		114	25-150
13C5_PFHxA		100	25-150
13C5_PFPeA		99	25-150
13C6_PFDA		100	25-150
13C7_PFUdA		93	25-150
13C8_PFOA		100	25-150
13C8_PFOS		101	25-150
13C8_PFOSA		91	10-150
13C9_PFNA		96	25-150
d-EtFOSA		75	10-150
d5-EtFOSAA		96	25-150
d9-EtFOSE		89	10-150
d-MeFOSA		78	10-150
d3-MeFOSAA		96	25-150
d7-MeFOSE		89	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = 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: YQ86250-002
Batch: 86250
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 10/01/2023 2059

Parameter	Spike Amount (ng/L)	Result (ng/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
9Cl-PF3ONS	15	16		1	105	50-150	10/03/2023 1422
11Cl-PF3OUdS	15	16		1	105	50-150	10/03/2023 1422
8:2 FTS	15	17		1	108	50-150	10/03/2023 1422
6:2 FTS	15	16		1	105	50-150	10/03/2023 1422
4:2 FTS	15	16		1	109	50-150	10/03/2023 1422
GenX	32	36		1	113	50-150	10/03/2023 1422
ADONA	15	14		1	94	50-150	10/03/2023 1422
EtFOSA	16	16		1	100	50-150	10/03/2023 1422
EtFOSAA	16	17		1	109	50-150	10/03/2023 1422
EtFOSE	16	17		1	109	50-150	10/03/2023 1422
MeFOSA	16	16		1	99	50-150	10/03/2023 1422
MeFOSAA	16	16		1	98	50-150	10/03/2023 1422
MeFOSE	16	17		1	105	50-150	10/03/2023 1422
PFBS	14	16		1	112	50-150	10/03/2023 1422
PFDS	15	17		1	108	50-150	10/03/2023 1422
PFHpS	15	13		1	85	50-150	10/03/2023 1422
PFNS	15	16		1	107	50-150	10/03/2023 1422
PFOSA	16	16		1	100	50-150	10/03/2023 1422
PFPeS	15	16		1	107	50-150	10/03/2023 1422
PFDOS	15	17		1	110	50-150	10/03/2023 1422
PFHxS	15	14		1	96	50-150	10/03/2023 1422
PFBA	16	17		1	108	50-150	10/03/2023 1422
PFDA	16	15		1	91	50-150	10/03/2023 1422
PFDoA	16	15		1	94	50-150	10/03/2023 1422
PFHpA	16	16		1	100	50-150	10/03/2023 1422
PFHxA	16	16		1	100	50-150	10/03/2023 1422
PFNA	16	15		1	95	50-150	10/03/2023 1422
PFOA	16	16		1	97	50-150	10/03/2023 1422
PFPeA	16	15		1	97	50-150	10/03/2023 1422
PFTeDA	16	15		1	95	50-150	10/03/2023 1422
PFTrDA	16	16		1	97	50-150	10/03/2023 1422
PFUdA	16	15		1	93	50-150	10/03/2023 1422
PFOS	15	17		1	113	50-150	10/03/2023 1422

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		92	25-150
13C2_6:2FTS		98	25-150
13C2_8:2FTS		85	25-150
13C2_PFDoA		104	25-150
13C2_PFTeDA		105	25-150
13C3_PFBS		95	25-150
13C3_PFHxS		106	25-150
13C3-HFPO-DA		90	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = 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: YQ86250-002
Batch: 86250
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 10/01/2023 2059

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		100	25-150
13C4_PFHpA		108	25-150
13C5_PFHxA		100	25-150
13C5_PFPeA		99	25-150
13C6_PFDA		105	25-150
13C7_PFUdA		92	25-150
13C8_PFOA		107	25-150
13C8_PFOS		89	25-150
13C8_PFOSA		97	10-150
13C9_PFNA		97	25-150
d-EtFOSA		71	10-150
d5-EtFOSAA		98	25-150
d9-EtFOSE		84	10-150
d-MeFOSA		67	10-150
d3-MeFOSAA		95	25-150
d7-MeFOSE		84	10-150

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

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

PFAS by LC/MS/MS - Duplicate

Sample ID: YI22011-001DU
Batch: 86250
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 10/01/2023 2059

Parameter	Sample Amount (ng/L)	Result (ng/L)	Q	Dil	% RPD	%RPD Limit	Analysis Date
9Cl-PF3ONS	ND	ND		1	0.00	20	10/03/2023 1701
11Cl-PF3OUdS	ND	ND		1	0.00	20	10/03/2023 1701
8:2 FTS	ND	ND		1	0.00	20	10/03/2023 1701
6:2 FTS	ND	ND		1	0.00	20	10/03/2023 1701
4:2 FTS	ND	ND		1	0.00	20	10/03/2023 1701
GenX	ND	ND		1	0.00	20	10/03/2023 1701
ADONA	ND	ND		1	0.00	20	10/03/2023 1701
EtFOSA	ND	ND		1	0.00	20	10/03/2023 1701
EtFOSAA	ND	ND		1	0.00	20	10/03/2023 1701
EtFOSE	ND	ND		1	0.00	20	10/03/2023 1701
MeFOSA	ND	ND		1	0.00	20	10/03/2023 1701
MeFOSAA	ND	ND		1	0.00	20	10/03/2023 1701
MeFOSE	ND	ND		1	0.00	20	10/03/2023 1701
PFBS	3.8	3.2	J	1	16	20	10/03/2023 1701
PFDS	ND	ND		1	0.00	20	10/03/2023 1701
PFHpS	ND	ND		1	0.00	20	10/03/2023 1701
PFNS	ND	ND		1	0.00	20	10/03/2023 1701
PFOSA	ND	ND		1	0.00	20	10/03/2023 1701
PFPeS	ND	ND		1	0.00	20	10/03/2023 1701
PFDOS	ND	ND		1	0.00	20	10/03/2023 1701
PFHxS	ND	ND		1	0.00	20	10/03/2023 1701
PFBA	6.5	6.6		1	2.1	20	10/03/2023 1701
PFDA	ND	ND		1	0.00	20	10/03/2023 1701
PFDoA	ND	ND		1	0.00	20	10/03/2023 1701
PFHpA	1.4	1.4	J	1	0.61	20	10/03/2023 1701
PFHxA	1.9	2.4	J,+	1	25	20	10/03/2023 1701
PFNA	0.99	0.67	J,+	1	39	20	10/03/2023 1701
PFOA	3.4	3.1	J	1	11	20	10/03/2023 1701
PFPeA	2.5	2.8	J	1	11	20	10/03/2023 1701
PFTeDA	ND	ND		1	0.00	20	10/03/2023 1701
PFTrDA	ND	ND		1	0.00	20	10/03/2023 1701
PFUdA	ND	ND		1	0.00	20	10/03/2023 1701
PFOS	6.5	6.4		1	0.83	20	10/03/2023 1701

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS	N	321	25-150
13C2_6:2FTS	N	273	25-150
13C2_8:2FTS		143	25-150
13C2_PFDoA		98	25-150
13C2_PFTeDA		93	25-150
13C3_PFBS		80	25-150
13C3_PFHxS		86	25-150
13C3-HFPO-DA		67	25-150

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

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

PFAS by LC/MS/MS - Duplicate

Sample ID: YI22011-001DU
Batch: 86250
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 10/01/2023 2059

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		35	25-150
13C4_PFHpA		85	25-150
13C5_PFHxA		77	25-150
13C5_PFPeA		58	25-150
13C6_PFDA		102	25-150
13C7_PFUdA		95	25-150
13C8_PFOA		101	25-150
13C8_PFOS		90	25-150
13C8_PFOSA		92	10-150
13C9_PFNA		105	25-150
d-EtFOSA		71	10-150
d5-EtFOSAA		101	25-150
d9-EtFOSE		75	10-150
d-MeFOSA		70	10-150
d3-MeFOSAA		107	25-150
d7-MeFOSE		72	10-150

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

Internal Transfer Chain of Custody

☐ Samples Pre-Logged into eCOC.

State Of Origin: WI
Cert. Needed: ☒ Yes ☐ No

Workorder: 40268374 **Workorder Name:** IE-1902007 PERSHING PLAZA
Owner Received Date: 9/21/2023 **Results Requested By:** 10/18/2023

Report To
Dan Milewsky
Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

Subcontract To
Pace Analytical West Columbia
106 Vantage Point Drive
West Columbia, SC 29172
Phone (803)791-9700

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	Requested Analysis: PFAS (WDNR 33 Targets)
1	MW-1	PS	9/19/2023 14:05	40268374001	Water	2	X
2	MW-2	PS	9/19/2023 12:55	40268374002	Water	2	X
3	MW-3	PS	9/20/2023 11:00	40268374003	Water	2	X
4	MW-4	PS	9/20/2023 10:00	40268374004	Water	2	X
5	MW-5	PS	9/19/2023 11:55	40268374005	Water	2	X

Y122011
JSH

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] Pace	9/21/23 1620		
2				
3	FedEx	9/22/23 1000	[signature]	9/22/23 1000

Comments: for historic data see WD15036-001

Cooler Temperature on Receipt 3.7 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Thursday, September 21, 2023 1:58:12 PM FMT-ALL-C-002rev.00 24March2009 Page 1 of 1

DC#_Title: ENV-FRM-WCOL-0286 v02_Samples Receipt Checklist (SRC)
Effective Date: 8/2/2022

Sample Receipt Checklist (SRC)

Client: PACE Cooler Inspected by/date: BRS2 / 09/21/23 Lot #: YI22011

Means of receipt: ☐ Pace ☐ 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 upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

3.7 / 3.7 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☐ Temperature Blank ☑ Against Bottles IR Gun ID: 8 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☑ Yes	☐ No	☐ NA	3. Were all coolers received at or below 6.0°C? If no, was Project Manager notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC and all sample containers?
☑ Yes	☐ No		7. Was collection date & time listed on the COC and all sample containers?
☑ Yes	☐ No		8. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		9. Were tests to be performed listed on the COC?
☑ Yes	☐ No		10. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)? _____
☑ Yes	☐ No		11. Was adequate sample volume available?
☑ Yes	☐ No		12. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☑ Yes	☐ No		13. Were all samples containers accounted for? (No missing/excess)
☐ Yes	☐ No	☑ NA	14. Were VOA, 8015C and RSK-175 samples free of bubbles >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	15. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	16. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	17. Were all applicable NH_3/TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☑ No	☐ NA	18. Was the quote number listed on the container label? If yes, Quote # _____

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA. ☐
Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_4$) with Unique ID: NA.

Comments:

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