February 23, 2021

Mark Yokum, Chief Counsel
Appvion Operations, Inc.
825 E. Wisconsin Avenue
P.O. Box 359
Appleton, WI 54912-0359

Subject: **Post-remedial Groundwater Sampling Results**
BRRTS#: 02-45-000015

Dear Mr. Yokum:

In accordance with the executed Agreement to Provide Access for Sampling Activities, and in accordance with Wisconsin Department of Natural Resources (WDNR) regulation NR 716.14, EnviroForensics, LLC (EnviroForensics) is providing the results of groundwater samples collected from monitoring wells MW-1, MW-2 and, MW-5 located on Appvion property at 714 North Lawe Street in Appleton, Wisconsin. The groundwater samples were collected on December 29, 2020 to monitor progress of groundwater remedial actions taken by Albany International, Inc. last summer. The chemicals of concern (COC) for the investigation are total dissolved chromium. In addition, per request of the WDNR, the wells were sampled for polyfluoroalkyl substances (PFAS) which are considered emerging contaminants of concern and possibly related to former chrome plating operations.

The groundwater sample from MW-5 was analyzed for total dissolved chromium, iron, manganese, and PFAS. The samples from MW-1 and MW-2 were analyzed for PFAS, only. The location of all groundwater monitoring wells on Appvion property are shown on attached **Figure 1**. The sampling activities were conducted at the direction of the WDNR as part of the post-remedial monitoring that they require. The WDNR has assigned the following identification to the former cleaning facility: BRRTS# 02-45-000015.

The Responsible Party is:

Albany International.
P.O. Box 1939
Appleton, WI 54913

Sampling Results

The chromium sample analytical results are summarized and compared to public health criteria in the

EnviroForensics, LLC
N16 W23390 Stone Ridge Dr, Suite G, Waukesha, WI 53188
Phone: 262-290-4001 • Fax 317-972-7875

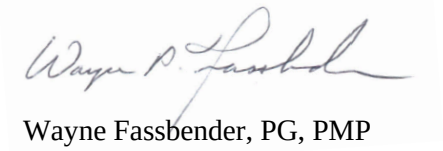
attached **Table 1**. The PFAS sample analytical results are in **Table 2.** An excerpt from the laboratory report is also attached.

As can be seen in **Table 1**, dissolved total chromium was not detected at MW-5 in a concentration exceeding the laboratory detection limits. Total dissolved iron and manganese concentrations exceeded applicable WDNR standards; however, these elements are integral reactants of the remedial injection process to reduce chromium and are anticipated to decrease over time.

As seen in **Table 2**, several PFAS were detected in wells MW-1, MW-2, and MW-5. Currently, there are no Wisconsin regulatory standards for these compounds; however, the WDNR is considering a groundwater enforcement standard (ES) of 20 nanograms per liter (20 parts per trillion) for both PFOA and PFOS either singly or in combination. Given this proposed standard, well MW-2 contained PFOA in a concentrations exceeding the proposed ES and MW-5 contained PFOS in a concentration exceeding the proposed ES. We also detected PFAS in a north property boundary well on the Luvata property having some of the greatest concentrations of PFAS. This well is in the up-gradient direction of groundwater flow and may indicate that the source of the PFAS is not on the Luvata property.

If you have any questions or concerns, please contact me at 414-982-3988 or by email at wfassbender@enviroforensics.com. The WDNR project manager, Jeremy Mitchell, can be reached at 920-366-6830. We greatly appreciate your help and patience with this matter.

Sincerely,
EnviroForensics, LLC

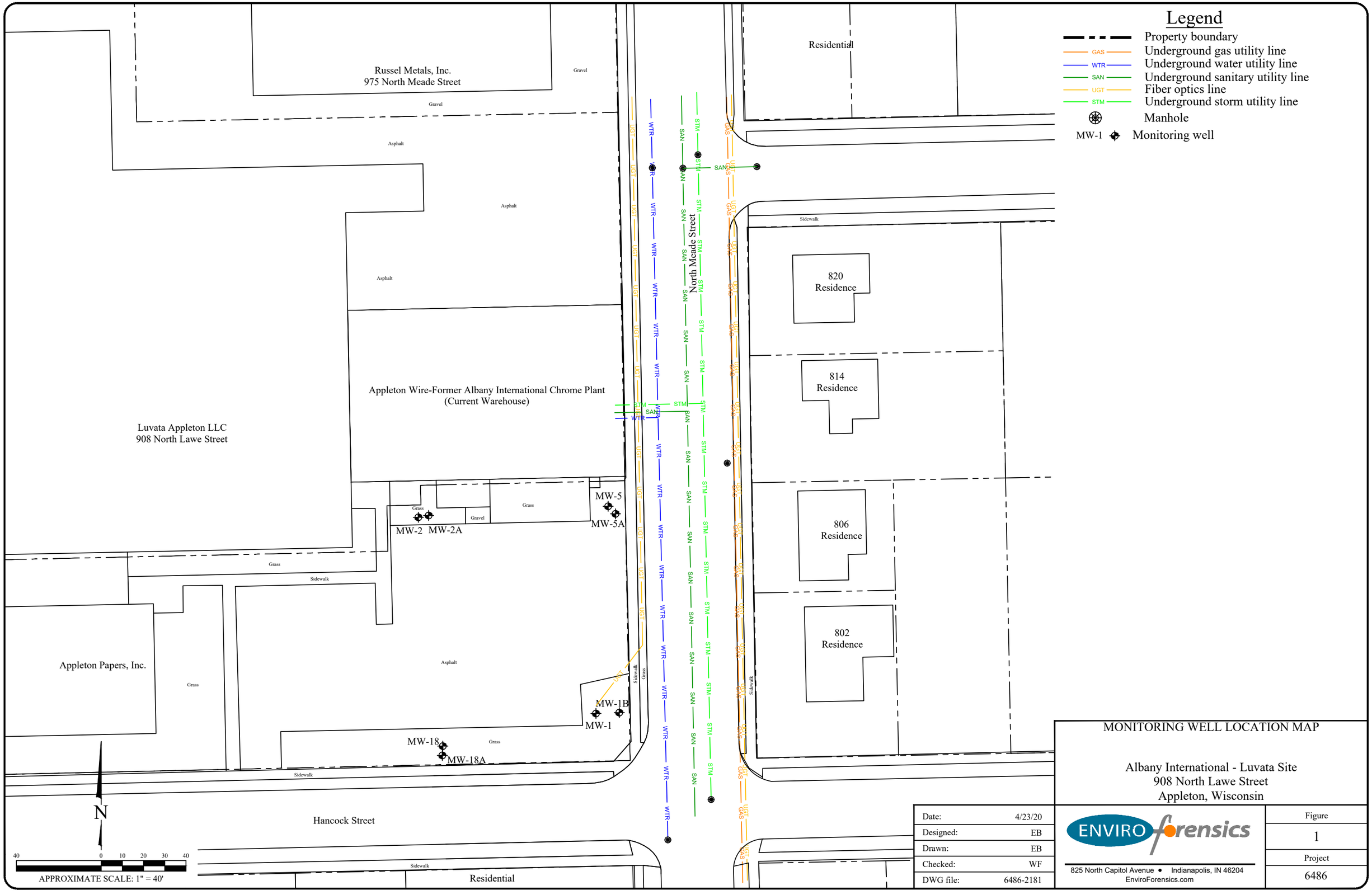


Wayne Fassbender, PG, PMP
Senior Project Manager

Copy: Jeremy Mitchell, Wisconsin Department of Natural Resources

Attachments:

Figure 1: Monitoring Well Location Map
Table 1: Groundwater Remediation Performance Monitoring Data
Table 2: PFAS Groundwater Analytical Results
Groundwater Laboratory Analytical Report Excerpts



MONITORING WELL LOCATION MAP

Albany International - Luvata Site
908 North Lawe Street
Appleton, Wisconsin

Date:	4/23/20
Designed:	EB
Drawn:	EB
Checked:	WF
DWG file:	6486-2181

ENVIRO forensics
825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com

Figure 1

Project 6486

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Albany International - Luvata Site
908 N. Lawe St., Appleton, WI 54911

Monitoring Well Identification	Sample Date	Dissolved Total Chromium	Hexavalent Chromium
Public Health Enforcement Standard		**100**	NE
Public Health Preventive Action Limit		*10*	NE
MW-1	06/29/17	<2.5	NA
	08/31/17	<2.5	NA
MW-1B	06/29/17	3.7 J	NA
	08/31/17	<2.5	NA
MW-2	06/29/17	*29.5*	NA
	08/31/17	<2.5	NA
	7/1/2020	<3.9	NA
MW-2A	06/29/17	<2.5	NA
	08/31/17	<2.5	NA
MW-5	06/29/17	**120**	NA
	08/31/17	**256**	NA
	4/10/2020	**12.7 J**	NA
	7/1/2020	<3.9	NA
	9/29/2020	<3.9	NA
	12/29/2020	<3.9	NA
MW-5A	06/29/17	<2.5	NA
	08/31/17	<2.5	NA
	7/1/2020	<3.9	NA
MW-5C	06/29/17	<2.5	NA
	08/31/17	<2.5	NA
MW-18	06/29/17	3.5 J	NA
	08/31/17	<2.5	NA
MW-18A	06/29/17	<2.5	NA
	08/31/17	<2.5	NA

Notes:
All concentrations reported in units of micrograms per liter (µg/l)
Only detected compounds are listed
Bolded and Orange Shaded values indicates an exceedance of the Public Health Enforcement Standard
Italicized and Blue Shaded values indicates an exceedance the Public Health Preventive Action Limit
J = Analyte concentration detected between the laboratory Reporting Limit and the laboratory Method Detection Limit
NE = Not Established
NA = Not Analyzed

TABLE 2
PFAS GROUNDWATER ANALYTICAL RESULTS
Albany International - Luvata Site
908 N. Lawe St., Appleton, Wisconsin

Monitoring Well	Sample Date	PFOA	PFOS	PFHxA	PFHxS	PFHpA	PHFpS	PFBA	PFBS	PFNA	PFNS	PFDA	PFDS	PFPeA	PFPeS	HFPO-DA	PFDoA	PFDoS	PFUnA	PFTrDA	PFTeDA	4:2 FTSA	6:2 FTSA	8:2 FTSA	10:2 FTSA	9CL-PF3ONS	11CL-PF3OUdS	DONA	FOSA	N-MeFOSAA	N-EtFOSAA	N-MeFOSA	N-MeFOSE	N-EtFOSA	N-EtFOSE
Proposed Groundwater Enforcement Standard		**20***	**20***	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
MW-1	12/29/2020	**6.3**	**5.3**	**3.1 J**	**1.8 J**	**1.8 J**	NR	**17**	**5.1**	<0.92	<0.92	**1.2 J**	<0.92	**4.0**	<0.92	NR	<0.92	NR	NR	<0.92	<0.92	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	NR	NR	<3.7	<1.8	<3.7	<3.7	<1.8	<1.8
MW-2	12/29/2020	**75**	**11**	**41**	**18**	**28**	NR	**220**	**69**	<1.0	<1.0	**1.2 J**	<1.0	**34**	<1.0	NR	<1.0	NR	NR	<1.0	<1.0	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	NR	NR	<4.1	<2.1	<4.1	<2.1	<2.1	<2.1
MW-5	12/29/2020	**19**	**22**	**8.9**	<0.98	**7.4**	NR	**32**	**9.9**	**2.4 J**	<0.98	<0.98	<0.98	**9.5**	<0.98	NR	<0.98	NR	NR	<0.98	<0.98	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NR	NR	<2.0	<2.0	<3.9	<2.0	<2.0	<2.0

Notes:

All concentrations reported in units of nanograms per liter (ng/L)

Bolded and orange shaded values are above proposed groundwater enforcement standards

Bolded values are above detection limits

***** Proposed groundwater standard applies to individual compound or combined PFOA and PFOS

J = Analyte concentration detected between the laboratory level of detection and the level of quantification

FRB = Compound detected in field reagent blank

NR = Not reported due to failure of laboratory QC

NE = Not Established

Synergy Environmental Lab, INC

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

WAYNE FASSBENDER
ENVIROFORENSICS
N16 W 23390 STONERIDGE DR
WAUKESHA WI 53188

Report Date *13-Jan-21*

Project Name ALBANY **Invoice #** E38947
Project # 6486 PO#2020-1948

Lab Code 5038947A
Sample ID 6486 MW-5
Sample Matrix Water
Sample Date 12/29/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Chromium, Dissolved	< 3.9	ug/L	3.9	12.8	1	200.7		1/11/2021	CWT	1
Iron, Dissolved	4.11	mg/l	0.03	0.1	1	200.7		1/11/2021	CWT	1
Manganese, Dissolved	353	ug/L	4.2	13.8	1	200.7		1/11/2021	CWT	1

Lab Code 5038947B
Sample ID 6486 MW-19R
Sample Matrix Water
Sample Date 12/29/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Chromium, Dissolved	< 3.9	ug/L	3.9	12.8	1	200.7		1/11/2021	CWT	1
Iron, Dissolved	0.12	mg/l	0.03	0.1	1	200.7		1/11/2021	CWT	1
Manganese, Dissolved	32.1	ug/L	4.2	13.8	1	200.7		1/11/2021	CWT	1

Lab Code 5038947C
Sample ID 6486 MW-20R
Sample Matrix Water
Sample Date 12/29/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Chromium, Dissolved	< 3.9	ug/L	3.9	12.8	1	200.7		1/11/2021	CWT	1
Iron, Dissolved	1.95	mg/l	0.03	0.1	1	200.7		1/11/2021	CWT	1
Manganese, Dissolved	160	ug/L	4.2	13.8	1	200.7		1/11/2021	CWT	1

PFAS by LC/MS/MS

Client: **Enviroforensics** Laboratory ID: **VL31055-001**

Description: **6486-MW1** Matrix: **Aqueous**

Date Sampled: **12/29/2020 0920**

Date Received: **12/31/2020**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/13/2021 1408	SES	01/11/2021 1020	78998

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		15	3.7	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**5.1**		**3.7**	**0.92**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**1.8**	**J**	**3.7**	**0.92**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**17**		**3.7**	**0.92**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	**335-76-2**	**PFAS by ID SOP**	**1.2**	**J**	**3.7**	**0.92**	**ng/L**	**1**
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**1.8**	**J**	**3.7**	**0.92**	**ng/L**	**1**
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**3.1**	**J**	**3.7**	**0.92**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.4	1.8	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**6.3**		**3.7**	**0.92**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**4.0**		**3.7**	**0.92**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.7	0.92	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**5.3**		**3.7**	**0.92**	**ng/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		118	25-150
13C2_6:2FTS		110	25-150
13C2_8:2FTS		102	25-150
13C2_PFDoA		109	25-150
13C2_PFHxDA		100	25-150
13C2_PFTeDA		98	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
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
H = Out of holding time
W = Reported on wet weight basis

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: **Enviroforensics** Laboratory ID: **VL31055-001**

Description: **6486-MW1** Matrix: **Aqueous**

Date Sampled: **12/29/2020 0920**

Date Received: **12/31/2020**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBS		110	25-150
13C3_PFHxS		107	25-150
13C3-HFPO-DA		116	25-150
13C4_PFBA		115	25-150
13C4_PFHpA		111	25-150
13C5_PFHxA		114	25-150
13C5_PFPeA		116	25-150
13C6_PFDA		111	25-150
13C7_PFUdA		101	25-150
13C8_PFOA		113	25-150
13C8_PFOS		103	25-150
13C8_PFOSA		122	10-150
13C9_PFNA		107	25-150
d-EtFOSA		98	10-150
d5-EtFOSAA		106	25-150
d9-EtFOSE		101	10-150
d-MeFOSA		100	10-150
d3-MeFOSAA		120	25-150
d7-MeFOSE		110	10-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
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
H = Out of holding time
W = Reported on wet weight basis

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: **Enviroforensics** Laboratory ID: **VL31055-002**

Description: **6486-MW2** Matrix: **Aqueous**

Date Sampled: **12/29/2020 0905**

Date Received: **12/31/2020**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/13/2021 1418	SES	01/11/2021 1020	78998

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		16	4.1	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**69**		**4.1**	**1.0**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**18**		**4.1**	**1.0**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**220**		**4.1**	**1.0**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	**335-76-2**	**PFAS by ID SOP**	**1.2**	**J**	**4.1**	**1.0**	**ng/L**	**1**
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**28**		**4.1**	**1.0**	**ng/L**	**1**
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**41**		**4.1**	**1.0**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		8.2	2.1	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**75**		**4.1**	**1.0**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**34**		**4.1**	**1.0**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.1	1.0	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**11**		**4.1**	**1.0**	**ng/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		109	25-150
13C2_6:2FTS		104	25-150
13C2_8:2FTS		98	25-150
13C2_PFDoA		105	25-150
13C2_PFHxDA		70	25-150
13C2_PFTeDA		94	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
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N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

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PFAS by LC/MS/MS

Client: **Enviroforensics**
Laboratory ID: **VL31055-002**
Description: **6486-MW2**
Matrix: **Aqueous**
Date Sampled: **12/29/2020 0905**
Date Received: **12/31/2020**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBS		108	25-150
13C3_PFHxS		104	25-150
13C3-HFPO-DA		119	25-150
13C4_PFBA		107	25-150
13C4_PFHpA		105	25-150
13C5_PFHxA		108	25-150
13C5_PFPeA		115	25-150
13C6_PFDA		108	25-150
13C7_PFUdA		103	25-150
13C8_PFOA		110	25-150
13C8_PFOS		112	25-150
13C8_PFOSA		117	10-150
13C9_PFNA		107	25-150
d-EtFOSA		81	10-150
d5-EtFOSAA		101	25-150
d9-EtFOSE		93	10-150
d-MeFOSA		85	10-150
d3-MeFOSAA		112	25-150
d7-MeFOSE		101	10-150

LOQ = Limit of Quantitation
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DL = Detection Limit
ND = Not detected at or above the DL
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PFAS by LC/MS/MS

Client: **Enviroforensics** Laboratory ID: **VL31055-003**

Description: **6486-MW5** Matrix: **Aqueous**

Date Sampled: **12/29/2020 0850**

Date Received: **12/31/2020**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/13/2021 1429	SES	01/11/2021 1020	78998

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H,1H,2H,2H-perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		16	3.9	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**9.9**		**3.9**	**0.98**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**32**		**3.9**	**0.98**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**7.4**		**3.9**	**0.98**	**ng/L**	**1**
Perfluoro-n-hexadecanoic acid (PFHxDA)	67905-19-5	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**8.9**		**3.9**	**0.98**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	**375-95-1**	**PFAS by ID SOP**	**2.4**	**J**	**3.9**	**0.98**	**ng/L**	**1**
Perfluoro-n-octadecanoic acid (PFODA)	16517-11-6	PFAS by ID SOP	ND		7.9	2.0	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**19**		**3.9**	**0.98**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**9.5**		**3.9**	**0.98**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.9	0.98	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**22**		**3.9**	**0.98**	**ng/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	234	25-150
13C2_6:2FTS	N	214	25-150
13C2_8:2FTS	N	203	25-150
13C2_PFDoA		87	25-150
13C2_PFHxDA		51	25-150
13C2_PFTeDA		58	25-150

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PFAS by LC/MS/MS

Client: **Enviroforensics** Laboratory ID: **VL31055-003**

Description: **6486-MW5** Matrix: **Aqueous**

Date Sampled: **12/29/2020 0850**

Date Received: **12/31/2020**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C3_PFBS		84	25-150
13C3_PFHxS		82	25-150
13C3-HFPO-DA		76	25-150
13C4_PFBA		50	25-150
13C4_PFHpA		91	25-150
13C5_PFHxA		88	25-150
13C5_PFPeA		80	25-150
13C6_PFDA		101	25-150
13C7_PFUdA		94	25-150
13C8_PFOA		94	25-150
13C8_PFOS		92	25-150
13C8_PFOSA		103	10-150
13C9_PFNA		95	25-150
d-EtFOSA		88	10-150
d5-EtFOSAA		106	25-150
d9-EtFOSE		56	10-150
d-MeFOSA		92	10-150
d3-MeFOSAA		116	25-150
d7-MeFOSE		60	10-150

LOQ = Limit of Quantitation
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