AECOM
40 British American Boulevard
Latham, NY 12110
aecom.com

Project name:
Dynamic Systems, Inc.

Project ref:
Site No. 442040

To:
NYSDEC, Remedial Bureau D
Attn: Rakshak Iyengar
625 Broadway, 12th Floor
Albany, NY 12233
(Transmitted via Email)

From:
John Santacroce

Date:
May 27, 2022

Memo

Subject: DSI Poestenkill, April 2022 PFAS Groundwater Sampling Results

Introduction

Dynamic Systems Inc.(DSI) has engaged AECOM, globally recognized experts in PFAS investigation and remediation, to provide services related to the New York State Department of Environmental Conservation (DEC) request for additional PFAS Sampling at the Poestenkill, NY facility (the Site). AECOM has reviewed the various workplans, reports, and correspondence related to environmental actions at the Site. The document review included the most recent letter from the DEC transmitted on 21 March 2017. DSI sent a letter to the NYSDEC Dated 30 March 2022 that recommended sampling of select monitoring wells at the Site including DSI-1, DSI-3, DSI-4, DSI-6, and MW-2N. The NYSDEC replied with a letter 15 April 2022 requesting that deep monitoring well MW-1 be included in the sampling event. DSI agreed to collect a sample from MW-1.

Groundwater Sampling

Approximately two weeks prior to the groundwater sampling event, tubing and bailers were removed from the monitoring wells. After the materials were removed the wells were purged to remove any stagnant water. The wells were purged until three well volumes were removed or the until the well was dry. The purge water was placed in a drum onsite for future disposal.

The ground water sampling event was conducted on 27 April 2022. Groundwater samples were collected from six monitoring wells including DSI-1, DSI-3, DSI-4, DSI-6, MW-2N, and MW-1. Prior to the start of groundwater sampling all wells were gauged for depth to water. The groundwater samples were collected by AECOM field staff trained in PFAS sample collection and in accordance with the DEC's PFAS sampling Guidance (rev. June 2021). The groundwater samples were collected with PFAS free sampling equipment with low flow methods utilizing peristaltic pumps and dedicated tubing. Monitoring well DSI-4 went dry and a sample was collected after the well fully recharged. The monitoring well field forms are included as **Attachment A.** Quality Control samples were collected in

accordance with NYSDEC guidance including one equipment blank, one ambient blank, one blind field duplicate, and one MS/MSD. The blank samples were collected using laboratory supplied PFAS free distilled water.

The groundwater samples were sent to the contracted laboratory (Eurofins) under chain of custody for analysis by EPA Method 537 (modified) for 21 PFAS compounds in accordance with the DEC guidance and the NYSDEC Letter dated 17 March 2022.

Groundwater Elevation

As stated above depth to groundwater measurements were taken at all site monitoring wells prior to sampling. Depth to water measurements and the corresponding groundwater elevations are included in **Attachment B** along with a groundwater flow map. The groundwater flow was found to be consistent with what has been reported for the Site historically. The groundwater at Site is moving south to southeast towards Newfoundland Creek.

As reported in the *Fall 2021 Semi-Annual Report* prepared by JMT, the southeastern-most well (DSI-4) is approximately 1,000 feet from the southern property boundary and about 2,000 feet from offsite homes (to the south). Based on an evaluation of surrounding topography, this southward component of flow does not appear to extend beyond the topographic lowland associated with Newfoundland Creek. In the vicinity of Snyders Corners Road, the topography and presumably groundwater flow, slopes northward towards the Newfoundland Creek lowland suggesting that groundwater from the DSI Site does not reach the homes in this area.

Groundwater PFAS Results

As stated previously groundwater samples were collected from six monitoring wells at the site including DSI-1, DSI-3, DSI-4, DSI-6, MW-2N, and MW-1 on 27 April 2022. The PFAS results from these samples are consistent with the PFAS results for groundwater samples collected in November 2021. The validated results are tabulated in **Attachment C.**

Perfluorooctanoic acid (PFOA) was detected at 20 ng/L in the groundwater sample from monitoring well DSI-4. This result was the only exceedance of the New York Maximum Contaminant Limit of 10 ng/L for PFOA. Previously PFOA had been detected in this well at 23.1 ng/L in the sample collected in November 2021. Low levels of PFOA were detected below the MCL in all other shallow monitoring wells at the Site and was not detected in the groundwater sample from the deep monitoring well (MW-1).

Perfluorooctanesulfonic acid (PFOS) was detected in all shallow monitoring wells at low concentrations below the NY MCL of 10 ng/L. PFOS was not detected in the groundwater sample from the deep monitoring well (MW-1).

Other unregulated PFAS compounds were detected in the groundwater samples which is consistent with the previous PFAS groundwater results for the Site. The only detection in the deep monitoring well (MW-1) was for the unregulated compound Perfluorobutanesulfonic acid (PFBS) at an estimated concentration of 1 ng/L.

No PFAS compounds were detected in the ambient blank or the equipment blank taken during this sampling event.

All of the data has been validated by an AECOM chemist and a Data Usability Summary Report (DUSR) is included as **Attachment D**. All of the data was found to be usable, and the validated qualifiers have been included in the data table.

Summary

The PFAS groundwater results from November 2021 and April 2022 indicate that there are low levels of PFAS in some areas of shallow groundwater at the Site. There are no PFAS impacts to deep groundwater at the Site as indicated from the results for MW-1. The highest concentrations of PFOA are in the monitoring well furthest from the DSI facility and away from the TCE source area suggesting that this detection is not related to the DSI operation or the historic spill of TCE. As stated previously there is no known historic or current use of PFAS containing material in the operations at the Site.

Attachment A

Field Sampling Forms

Monitoring Well Purging/Sampling Form

Project Name and Number: DSI Poestenkill 60682557

Monitoring Well Number: MW-1 Date: 4/27/2022

Samplers: Chris French/Tom Quackenbush

Sample Number: MW-1 042722 QA/QC Collected? MS/MSD

Purging / Sampling Method: Peristaltic/Low Flow

1. L = Total Well Depth:	54.5	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	6.59	feet
4. C = Column of Water in Casing:	47.91	feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)^2(7.48)	7.8	gal
6. D2 = Pump Setting Depth (ft):	52'	feet
7. C2 = Column of water in Pump/Tubing (ft):		feet
8. Tubing Volume = C2(0.005737088)		gal

D (inches)	D (feet)
1-inch	0.08
1.5-inch	0.125
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	1.5-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.092	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI Prof. + Quatro and Geotech Turbidity Meter

Parameter	Units	Readings						
Time	24 hr	0940	0945	0950	0955	1000	1005	1010
Water Level (0.33)	feet	6.74	7.70	8.49	9.11	9.79	10.73	11.29
Volume Purged	gal	0	0.2	0.37	0.55	0.7	0.95	1.1
Flow Rate	mL / min	130	190	140	140	140	190	140
Turbidity (+/- 10%)	NTU	56.7	66.4	59.7	66.1	65.1	56.1	99.9
Dissolved Oxygen (+/- 10%)	%	41.5	38.2	38.6	38.3	36.7	37.2	37.3
Dissolved Oxygen (+/- 10%)	mg/L	4.68	4.24	4.26	4.25	4.10	4.11	4.13
Eh / ORP (+/- 10)	MeV	148.6	127.8	119.3	116.4	112.8	110.7	109.2
Specific Conductivity	mS/cm[c]	0.434	0.399	0.396	0.395	0.394	0.394	0.393
Conductivity (+/- 3%)	mS/cm	0.318	0.290	0.287	0.288	0.288	0.287	0.287
pH (+/- 0.1)	pH unit	6.76	7.10	7.24	7.28	7.33	7.37	7.39
Temp (+/- 0.5)	C	10.7	10.7	10.6	10.8	10.9	10.9	10.9
Color	Visual	Clear	Clear	Clear	Clear	Clear	Clear	cloudy
Odor	Olfactory	none	none	none	none	none	none	none

Comments

Purge Start Time: 0938

Sample Time: 1235

* Three consecutive readings within range indicates stabilization of that parameter.

Monitoring Well Purging/Sampling Form

Project Name and Number: DSI Poestenkill 60682557

Monitoring Well Number: MW-1 Date: 4/27/2022

Samplers: Chris French/Tom Quackenbush

Sample Number: MW-1 042722 QA/QC Collected? MS/MSD

Purging / Sampling Method: Peristaltic/Low Flow

1. L = Total Well Depth:	54.5	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	6.59	feet
4. C = Column of Water in Casing:	47.91	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	7.8	gal
6. D2 = Pump Setting Depth (ft):	52	feet
7. C2 = Column of water in Pump/Tubing (ft):		feet
8. Tubing Volume = C2(0.005737088)		gal

D (inches)	D (feet)
1-inch	0.08
1.5-inch	0.125
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	1.5-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.092	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI Prof. + Quatro and Geotech Turbidity Meter

Parameter	Units	Readings						
Time	24 hr	1015	1020	1025	1030	1035	1040	1045
Water Level (0.33)	feet	11.98	12.84	13.59	13.96	14.42	14.90	15.38
Volume Purged	gal	1.25	1.5	1.65	1.75	1.9	2.05	2.2
Flow Rate	mL / min	140	150	100	100	100	100	105
Turbidity (+/- 10%)	NTU	92.0	109	110	86.8	77.2	87.5	77.5
Dissolved Oxygen (+/- 10%)	%	37.5	37.9	38.2	37.6	37.7	37.6	37.8
Dissolved Oxygen (+/- 10%)	mg/L	4.17	4.15	4.21	4.18	4.16	4.15	4.15
Eh / ORP (+/- 10)	MeV	107.3	106.0	105.1	104.4	104.3	104.2	104.0
Specific Conductivity	mS/cm[c]	0.393	0.391	0.391	0.392	0.392	0.392	0.391
Conductivity (+/- 3%)	mS/cm	0.287	0.287	0.286	0.286	0.287	0.287	0.286
pH (+/- 0.1)	pH unit	7.41	7.43	7.44	7.46	7.47	7.47	7.48
Temp (+/- 0.5)	C	11.0	11.1	10.9	10.9	11.0	11.0	10.9
Color	Visual	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy
Odor	Olfactory	none	none	none	none	none	none	none

Comments

Purge Start Time: 0938

Sample Time: 1235

* Three consecutive readings within range indicates stabilization of that parameter.

Monitoring Well Purging/Sampling Form

Project Name and Number: DSI Poestenkill 60682557

Monitoring Well Number: MW-1 Date: 4/27/2022

Samplers: Chris French/Tom Quackenbush

Sample Number: MW-1 042722 QA/QC Collected? MS/MSD

Purging / Sampling Method: Peristaltic/Low Flow

1. L = Total Well Depth:	54.5	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	6.59	feet
4. C = Column of Water in Casing:	47.91	feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)^2(7.48)	7.8	gal
6. D2 = Pump Setting Depth (ft):	52	feet
7. C2 = Column of water in Pump/Tubing (ft):		feet
8. Tubing Volume = C2(0.005737088)		gal

D (inches)	D (feet)
1-inch	0.08
1.5-inch	0.125
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	1.5-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.092	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI Prof. + Quatro and Geotech Turbidity Meter

Parameter	Units	Readings						
Time	24 hr	1050	1055	1100	1105	1110	1115	1120
Water Level (0.33)	feet	15.70	15.96	16.16	16.52	16.83	17.01	17.16
Volume Purged	gal	2.35	2.5	2.6	2.75	2.85	2.95	3.05
Flow Rate	mL / min	110	90	110	110	100	90	~~70~~
Turbidity (+/- 10%)	NTU	64.1	72.3	59.9	41.5	47.3	43.7	~~35.4~~ 79.8
Dissolved Oxygen (+/- 10%)	%	37.4	37.6	37.5	42.6	42.7	42.9	~~2.64~~ 33.2
Dissolved Oxygen (+/- 10%)	mg/L	9.10	9.12	9.12	9.71	9.71	9.82	3.64
Eh / ORP (+/- 10)	MeV	103.2	102.3	102.4	101.4	101.5	101.8	101.1
Specific Conductivity	mS/cm[c]	0.390	0.393	0.392	0.392	0.391	0.391	0.396
Conductivity (+/- 3%)	mS/cm	0.286	0.288	0.287	0.287	0.287	0.287	0.291
pH (+/- 0.1)	pH unit	7.49	7.50	7.48	7.53	7.52	7.53	7.55
Temp (+/- 0.5)	C	11.0	11.0	10.9	11.0	11.0	11.1	11.2
Color	Visual	cloudy	cloudy	cloudy	clear	clear	clear	cloudy
Odor	Olfactory	none	none	none	none	none	none	none

Comments

Purge Start Time: 0938

Sample Time: 1235

* Three consecutive readings within range indicates stabilization of that parameter.

Monitoring Well Purging/Sampling Form

Project Name and Number: DSI Poestenkill 60682557

Monitoring Well Number: MW-1 Date: 4/27/2022

Samplers: Chris French/Tom Quackenbush

Sample Number: MW-1 042722 QA/QC Collected? MS/MSD

Purging / Sampling Method: Peristaltic/Low Flow

1. L = Total Well Depth:	54.5	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	6.59	feet
4. C = Column of Water in Casing:	47.91	feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)^2(7.48)	7.8	gal
6. D2 = Pump Setting Depth (ft):	52	feet
7. C2 = Column of water in Pump/Tubing (ft):		feet
8. Tubing Volume = C2(0.005737088)		gal

D (inches)	D (feet)
1-inch	0.08
1.5-inch	0.125
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	1.5-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.092	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI Prof. + Quatro and Geotech Turbidity Meter

Parameter	Units	Readings						
Time	24 hr	1125	1130	1135	1140	1145	1150	1155
Water Level (0.33)	feet	17.34	17.88	18.49	19.16	19.78	20.05	2039
Volume Purged	gal	3.15	3.3	3.5	3.7	3.9	4.0	4.1
Flow Rate	mL / min	90	140	150	150	150	90	90
Turbidity (+/- 10%)	NTU	36.3	75.9	103	68.9	61.5	65.1	~~34.4~~
Dissolved Oxygen (+/- 10%)	%	32.9	34.7	34.7	35.3	35.2	34.4	34.1
Dissolved Oxygen (+/- 10%)	mg/L	3.59	3.76	3.78	3.83	3.80	3.71	3.74
Eh / ORP (+/- 10)	MeV	100.9	99.9	100.0	99.7	99.0	100.3	100.3
Specific Conductivity	mS/cm[c]	0.394	0.392	0.392	0.393	0.391	0.391	0.391
Conductivity (+/- 3%)	mS/cm	0.292	0.293	0.294	0.293	0.294	0.293	0.291
pH (+/- 0.1)	pH unit	7.55	7.56	7.56	7.55	7.56	7.55	7.53
Temp (+/- 0.5)	C	11.4	11.7	11.8	11.7	11.9	11.8	11.6
Color	Visual	clear	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy
Odor	Olfactory	none	none	none	none	none	none	none

Comments

Purge Start Time: 0938

Sample Time: 1235

* Three consecutive readings within range indicates stabilization of that parameter.

Monitoring Well Purging/Sampling Form

Project Name and Number: DSI Poestenkill 60682557

Monitoring Well Number: MW-1 Date: 4/27/2022

Samplers: Chris French/Tom Quackenbush

Sample Number: MW-1 042722 QA/QC Collected? MS/MSD

Purging / Sampling Method: Peristaltic/Low Flow

1. L = Total Well Depth:	54.5	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	6.59	feet
4. C = Column of Water in Casing:	47.91	feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)^2(7.48)	7.8	gal
6. D2 = Pump Setting Depth (ft):	52	feet
7. C2 = Column of water in Pump/Tubing (ft):		feet
8. Tubing Volume = C2(0.005737088)		gal

D (inches)	D (feet)
1-inch	0.08
1.5-inch	0.125
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	1.5-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.092	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI Prof. + Quatro and Geotech Turbidity Meter

Parameter	Units	Readings							
Time	24 hr	1200	1205	1210	1215	1220	1225	1230	1235
Water Level (0.33)	feet	20.55	20.94	21.58	21.95	22.10	22.99	22.99	22.99
Volume Purged	gal	4.25	4.35	4.6	4.7	4.8	5.05	5.2	5.3
Flow Rate	mL / min	140	140	155	90	120	85	85	85
Turbidity (+/- 10%)	NTU	45.6	48.7	48.0	50.4	43.6	44.1	46.1	45.8
Dissolved Oxygen (+/- 10%)	%	34.4	35.1	37.2	37.7	35.8	33.2	33.0	35.3
Dissolved Oxygen (+/- 10%)	mg/L	3.70	3.81	3.99	4.05	3.86	3.72	3.70	3.80
Eh / ORP (+/- 10)	MeV	100.7	101.3	100.6	101.4	100.7	101.0	102.0	103.1
Specific Conductivity	mS/cm[c]	0.391	0.392	0.391	0.391	0.391	0.391	0.392	0.392
Conductivity (+/- 3%)	mS/cm	0.294	0.293	0.295	0.293	0.295	0.295	0.293	0.292
pH (+/- 0.1)	pH unit	7.54	7.53	7.55	7.53	7.53	7.54	7.52	7.50
Temp (+/- 0.5)	C	12.0	11.7	11.9	11.8	11.9	11.9	11.8	11.6
Color	Visual	clear	clear	clear	clear	clear	clear	clear	clear
Odor	Olfactory	none	none	none	none	none	none	none	none

Comments

Purge Start Time: 0938

Sample Time: 1235

* Three consecutive readings within range indicates stabilization of that parameter.

Monitoring Well Purging/Sampling Form

Project Name and Number: DSI Poestenkill 60682557

Monitoring Well Number: MW-2N Date: 4/27/2022

Samplers: Chris French/Tom Quackenbush

Sample Number: _____ QA/QC Collected? Yes, DUP

Purging / Sampling Method: Peristaltic/Low Flow

1. L = Total Well Depth:		feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):		feet
4. C = Column of Water in Casing:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$		gal
6. D2 = Pump Setting Depth (ft):		feet
7. C2 = Column of water in Pump/Tubing (ft):		feet
8. Tubing Volume = C2(0.005737088)		gal

D (inches)	D (feet)
1-inch	0.08
1.5-inch	0.125
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	1.5-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.092	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI Prof. + Quatro and Geotech Turbidity Meter

Parameter	Units	Readings							
Time	24 hr	1050	1055	1100	1105	1110	1115	1120	1125
Water Level (0.33)	feet	3.99	4.37	4.46	4.51	4.51	4.49	4.51	4.51
Volume Purged	gal	0.0	0.2	0.4	0.6	0.8	1.0	1.2	1.4
Flow Rate	mL / min	100	100	100	100	100	100	100	100
Turbidity (+/- 10%)	NTU	408	107	58.4	34.9	13.3	9.62	7.00	5.71
Dissolved Oxygen (+/- 10%)	%	0.7	-3.7	-4.5	-4.9	0.5	0.0	0.1	-0.1
Dissolved Oxygen (+/- 10%)	mg/L	0.05	---	---	---	0.03	0.00	0.00	0.--
Eh / ORP (+/- 10)	MeV	-86.4	-86.3	-95.7	-99.4	-81.2	-78.4	-75.2	-73.5
Specific Conductivity	mS/cm[c]	1241	1241	1240	1247	1296	1302	1308	1311
Conductivity (+/- 3%)	mS/cm	0.62	0.62	0.62	0.63	0.65	0.65	0.66	0.65
pH (+/- 0.1)	pH unit	6.91	6.94	6.91	6.91	6.72	6.73	6.77	6.75
Temp (+/- 0.5)	C	18.4	18.5	18.6	18.5	18.6	18.6	18.7	18.7
Color	Visual	Cloudy	Cloudy	=	=	Clear	=	=	=
Odor	Olfactory	Odor	Odor	=	=	=	=	=	=

Comments

Purge Start Time: 1050

Sample Time: 1125

Sulfur odor Present

DUP collected

Page of

* Three consecutive readings within range indicates stabilization of that parameter.

Monitoring Well Purging/Sampling Form

Project Name and Number: DSI Poestenkill 60682557

Monitoring Well Number: DSI - 1 Date: 4/27/2022

Samplers: Chris French/Tom Quackenbush

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic/Low Flow

1. L = Total Well Depth:	_____	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	_____	feet
4. C = Column of Water in Casing:	_____	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	_____	gal
6. D2 = Pump Setting Depth (ft):	_____	feet
7. C2 = Column of water in Pump/Tubing (ft):	_____	feet
8. Tubing Volume = C2(0.005737088)	_____	gal

D (inches)	D (feet)
1-inch	0.08
1.5-inch	0.125
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	1.5-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.092	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI Prof. + Quatro and Geotech Turbidity Meter

Parameter	Units	Readings						
Time	24 hr	1215	1220	1225	1230	1235	1240	1245
Water Level (0.33)	feet	5.01	6.70	7.46	7.71	8.04	8.19	8.31
Volume Purged	gal	0.0	0.25	0.5	0.75	1.1	1.4	1.7
Flow Rate	mL / min	100	200	200	200	200	200	200
Turbidity (+/- 10%)	NTU	7.35	3.03	3.63	0.98	0.32	0.02	0.08
Dissolved Oxygen (+/- 10%)	%	1.3	-2.3	-3.2	-3.5	-3.9	-4.2	-4.1
Dissolved Oxygen (+/- 10%)	mg/L	0.12	---	---	---	---	---	---
Eh / ORP (+/- 10)	MeV	22.7	36.4	37.9	+39.7	45.6	52.1	56.2
Specific Conductivity	mS/cm[c]	109.8	103.0	101.0	99.1	95.3	92.2	93.1
Conductivity (+/- 3%)	mS/cm	0.078	0.073	0.072	0.070	0.067	0.065	0.066
pH (+/- 0.1)	pH unit	6.45	6.41	6.43	6.45	6.42	6.39	6.38
Temp (+/- 0.5)	C	10.1	10.0	9.7	9.9	9.7	9.8	9.7
Color	Visual	clear	"	"	"	"		"
Odor	Olfactory	None	"	"	"	"	"	"

Comments

Purge Start Time: 1215

Sample Time: 1305

* Three consecutive readings within range indicates stabilization of that parameter.

Monitoring Well Purging/Sampling Form

Project Name and Number: DSI Poestenkill 60682557

Monitoring Well Number: DSI - 1 Date: 4/27/2022

Samplers: Chris French/Tom Quackenbush

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic/Low Flow

1. L = Total Well Depth:		feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):		feet
4. C = Column of Water in Casing:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$		gal
6. D2 = Pump Setting Depth (ft):		feet
7. C2 = Column of water in Pump/Tubing (ft):		feet
8. Tubing Volume = C2(0.005737088)		gal

D (inches)	D (feet)
1-inch	0.08
1.5-inch	0.125
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	1.5-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.092	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI Prof. + Quatro and Geotech Turbidity Meter

Parameter	Units	Readings						
Time	24 hr	1250	1255	1300				
Water Level (0.33)	feet	8.39	8.42	8.45				
Volume Purged	gal	1.9	2.1	2.3				
Flow Rate	mL / min	200	200	200				
Turbidity (+/- 10%)	NTU	0.2	0.2	0.9				
Dissolved Oxygen (+/- 10%)	%	-4.0	-4.4	-4.5				
Dissolved Oxygen (+/- 10%)	mg/L	- - -	- - -	- - -				
Eh / ORP (+/- 10)	MeV	61.7	63.3	69.2				
Specific Conductivity	mS/cm[c]	92.2	92.1	92.4				
Conductivity (+/- 3%)	mS/cm	0.065	0.065	0.065				
pH (+/- 0.1)	pH unit	6.37	6.36	6.35				
Temp (+/- 0.5)	C	9.8	9.7	9.7				
Color	Visual	clear	"	"				
Odor	Olfactory	none	"	"				

Comments

Purge Start Time: 1215

Sample Time: 1305

* Three consecutive readings within range indicates stabilization of that parameter.

Monitoring Well Purging/Sampling Form

Project Name and Number: DSI Poestenkill 60682557

Monitoring Well Number: DST-3 Date: 4/27/2022

Samplers: Chris French/Tom Quackenbush

Sample Number: DST-3 042722 QA/QC Collected? EB-042722 & AB-042722

Purging / Sampling Method: Peristaltic/Low Flow

1. L = Total Well Depth:	24	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	4.62	feet
4. C = Column of Water in Casing:	19.38	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	3.16	gal
6. D2 = Pump Setting Depth (ft):	21.5	feet
7. C2 = Column of water in Pump/Tubing (ft):		feet
8. Tubing Volume = C2(0.005737088)		gal

D (inches)	D (feet)
1-inch	0.08
1.5-inch	0.125
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	1.5-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.092	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI Prof. + Quatro and Geotech Turbidity Meter

Parameter	Units	Readings						
Time	24 hr	1330	1335	1340	1345	1350	1355	1400
Water Level (0.33)	feet	5.03	5.85	6.98	7.75	8.27	8.75	9.10
Volume Purged	gal	0	0.2	0.5	0.8	1.05	1.3	1.6
Flow Rate	mL / min	140	140	155	160	160	160	160
Turbidity (+/- 10%)	NTU	49.0	52.0	98.9	54.8	57.6	47.4	45.0
Dissolved Oxygen (+/- 10%)	%	5.1	2.8	1.9	2.2	2.4	1.9	1.8
Dissolved Oxygen (+/- 10%)	mg/L	0.58	0.37	0.20	0.25	0.28	0.22	0.21
Eh / ORP (+/- 10)	MeV	106.8	69.4	35.5	24.7	18.1	11.7	6.8
Specific Conductivity	mS/cm[c]	1.07	1.05	1.02	1.01	1.00	1.00	1.00
Conductivity (+/- 3%)	mS/cm	0.74	0.72	0.70	0.69	0.69	0.69	0.69
pH (+/- 0.1)	pH unit	6.23	6.57	6.69	6.73	6.74	6.75	6.76
Temp (+/- 0.5)	C	8.8	8.6	8.5	8.6	8.5	8.7	8.7
Color	Visual	Clear	Clear	Clear	Clear	Clear	Clear	Clear
Odor	Olfactory	none	none	none	none	none	none	none

Comments

Purge Start Time: 1327

Sample Time: 1425

Equipment Blank EB-042722 Collected here @ 1450

Ambient Blank AB-042722 Collected here @ 1500

* Three consecutive readings within range indicates stabilization of that parameter.

Monitoring Well Purging/Sampling Form

Project Name and Number: DSI Poestenkill 60682557

Monitoring Well Number: DSI-3 Date: 4/27/2022

Samplers: Chris French, Tom Quackenbush

Sample Number: DSI-3 042722 QA/QC Collected? EB-042722 & AB-042722

Purging / Sampling Method: Peristaltic/Low Flow

1. L = Total Well Depth:	24	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	4.62	feet
4. C = Column of Water in Casing:	19.38	feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)^2(7.48)	3.16	gal
6. D2 = Pump Setting Depth (ft):	21.5	feet
7. C2 = Column of water in Pump/Tubing (ft):		feet
8. Tubing Volume = C2(0.005737088)		gal

D (inches)	D (feet)
1-inch	0.08
1.5-inch	0.125
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	1.5-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.092	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI Prof. + Quatro and Geotech Turbidity Meter

Parameter	Units	Readings						
Time	24 hr	1405	1410	1415	1420	1425		
Water Level (0.33)	feet	9.34	9.55	9.45	9.45	9.45		
Volume Purged	gal	1.85	2.1	2.3	2.45	2.6		
Flow Rate	mL / min	150	120	120	120	120		
Turbidity (+/- 10%)	NTU	34.3	29.8	26.8	25.2	24.8		
Dissolved Oxygen (+/- 10%)	%	1.8	1.7	1.7	1.7	1.8		
Dissolved Oxygen (+/- 10%)	mg/L	0.19	0.20	0.19	0.20	0.21		
Eh / ORP (+/- 10)	MeV	2.5	-1.5	-4.6	-7.6	-11.4		
Specific Conductivity	mS/cm[c]	1.00	0.99	0.99	0.99	0.99		
Conductivity (+/- 3%)	mS/cm	0.69	0.68	0.68	0.68	0.68		
pH (+/- 0.1)	pH unit	6.77	6.77	6.77	6.77	6.78		
Temp (+/- 0.5)	C	8.7	8.7	8.7	8.7	8.7		
Color	Visual	clear	clear	clear	clear	clear		
Odor	Olfactory	none	none	none	none	none		

Comments

Purge Start Time: 1327

Sample Time: 1425

Batteries changed @ 1410 (Peristaltic Pump)

Equipment Blank EB-042722 collected @ 1450

Ambient Blank AB-042722 collected @ 1500

* Three consecutive readings within range indicates stabilization of that parameter.

Monitoring Well Purging/Sampling Form

Project Name and Number: DSI Poestenkill 60682557

Monitoring Well Number: DSI - 4 Date: 4/27/2022

Samplers: Chris French/Tom Quackenbush

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic/Low Flow

1. L = Total Well Depth:	_____	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	_____	feet
4. C = Column of Water in Casing:	_____	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	_____	gal
6. D2 = Pump Setting Depth (ft):	_____	feet
7. C2 = Column of water in Pump/Tubing (ft):	_____	feet
8. Tubing Volume = C2(0.005737088)	_____	gal

D (inches)	D (feet)
1-inch	0.08
1.5-inch	0.125
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	1.5-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.092	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI Prof. + Quatro and Geotech Turbidity Meter

Parameter	Units	Readings					
Time	24 hr	0940	0945	0950	0955	1000	1005
Water Level (0.33)	feet	1.63	3.99	5.20	6.12	6.63	8.29
Volume Purged	gal	0.05	0.3	0.5	0.65	0.85	1.1
Flow Rate	mL / min	250	260	250	250	250	250
Turbidity (+/- 10%)	NTU	18.6	19.4	12.9	8.13	4.42	
Dissolved Oxygen (+/- 10%)	%	10.7	21.2	20.5	24.5	9.3	6.8
Dissolved Oxygen (+/- 10%)	mg/L	1.09	1.67	1.69	2.42	1.08	0.81
Eh / ORP (+/- 10)	MeV	-52.6	-37.3	-71.4	-88.5	-95.0	-91.0
Specific Conductivity	mS/cm[c]	698.7	711.1	1186.0	1365	1369	1320
Conductivity (+/- 3%)	mS/cm	0.31	0.35	0.59	0.69	0.69	0.66
pH (+/- 0.1)	pH unit	6.69	6.67	6.73	6.82	6.83	6.87
Temp (+/- 0.5)	C	8.1	8.6	7.4	7.1	7.1	7.1
Color	Visual	Sl. light yellow	=	=	clear	=	=
Odor	Olfactory	None	=	=	=	=	=

Comments

Purge Start Time: 0940

Sample Time: 1457

0950 adjust tubing

1009 well dry 1.3 gallons

Page of

* Three consecutive readings within range indicates stabilization of that parameter.

Monitoring Well Purging/Sampling Form

Project Name and Number: DSI Poestenkill 60682557

Monitoring Well Number: DSI-6 Date: 4/27/2022

Samplers: Chris French/Tom Quackenbush

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic/Low Flow

1. L = Total Well Depth:		feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):		feet
4. C = Column of Water in Casing:		feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)^2(7.48)		gal
6. D2 = Pump Setting Depth (ft):		feet
7. C2 = Column of water in Pump/Tubing (ft):		feet
8. Tubing Volume = C2(0.005737088)		gal

D (inches)	D (feet)
1-inch	0.08
1.5-inch	0.125
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	1.5-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.092	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI Prof. + Quatro and Geotech Turbidity Meter

Parameter	Units	Readings							
Time	24 hr	1330	1335	1340	1345	1350	1355	1400	1405
Water Level (0.33)	feet	6.45	7.68	8.23	8.87	9.38	9.69	9.94	10.14
Volume Purged	gal	0.0	0.2	0.4	0.6	0.8	1.0	1.2	1.4
Flow Rate	mL / min	100	150	150	150	150	150	150	150
Turbidity (+/- 10%)	NTU	54.9	39.7	27.5	21.2	18.4	16.8	12.9	9.54
Dissolved Oxygen (+/- 10%)	%	21.2	2.0	0.0	-0.6	-2.3	-2.4	-2.4	-3.4
Dissolved Oxygen (+/- 10%)	mg/L	2.17	0.21	---	---	---	---	---	---
Eh / ORP (+/- 10)	MeV	23.6	-12.9	-26.5	-37.8	-45.9	-51.0	-54.2	-57.4
Specific Conductivity	mS/cm[c]	334.6	339.6	340.9	347.0	355.5	358.6	363.5	369.3
Conductivity (+/- 3%)	mS/cm	0.234	0.236	0.237	0.241	0.246	0.249	0.252	0.255
pH (+/- 0.1)	pH unit	6.83	6.83	6.84	6.84	6.84	6.84	6.85	6.85
Temp (+/- 0.5)	C	9.3	9.1	9.1	9.1	8.9	8.9	8.9	8.9
Color	Visual	Clear	"	"	"	"	"	"	"
Odor	Olfactory	odor	"	"	"	"	"	"	"

Comments

Purge Start Time: 1330

Sample Time: 1425

* Three consecutive readings within range indicates stabilization of that parameter.

Monitoring Well Purging/Sampling Form

Project Name and Number: DSI Poestenkill 60682557

Monitoring Well Number: DSI - 6 Date: 4/27/2022

Samplers: Chris French/Tom Quackenbush

Sample Number: _____ QA/QC Collected? _____

Purging / Sampling Method: Peristaltic/Low Flow

1. L = Total Well Depth:	_____	feet
2. D = Riser Diameter (I.D.):	0.17	feet
3. W = Static Depth to Water (TOC):	_____	feet
4. C = Column of Water in Casing:	_____	feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	_____	gal
6. D2 = Pump Setting Depth (ft):	_____	feet
7. C2 = Column of water in Pump/Tubing (ft):	_____	feet
8. Tubing Volume = C2(0.005737088)	_____	gal

D (inches)	D (feet)
1-inch	0.08
1.5-inch	0.125
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	1.5-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.092	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI Prof. + Quatro and Geotech Turbidity Meter

Parameter	Units	Readings						
Time	24 hr	1410	1415	1480	1425			
Water Level (0.33)	feet	10.39	10.51	10.59	10.64			
Volume Purged	gal	1.4	1.6	1.8	2.0			
Flow Rate	mL / min	150	150	150	150			
Turbidity (+/- 10%)	NTU	11.3	7.96	6.79	6.11			
Dissolved Oxygen (+/- 10%)	%	-3.8	-3.7	-3.2	-3.7			
Dissolved Oxygen (+/- 10%)	mg/L	- - -	- - -	- - -	- - -			
Eh / ORP (+/- 10)	MeV	-60.5	-62.0	-63.4	-64.3			
Specific Conductivity	mS/cm[c]	371.4	374.3	376.2	377.2			
Conductivity (+/- 3%)	mS/cm	0.256	0.258	0.259	0.261			
pH (+/- 0.1)	pH unit	6.85	6.85	6.85	6.85			
Temp (+/- 0.5)	C	8.8	8.7	8.7	8.8			
Color	Visual	Clear	"	"	"			
Odor	Olfactory	Odor	"	"	"			

Comments

Purge Start Time: 1330

Sample Time: 1425

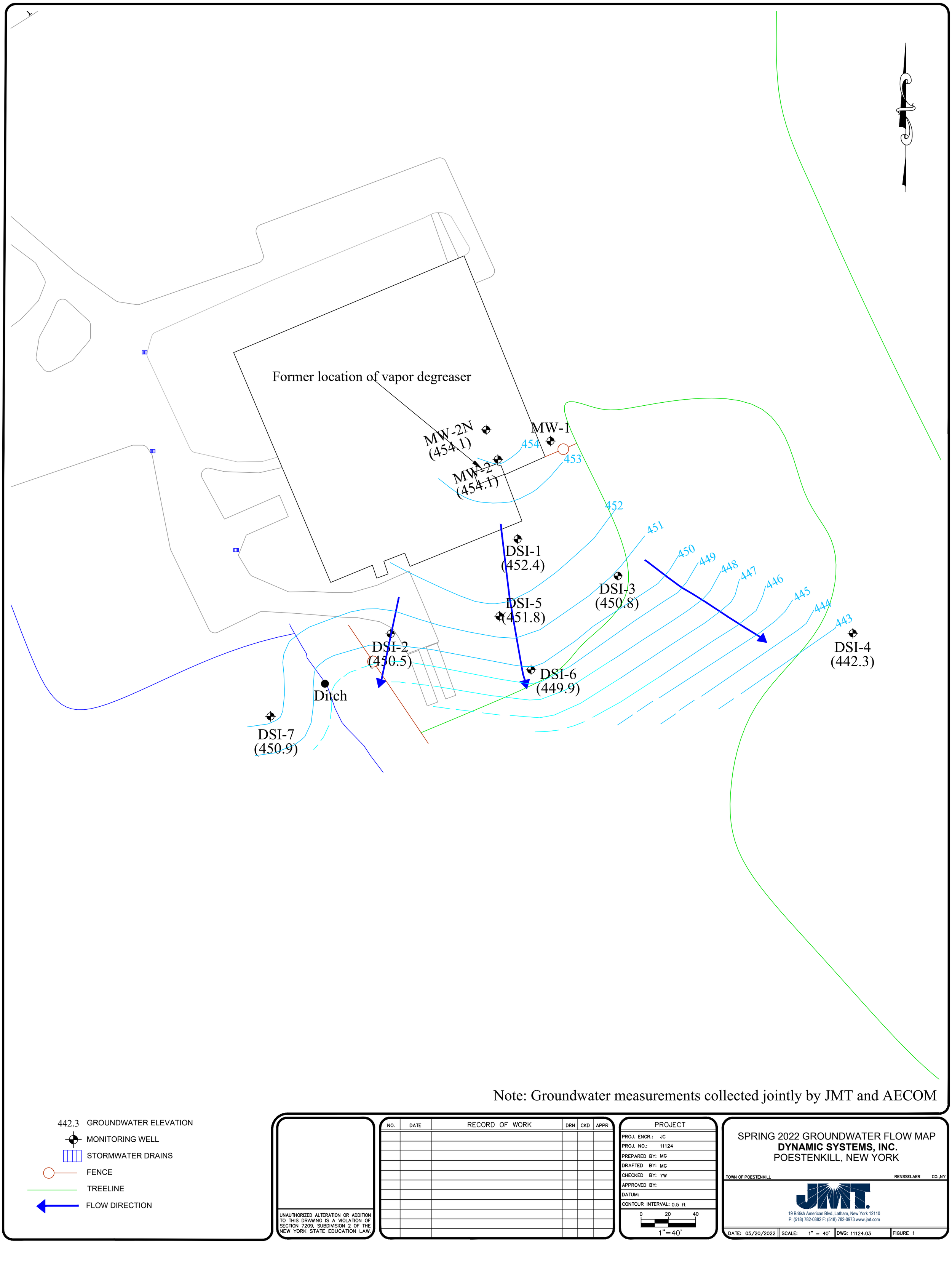
* Three consecutive readings within range indicates stabilization of that parameter.

Attachment B

Groundwater Elevation Data and Figure

Groundwater Elevations 4/27/22

WELL ID	GROUND ELEV.	STICK UP/DOWN	MEASURMENT ELEV.	4/27/2022 DTW (FT)	4/27/2022 GW ELV.
MW-2N	458.431	-0.375	458.056	3.990	454.066
MW-2	458.458	-0.333	458.125	4.010	454.115
DSI-4	444.026	-0.420	443.606	1.300	442.306
DSI-2	457.190	-0.542	456.648	6.150	450.498
DSI-5	456.497	-0.542	455.955	4.110	451.845
DSI-6	456.434	-0.250	456.184	6.300	449.884
DSI-1	457.355	-0.167	457.188	4.830	452.358
DSI-3	455.848	-0.417	455.431	4.620	450.811
DSI-7	453.012	2.708	455.720	4.800	450.920



Note: Groundwater measurements collected jointly by JMT and AECOM

442.3 GROUNDWATER ELEVATION
MONITORING WELL
STORMWATER DRAINS
FENCE
TREELINE
FLOW DIRECTION

NO.	DATE	RECORD OF WORK	DRN	CKD	APPR

PROJECT	
PROJ. ENGR.:	JC
PROJ. NO.:	11124
PREPARED BY:	MG
DRAFTED BY:	MG
CHECKED BY:	YW
APPROVED BY:	
DATUM:	
CONTOUR INTERVAL:	0.5 ft

0 20 40
1"=40'

SPRING 2022 GROUNDWATER FLOW MAP
DYNAMIC SYSTEMS, INC.
POESTENKILL, NEW YORK

TOWN OF POESTENKILL RENSSELAER CO.,NY

19 British American Blvd.,Latham, New York 12110
P: (518) 782-0882 F: (518) 782-0973 www.jmt.com

DATE: 05/20/2022 | SCALE: 1" = 40' | DWG: 11124.03 | FIGURE 1

Attachment C

Validated Groundwater Results Table

PFAS Groundwater Results- Validated
DSI Poestenkill

Sample ID		MW-2N 042722		MW-1 042722		DSI-1 042722		DSI-3 042722		DSI-6 042722		DSI-4 042722		*Dup-042722		EB-042722		AB-042722	
Sampling Date		4/27/2022		4/27/2022		4/27/2022		4/27/2022		4/27/2022		4/27/2022		4/27/2022		4/27/2022		4/27/2022	
Matrix		Water		Water		Water		Water		Water		Water		Water		Water		Water	
Units		ng/L																	
LCMS - 537	**NY MCL**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Perfluorohexanoic acid (PFHxA)		**8.1**		ND		**0.73**	J	**3.4**		**1.5**	J	ND		**8.5**		ND		ND	
Perfluoroheptanoic acid (PFHpA)		**1.8**	NJ	ND		**0.84**	J	**3**		**0.96**	NJ	**6.2**		**2.1**	NJ	ND		ND	
Perfluorooctanoic acid (PFOA)	10	**5.1**		ND		**0.93**	J	**8.1**		**2.1**		**20**		**4.7**		ND		ND	
Perfluorononanoic acid		ND		ND		**1.0**	J	ND		ND		**2.2**		ND		ND		ND	
Perfluorodecanoic acid		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Perfluorotridecanoic acid		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Perfluorotetradecanoic acid		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Perfluorobutanesulfonic acid (PFBS)		**120**		**1.0**	J	**0.52**	J	**5.6**		**8.3**		**2**		**120**		ND		ND	
Perfluorohexanesulfonic acid		ND		ND		ND		ND		ND		**0.64**	NJ	ND		ND		ND	
Perfluorooctanesulfonic acid (PFOS)	10	**1.9**		ND		**2.2**		**4.2**		**1.3**	J	**3.1**		**1.8**		ND		ND	
NEtFOSAA		ND		ND		ND		ND		ND		ND		ND		ND		ND	
NMeFOSAA		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Perfluoroheptanesulfonic acid		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Perfluorodecanesulfonic acid		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Perfluorooctanesulfonamide		ND		ND		ND		**1.1**	J	ND		ND		ND		ND		ND	
Perfluorobutanoic acid (PFBA)		**6.9**		ND		**ND**		**5.3**		**1.9**	J	**12**		**6.8**		ND		ND	
Perfluoroundecanoic acid		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Perfluorododecanoic acid		ND		ND		ND		ND		ND		ND		ND		ND		ND	
6:2 Fluorotelomer sulfonic acid		ND		ND		ND		ND		ND		ND		ND		ND		ND	
8:2 Fluorotelomer sulfonic acid		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Perfluoropentanoic acid (PFPeA)		**10**		ND		**1.3**	J	**3.2**		**1.5**	J	**4.2**		**11**		ND		ND	

Shading indicates result exceeds NY MCL

Bold indicates detected result.

ND: The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

NJ : The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

*Duplicate Sample Collected at MW-2N

Attachment D

Data Usability Summary Report

DATA USABILITY SUMMARY REPORT

2022 GROUNDWATER SAMPLING EVENT
POESTENKILL, NEW YORK

Analyses Performed by:

EUROFINS TESTAMERICA
LANCASTER, PENNSYLVANIA

Prepared for:
DSI

Prepared by:

AECOM
ONE JOHN JAMES AUDUBON PARKWAY
SUITE 210
AMHERST, NEW YORK 14228

MAY 2022

TABLE OF CONTENTS

ATTACHMENTS

1.0 INTRODUCTION

This Data Usability Summary Report (DUSR) has been prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation *DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 2B-Guidance for Data Deliverables and the Development of Data Usability and Summary Reports,* May 2010. Discussed in this DUSR are analytical data for six groundwater (GW) samples, one GW field duplicate (FD), one GW matrix spike/matrix spike duplicate (MS/MSD) pair, one ambient blank, and one field blank collected by AECOM personnel on April 27, 2022 from the Poestenkill, NY site.

2.0 ANALYTICAL METHODOLOGIES/DATA VALIDATION PROCEDURES

The samples were delivered to Eurofins located in Lancaster, Pennsylvania. The samples were analyzed for the following parameter:

Parameter	**Method Number**
Per- and Polyfluoroalkyl Substances (PFASs)	Method 537-Modified

A limited data validation was performed following the guidelines in the following NYSDEC document:

- *Data Review Guidelines for the analysis of PFAS in Non-Potable Water and Solids. Sampling, Analysis, and Assessment Of Per- and Polyfluoroalkyl Substances (PFASs) Under NYSDEC Part 375 Remedial Programs, Appendix I - January 2021*.

The limited validation included: a review of completeness of all required deliverables; holding times; a review of quality control (QC) results [blanks, instrument tunings, calibration standards, field duplicate analyses, and MS/MSD/laboratory control sample (LCS) recoveries] to determine if the data are within the protocol-required limits and specifications; a determination that all samples were analyzed using established and agreed upon analytical protocols; an evaluation of the raw data to confirm the results provided in the data summary sheets; and a review of laboratory data qualifiers.

Data qualifiers applied to the results during the validation included 'NJ' (tentatively identified, approximate concentration). Definitions of data qualifiers are presented at the end of this text. Copies of the

validated laboratory results (i.e., Form 1's) are presented in Attachment A. Documentation supporting the qualification of data is presented in Attachment B. Only analytical deviations affecting data usability are discussed in this report.

3.0 DATA DELIVERABLE COMPLETENESS

A full deliverable data package (i.e., NYSDEC ASP Category B, or equivalent) was provided by the laboratory, which included all reporting forms and raw data necessary to fully evaluate and verify the reported analytical results.

4.0 SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES

All samples were received by the laboratory intact, properly preserved, and under proper chain-of-custody (COC). All samples were analyzed within the required holding times.

5.0 NON-CONFORMANCES

Laboratory Method Blank

Perfluorooctanesulfonic acid was detected in the laboratory method blank at a concentration below the reporting limit (RL) but greater than the method detection limit (MDL) (i.e., J value). Since the result for this compound in the associated sample was greater than the RL, the B qualifier applied by the laboratory has been removed.

Surrogate/Internal Standards

DSI-3, DSI-4, and DSI-6 showed surrogate and internal standard outliers. These samples were re-extracted and re-analyzed and showed acceptable recoveries. Since the re-extraction occurred within the holding time, the results of the re-extractions have been reported and the initial analyses Form I's were crossed out.

Field Duplicate Sample

A field duplicate was collected at GW location MW-2N and exhibited good analytical precision (i.e., ≤ 30% relative percent difference).

6.0 SAMPLE RESULTS AND REPORTING

All quantitation/detection limits were reported in accordance with method requirements and were adjusted for sample volume and dilution factors (if applicable). Results less than the RL were qualified 'J' by the laboratory.

The ion mass ratio for perfluoroheptanoic acid in samples MW-2N, Dup-042722 (MW-2N) and DSI-6; and perfluorohexanesulfonic acid in DSI-4 were outside of the laboratory's QC limits for identification. The laboratory has reported the results as a detection using analyst judgement and qualified the result 'I'. The 'I' qualifier was changed to 'NJ' by the validator.

7.0 SUMMARY

All sample analyses were found to be compliant with the method criteria, except where previously noted. Those results qualified 'NJ' (tentatively identified, approximate concentration) are considered conditionally usable. AECOM does not recommend the recollection of any samples at this time.

Prepared By: Ann Marie Kropovitch, Chemist **Date:** 5/18/22

Reviewed By: George E. Kisluk, Senior Chemist **Date:** 5/18/22

DEFINITIONS OF DATA QUALIFIERS

U – The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R – The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

D – The positive value is the result of an analysis at a secondary dilution factor

NJ- The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

ATTACHMENT A

VALIDATED FORM 1's

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-82166-1

SDG No.:

Client Sample ID: MW-2N 042722 Lab Sample ID: 410-82166-1

Matrix: Water Lab File ID: 22MAY12-34.d

Analysis Method: 537 IDA Date Collected: 04/27/2022 11:25

Extraction Method: 537 IDA Date Extracted: 05/11/2022 10:09

Sample wt/vol: 280.6(mL) Date Analyzed: 05/12/2022 22:28

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 6(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 254704 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
307-24-4	Perfluorohexanoic acid	8.1		1.8	0.45
375-85-9	Perfluoroheptanoic acid	1.8	NJ	1.8	0.45
335-67-1	Perfluorooctanoic acid	5.1		1.8	0.45
375-95-1	Perfluorononanoic acid	ND		1.8	0.45
335-76-2	Perfluorodecanoic acid	ND		1.8	0.45
72629-94-8	Perfluorotridecanoic acid	ND		1.8	0.45
376-06-7	Perfluorotetradecanoic acid	ND		1.8	0.45
375-73-5	Perfluorobutanesulfonic acid	120		1.8	0.45
355-46-4	Perfluorohexanesulfonic acid	ND		1.8	0.45
1763-23-1	Perfluorooctanesulfonic acid	1.9		1.8	0.45
2991-50-6	NEtFOSAA	ND		2.7	0.45
2355-31-9	NMeFOSAA	ND		1.8	0.53
375-92-8	Perfluoroheptanesulfonic acid	ND		1.8	0.45
335-77-3	Perfluorodecanesulfonic acid	ND		1.8	0.45
754-91-6	Perfluorooctanesulfonamide	ND		1.8	0.45
375-22-4	Perfluorobutanoic acid	6.9		4.5	1.8
2058-94-8	Perfluoroundecanoic acid	ND		1.8	0.45
307-55-1	Perfluorododecanoic acid	ND		1.8	0.45
27619-97-2	6:2 Fluorotelomer sulfonic acid	ND		4.5	1.8
39108-34-4	8:2 Fluorotelomer sulfonic acid	ND		2.7	0.89
2706-90-3	Perfluoropentanoic acid	10		1.8	0.45

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-82166-1

SDG No.:

Client Sample ID: MW-1 042722 Lab Sample ID: 410-82166-2

Matrix: Water Lab File ID: 22MAY12-35.d

Analysis Method: 537 IDA Date Collected: 04/27/2022 12:35

Extraction Method: 537 IDA Date Extracted: 05/11/2022 10:09

Sample wt/vol: 303.2(mL) Date Analyzed: 05/12/2022 22:39

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 6(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 254704 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
307-24-4	Perfluorohexanoic acid	ND		1.6	0.41
375-85-9	Perfluoroheptanoic acid	ND		1.6	0.41
335-67-1	Perfluorooctanoic acid	ND		1.6	0.41
375-95-1	Perfluorononanoic acid	ND		1.6	0.41
335-76-2	Perfluorodecanoic acid	ND		1.6	0.41
72629-94-8	Perfluorotridecanoic acid	ND		1.6	0.41
376-06-7	Perfluorotetradecanoic acid	ND		1.6	0.41
375-73-5	Perfluorobutanesulfonic acid	1.0	J	1.6	0.41
355-46-4	Perfluorohexanesulfonic acid	ND		1.6	0.41
1763-23-1	Perfluorooctanesulfonic acid	ND		1.6	0.41
2991-50-6	NEtFOSAA	ND		2.5	0.41
2355-31-9	NMeFOSAA	ND		1.6	0.49
375-92-8	Perfluoroheptanesulfonic acid	ND		1.6	0.41
335-77-3	Perfluorodecanesulfonic acid	ND		1.6	0.41
754-91-6	Perfluorooctanesulfonamide	ND		1.6	0.41
375-22-4	Perfluorobutanoic acid	ND		4.1	1.6
2058-94-8	Perfluoroundecanoic acid	ND		1.6	0.41
307-55-1	Perfluorododecanoic acid	ND		1.6	0.41
27619-97-2	6:2 Fluorotelomer sulfonic acid	ND		4.1	1.6
39108-34-4	8:2 Fluorotelomer sulfonic acid	ND		2.5	0.82
2706-90-3	Perfluoropentanoic acid	ND		1.6	0.41

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-82166-1

SDG No.:

Client Sample ID: DSI-1 042722 Lab Sample ID: 410-82166-3

Matrix: Water Lab File ID: 22MAY12-38.d

Analysis Method: 537 IDA Date Collected: 04/27/2022 13:05

Extraction Method: 537 IDA Date Extracted: 05/11/2022 10:09

Sample wt/vol: 265.8(mL) Date Analyzed: 05/12/2022 23:13

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 6(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 254704 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
307-24-4	Perfluorohexanoic acid	0.73	J	1.9	0.47
375-85-9	Perfluoroheptanoic acid	0.84	J	1.9	0.47
335-67-1	Perfluorooctanoic acid	0.93	J	1.9	0.47
375-95-1	Perfluorononanoic acid	1.0	J	1.9	0.47
335-76-2	Perfluorodecanoic acid	ND		1.9	0.47
72629-94-8	Perfluorotridecanoic acid	ND		1.9	0.47
376-06-7	Perfluorotetradecanoic acid	ND		1.9	0.47
375-73-5	Perfluorobutanesulfonic acid	0.52	J	1.9	0.47
355-46-4	Perfluorohexanesulfonic acid	ND		1.9	0.47
1763-23-1	Perfluorooctanesulfonic acid	2.2		1.9	0.47
2991-50-6	NEtFOSAA	ND		2.8	0.47
2355-31-9	NMeFOSAA	ND		1.9	0.56
375-92-8	Perfluoroheptanesulfonic acid	ND		1.9	0.47
335-77-3	Perfluorodecanesulfonic acid	ND		1.9	0.47
754-91-6	Perfluorooctanesulfonamide	ND		1.9	0.47
375-22-4	Perfluorobutanoic acid	ND		4.7	1.9
2058-94-8	Perfluoroundecanoic acid	ND		1.9	0.47
307-55-1	Perfluorododecanoic acid	ND		1.9	0.47
27619-97-2	6:2 Fluorotelomer sulfonic acid	ND		4.7	1.9
39108-34-4	8:2 Fluorotelomer sulfonic acid	ND		2.8	0.94
2706-90-3	Perfluoropentanoic acid	1.3	J	1.9	0.47

Use these results

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-82166-1

SDG No.:

Client Sample ID: DSI-3 042722 RE Lab Sample ID: 410-82166-4 RE

Matrix: Water Lab File ID: 22MAY10-44.d

Analysis Method: 537 IDA Date Collected: 04/27/2022 14:25

Extraction Method: 537 IDA Date Extracted: 05/09/2022 08:14

Sample wt/vol: 315.3(mL) Date Analyzed: 05/10/2022 16:20

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 3(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 253572 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
307-24-4	*Perfluorohexanoic acid*	*3.4*		*1.6*	*0.40*
375-85-9	*Perfluoroheptanoic acid*	*3.0*		*1.6*	*0.40*
335-67-1	*Perfluorooctanoic acid*	*8.1*		*1.6*	*0.40*
375-95-1	*Perfluorononanoic acid*	*ND*		*1.6*	*0.40*
335-76-2	*Perfluorodecanoic acid*	*ND*		*1.6*	*0.40*
72629-94-8	*Perfluorotridecanoic acid*	*ND*		*1.6*	*0.40*
376-06-7	*Perfluorotetradecanoic acid*	*ND*		*1.6*	*0.40*
375-73-5	*Perfluorobutanesulfonic acid*	*5.6*		*1.6*	*0.40*
355-46-4	*Perfluorohexanesulfonic acid*	*ND*		*1.6*	*0.40*
1763-23-1	*Perfluorooctanesulfonic acid*	*4.2*		*1.6*	*0.40*
2991-50-6	*NEtFOSAA*	*ND*		*2.4*	*0.40*
2355-31-9	*NMeFOSAA*	*ND*		*1.6*	*0.48*
375-92-8	*Perfluoroheptanesulfonic acid*	*ND*		*1.6*	*0.40*
335-77-3	*Perfluorodecanesulfonic acid*	*ND*		*1.6*	*0.40*
754-91-6	*Perfluorooctanesulfonamide*	*1.1*	*J*	*1.6*	*0.40*
375-22-4	*Perfluorobutanoic acid*	*5.3*		*4.0*	*1.6*
2058-94-8	*Perfluoroundecanoic acid*	*ND*		*1.6*	*0.40*
307-55-1	*Perfluorododecanoic acid*	*ND*		*1.6*	*0.40*
27619-97-2	*6:2 Fluorotelomer sulfonic acid*	*ND*		*4.0*	*1.6*
39108-34-4	*8:2 Fluorotelomer sulfonic acid*	*ND*		*2.4*	*0.79*
2706-90-3	*Perfluoropentanoic acid*	*3.2*		*1.6*	*0.40*

Use the RE results - not this one

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-82166-1

SDG No.:

Client Sample ID: DSI-3 042722 Lab Sample ID: 410-82166-4

Matrix: Water Lab File ID: 22MAY12-39.d

Analysis Method: 537 IDA Date Collected: 04/27/2022 14:25

Extraction Method: 537 IDA Date Extracted: 05/11/2022 10:09

Sample wt/vol: 316.1(mL) Date Analyzed: 05/12/2022 23:24

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 6(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 254704 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
307-24-4	Perfluorohexanoic acid	3.8		1.6	0.40
375-85-9	Perfluoroheptanoic acid	2.4		1.6	0.40
335-67-1	Perfluorooctanoic acid	8.5		1.6	0.40
375-95-1	Perfluorononanoic acid	ND		1.6	0.40
335-76-2	Perfluorodecanoic acid	ND		1.6	0.40
72629-94-8	Perfluorotridecanoic acid	ND		1.6	0.40
376-06-7	Perfluorotetradecanoic acid	ND		1.6	0.40
375-73-5	Perfluorobutanesulfonic acid	5.5		1.6	0.40
355-46-4	Perfluorohexanesulfonic acid	ND		1.6	0.40
1763-23-1	Perfluorooctanesulfonic acid	3.9		1.6	0.40
2991-50-6	NEtFOSAA	ND		2.4	0.40
2355-31-9	NMeFOSAA	ND		1.6	0.47
375-92-8	Perfluoroheptanesulfonic acid	ND		1.6	0.40
335-77-3	Perfluorodecanesulfonic acid	ND		1.6	0.40
754-91-6	Perfluorooctanesulfonamide	ND		1.6	0.40
375-22-4	Perfluorobutanoic acid	4.5		4.0	1.6
2058-94-8	Perfluoroundecanoic acid	ND		1.6	0.40
307-55-1	Perfluorododecanoic acid	ND		1.6	0.40
27619-97-2	6:2 Fluorotelomer sulfonic acid	ND		4.0	1.6
39108-34-4	8:2 Fluorotelomer sulfonic acid	ND		2.4	0.79
2706-90-3	Perfluoropentanoic acid	3.4		1.6	0.40

Use these results

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-82166-1

SDG No.:

Client Sample ID: DSI-6 042722 RE Lab Sample ID: 410-82166-5 RE

Matrix: Water Lab File ID: 22MAY10-45.d

Analysis Method: 537 IDA Date Collected: 04/27/2022 14:25

Extraction Method: 537 IDA Date Extracted: 05/09/2022 08:14

Sample wt/vol: 271.6(mL) Date Analyzed: 05/10/2022 16:31

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 3(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 253572 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
307-24-4	Perfluorohexanoic acid	1.5	J	1.8	0.46
375-85-9	Perfluoroheptanoic acid	0.96	NJ	1.8	0.46
335-67-1	Perfluorooctanoic acid	2.1		1.8	0.46
375-95-1	Perfluorononanoic acid	ND		1.8	0.46
335-76-2	Perfluorodecanoic acid	ND		1.8	0.46
72629-94-8	Perfluorotridecanoic acid	ND		1.8	0.46
376-06-7	Perfluorotetradecanoic acid	ND		1.8	0.46
375-73-5	Perfluorobutanesulfonic acid	8.3		1.8	0.46
355-46-4	Perfluorohexanesulfonic acid	ND		1.8	0.46
1763-23-1	Perfluorooctanesulfonic acid	1.3	J	1.8	0.46
2991-50-6	NEtFOSAA	ND		2.8	0.46
2355-31-9	NMeFOSAA	ND		1.8	0.55
375-92-8	Perfluoroheptanesulfonic acid	ND		1.8	0.46
335-77-3	Perfluorodecanesulfonic acid	ND		1.8	0.46
754-91-6	Perfluorooctanesulfonamide	ND		1.8	0.46
375-22-4	Perfluorobutanoic acid	1.9	J	4.6	1.8
2058-94-8	Perfluoroundecanoic acid	ND		1.8	0.46
307-55-1	Perfluorododecanoic acid	ND		1.8	0.46
27619-97-2	6:2 Fluorotelomer sulfonic acid	ND		4.6	1.8
39108-34-4	8:2 Fluorotelomer sulfonic acid	ND		2.8	0.92
2706-90-3	Perfluoropentanoic acid	1.5	J	1.8	0.46

Use the RE results - not this one

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-82166-1

SDG No.:

Client Sample ID: DSI-6 042722
Lab Sample ID: 410-82166-5

Matrix: Water
Lab File ID: 22MAY12-40.d

Analysis Method: 537 IDA
Date Collected: 04/27/2022 14:25

Extraction Method: 537 IDA
Date Extracted: 05/11/2022 10:09

Sample wt/vol: 279.5(mL)
Date Analyzed: 05/12/2022 23:35

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 6(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 254704
Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
307-24-4	Perfluorohexanoic acid	1.5	J	1.8	0.45
375-85-9	Perfluoroheptanoic acid	0.70	J	1.8	0.45
335-67-1	Perfluorooctanoic acid	2.4		1.8	0.45
375-95-1	Perfluorononanoic acid	ND		1.8	0.45
335-76-2	Perfluorodecanoic acid	ND		1.8	0.45
72629-94-8	Perfluorotridecanoic acid	ND		1.8	0.45
376-06-7	Perfluorotetradecanoic acid	ND		1.8	0.45
375-73-5	Perfluorobutanesulfonic acid	8.0		1.8	0.45
355-46-4	Perfluorohexanesulfonic acid	ND		1.8	0.45
1763-23-1	Perfluorooctanesulfonic acid	1.2	J	1.8	0.45
2991-50-6	NEtFOSAA	ND		2.7	0.45
2355-31-9	NMeFOSAA	ND		1.8	0.54
375-92-8	Perfluoroheptanesulfonic acid	ND		1.8	0.45
335-77-3	Perfluorodecanesulfonic acid	ND		1.8	0.45
754-91-6	Perfluorooctanesulfonamide	ND		1.8	0.45
375-22-4	Perfluorobutanoic acid	ND		4.5	1.8
2058-94-8	Perfluoroundecanoic acid	ND		1.8	0.45
307-55-1	Perfluorododecanoic acid	ND		1.8	0.45
27619-97-2	6:2 Fluorotelomer sulfonic acid	ND		4.5	1.8
39108-34-4	8:2 Fluorotelomer sulfonic acid	ND		2.7	0.89
2706-90-3	Perfluoropentanoic acid	1.9		1.8	0.45

Use these results

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-82166-1

SDG No.:

Client Sample ID: DSI-4 042722 RE Lab Sample ID: 410-82166-6 RE

Matrix: Water Lab File ID: 22MAY10-46.d

Analysis Method: 537 IDA Date Collected: 04/27/2022 14:57

Extraction Method: 537 IDA Date Extracted: 05/09/2022 08:14

Sample wt/vol: 287.1(mL) Date Analyzed: 05/10/2022 16:43

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 3(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 253572 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
307-24-4	Perfluorohexanoic acid	ND		1.7	0.44
375-85-9	Perfluoroheptanoic acid	6.2		1.7	0.44
335-67-1	Perfluorooctanoic acid	20		1.7	0.44
375-95-1	Perfluorononanoic acid	2.2		1.7	0.44
335-76-2	Perfluorodecanoic acid	ND		1.7	0.44
72629-94-8	Perfluorotridecanoic acid	ND		1.7	0.44
376-06-7	Perfluorotetradecanoic acid	ND		1.7	0.44
375-73-5	Perfluorobutanesulfonic acid	2.0		1.7	0.44
355-46-4	Perfluorohexanesulfonic acid	0.64	NJ	1.7	0.44
1763-23-1	Perfluorooctanesulfonic acid	3.1		1.7	0.44
2991-50-6	NEtFOSAA	ND		2.6	0.44
2355-31-9	NMeFOSAA	ND		1.7	0.52
375-92-8	Perfluoroheptanesulfonic acid	ND		1.7	0.44
335-77-3	Perfluorodecanesulfonic acid	ND		1.7	0.44
754-91-6	Perfluorooctanesulfonamide	ND		1.7	0.44
375-22-4	Perfluorobutanoic acid	12		4.4	1.7
2058-94-8	Perfluoroundecanoic acid	ND		1.7	0.44
307-55-1	Perfluorododecanoic acid	ND		1.7	0.44
27619-97-2	6:2 Fluorotelomer sulfonic acid	ND		4.4	1.7
39108-34-4	8:2 Fluorotelomer sulfonic acid	ND		2.6	0.87
2706-90-3	Perfluoropentanoic acid	4.2		1.7	0.44

Use the RE results - not this one

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-82166-1

SDG No.:

Client Sample ID: DSI-4 042722 Lab Sample ID: 410-82166-6

Matrix: Water Lab File ID: 22MAY12-41.d

Analysis Method: 537 IDA Date Collected: 04/27/2022 14:57

Extraction Method: 537 IDA Date Extracted: 05/11/2022 10:09

Sample wt/vol: 282.3(mL) Date Analyzed: 05/12/2022 23:46

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 6(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 254704 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
307-24-4	Perfluorohexanoic acid	ND		1.8	0.44
375-85-9	Perfluoroheptanoic acid	3.6		1.8	0.44
335-67-1	Perfluorooctanoic acid	31		1.8	0.44
375-95-1	Perfluorononanoic acid	2.7		1.8	0.44
335-76-2	Perfluorodecanoic acid	ND		1.8	0.44
72629-94-8	Perfluorotridecanoic acid	ND		1.8	0.44
376-06-7	Perfluorotetradecanoic acid	ND		1.8	0.44
375-73-5	Perfluorobutanesulfonic acid	1.9	NJ	1.8	0.44
355-46-4	Perfluorohexanesulfonic acid	0.74	J	1.8	0.44
1763-23-1	Perfluorooctanesulfonic acid	3.0		1.8	0.44
2991-50-6	NEtFOSAA	ND		2.7	0.44
2355-31-9	NMeFOSAA	ND		1.8	0.53
375-92-8	Perfluoroheptanesulfonic acid	ND		1.8	0.44
335-77-3	Perfluorodecanesulfonic acid	ND		1.8	0.44
754-91-6	Perfluorooctanesulfonamide	ND		1.8	0.44
375-22-4	Perfluorobutanoic acid	18		4.4	1.8
2058-94-8	Perfluoroundecanoic acid	ND		1.8	0.44
307-55-1	Perfluorododecanoic acid	ND		1.8	0.44
27619-97-2	6:2 Fluorotelomer sulfonic acid	ND		4.4	1.8
39108-34-4	8:2 Fluorotelomer sulfonic acid	ND		2.7	0.89
2706-90-3	Perfluoropentanoic acid	4.7		1.8	0.44

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-82166-1

SDG No.:

Client Sample ID: Dup-042722 Lab Sample ID: 410-82166-7

Matrix: Water Lab File ID: 22MAY12-42.d

Analysis Method: 537 IDA Date Collected: 04/27/2022 00:00

Extraction Method: 537 IDA Date Extracted: 05/11/2022 10:09

Sample wt/vol: 282.7(mL) Date Analyzed: 05/12/2022 23:57

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 6(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 254704 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
307-24-4	Perfluorohexanoic acid	8.5		1.8	0.44
375-85-9	Perfluoroheptanoic acid	2.1	NJ	1.8	0.44
335-67-1	Perfluorooctanoic acid	4.7		1.8	0.44
375-95-1	Perfluorononanoic acid	ND		1.8	0.44
335-76-2	Perfluorodecanoic acid	ND		1.8	0.44
72629-94-8	Perfluorotridecanoic acid	ND		1.8	0.44
376-06-7	Perfluorotetradecanoic acid	ND		1.8	0.44
375-73-5	Perfluorobutanesulfonic acid	120		1.8	0.44
355-46-4	Perfluorohexanesulfonic acid	ND		1.8	0.44
1763-23-1	Perfluorooctanesulfonic acid	1.8		1.8	0.44
2991-50-6	NEtFOSAA	ND		2.7	0.44
2355-31-9	NMeFOSAA	ND		1.8	0.53
375-92-8	Perfluoroheptanesulfonic acid	ND		1.8	0.44
335-77-3	Perfluorodecanesulfonic acid	ND		1.8	0.44
754-91-6	Perfluorooctanesulfonamide	ND		1.8	0.44
375-22-4	Perfluorobutanoic acid	6.8		4.4	1.8
2058-94-8	Perfluoroundecanoic acid	ND		1.8	0.44
307-55-1	Perfluorododecanoic acid	ND		1.8	0.44
27619-97-2	6:2 Fluorotelomer sulfonic acid	ND		4.4	1.8
39108-34-4	8:2 Fluorotelomer sulfonic acid	ND		2.7	0.88
2706-90-3	Perfluoropentanoic acid	11		1.8	0.44

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-82166-1

SDG No.:

Client Sample ID: EB-042722
Lab Sample ID: 410-82166-8

Matrix: Water
Lab File ID: 22MAY12-43.d

Analysis Method: 537 IDA
Date Collected: 04/27/2022 14:50

Extraction Method: 537 IDA
Date Extracted: 05/11/2022 10:09

Sample wt/vol: 277.1(mL)
Date Analyzed: 05/13/2022 00:08

Con. Extract Vol.: 1(mL)
Dilution Factor: 1

Injection Volume: 6(uL)
GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture:
% Solids:
GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 254704
Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
307-24-4	Perfluorohexanoic acid	ND		1.8	0.45
375-85-9	Perfluoroheptanoic acid	ND		1.8	0.45
335-67-1	Perfluorooctanoic acid	ND		1.8	0.45
375-95-1	Perfluorononanoic acid	ND		1.8	0.45
335-76-2	Perfluorodecanoic acid	ND		1.8	0.45
72629-94-8	Perfluorotridecanoic acid	ND		1.8	0.45
376-06-7	Perfluorotetradecanoic acid	ND		1.8	0.45
375-73-5	Perfluorobutanesulfonic acid	ND		1.8	0.45
355-46-4	Perfluorohexanesulfonic acid	ND		1.8	0.45
1763-23-1	Perfluorooctanesulfonic acid	ND		1.8	0.45
2991-50-6	NEtFOSAA	ND		2.7	0.45
2355-31-9	NMeFOSAA	ND		1.8	0.54
375-92-8	Perfluoroheptanesulfonic acid	ND		1.8	0.45
335-77-3	Perfluorodecanesulfonic acid	ND		1.8	0.45
754-91-6	Perfluorooctanesulfonamide	ND		1.8	0.45
375-22-4	Perfluorobutanoic acid	ND		4.5	1.8
2058-94-8	Perfluoroundecanoic acid	ND		1.8	0.45
307-55-1	Perfluorododecanoic acid	ND		1.8	0.45
27619-97-2	6:2 Fluorotelomer sulfonic acid	ND		4.5	1.8
39108-34-4	8:2 Fluorotelomer sulfonic acid	ND		2.7	0.90
2706-90-3	Perfluoropentanoic acid	ND		1.8	0.45

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-82166-1

SDG No.:

Client Sample ID: AB-042722 Lab Sample ID: 410-82166-9

Matrix: Water Lab File ID: 22MAY12-81.d

Analysis Method: 537 IDA Date Collected: 04/27/2022 15:00

Extraction Method: 537 IDA Date Extracted: 05/11/2022 10:09

Sample wt/vol: 291.3(mL) Date Analyzed: 05/13/2022 07:10

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 6(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 254704 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
307-24-4	Perfluorohexanoic acid	ND		1.7	0.43
375-85-9	Perfluoroheptanoic acid	ND		1.7	0.43
335-67-1	Perfluorooctanoic acid	ND		1.7	0.43
375-95-1	Perfluorononanoic acid	ND		1.7	0.43
335-76-2	Perfluorodecanoic acid	ND		1.7	0.43
72629-94-8	Perfluorotridecanoic acid	ND		1.7	0.43
376-06-7	Perfluorotetradecanoic acid	ND		1.7	0.43
375-73-5	Perfluorobutanesulfonic acid	ND		1.7	0.43
355-46-4	Perfluorohexanesulfonic acid	ND		1.7	0.43
1763-23-1	Perfluorooctanesulfonic acid	ND		1.7	0.43
2991-50-6	NEtFOSAA	ND		2.6	0.43
2355-31-9	NMeFOSAA	ND		1.7	0.51
375-92-8	Perfluoroheptanesulfonic acid	ND		1.7	0.43
335-77-3	Perfluorodecanesulfonic acid	ND		1.7	0.43
754-91-6	Perfluorooctanesulfonamide	ND		1.7	0.43
375-22-4	Perfluorobutanoic acid	ND		4.3	1.7
2058-94-8	Perfluoroundecanoic acid	ND		1.7	0.43
307-55-1	Perfluorododecanoic acid	ND		1.7	0.43
27619-97-2	6:2 Fluorotelomer sulfonic acid	ND		4.3	1.7
39108-34-4	8:2 Fluorotelomer sulfonic acid	ND		2.6	0.86
2706-90-3	Perfluoropentanoic acid	ND		1.7	0.43

ATTACHMENT B

SUPPORT DOCUMENTATION

410-82166 Chain of Custody

Eurofins Environment Testing

Chain of Custody Record

	Sampler: Chris French	Lab PM: Barnhart, Amanda	Carrier Tracking No(s):	COC No: 410-55203-15564 1
Client Contact: Mr. Chris French	Phone: 518-860-3855	E-Mail: Amanda.Barnhart@et.eurofinsus.com	State of Origin: New York	Page: Page 1 of 2
Company: AECOM	PWSID:			Job #:
Address: 40 British American Blvd	Due Date Requested:			
City: Latham	TAT Requested (days): Standard			
State, Zip: NY, 12110	Compliance Project: Δ Yes Δ No			
Phone: 518-951-2204(Tel)	PO #: Purchase Order Requested			
Email: chris.french@aecom.com	WO #:			
Project Name: PFAS in Water	Project #: 41010488			
Site: DSI Poestenkill	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA - NY 21 PFAS	Total Number of containers	Special Instructions/Note:
		Preservation Code:					N		
MW-2N 042722	4/27/22	1125	G	W	N		X		
MW-1 042722		1235				Y			Extra volume collected for MS/MSD
DSI-1 042722		1305							
DSI-3 042722		1425							
DSI-6 042722		1425							
DSI-4 042722		1457							
Dup-042722		—							
EB-042722		1450							
AB-042722	↓	1500	↓	↓	↓		↓		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Chris	Date/Time: 04-25-22 1400	Company: AECOM	Received by:	Date/Time: 4/28/22 1500	Company: AECOM
Relinquished by:	Date/Time: 4/27/22 1615	Company: AECOM	Received by:	Date/Time: 4-27-2022 1645	Company: ESM
Relinquished by:	Date/Time: 4/28/22 1700	Company: ESM	Received by:	Date/Time: 4/29/22 1053	Company: ESM
Custody Seals Intact: X Yes Δ No	Custody Seal No.: 200873		Cooler Temperature(s) °C and Other Remarks: 1.9°C		

Ver: 01/16/2019

Job Narrative
410-82166-1

Receipt
The samples were received on 4/29/2022 10:13 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.9°C

PFAS
Method PFC_IDA: The recovery for the labeled isotope(s) in the following samples: MW-2N 042722 (410-82166-1), DSI-1 042722 (410-82166-3), Dup-042722 (410-82166-7) and EB-042722 (410-82166-8) is outside the QC acceptance limits. Since the recovery is high and the native analyte is not detected in the sample, the data is reported.

Method PFC_IDA: The recovery for the labeled isotope(s) in the following sample: DSI-3 042722 (410-82166-4) is outside the QC acceptance limits. The following action was taken: This sample was re-extracted within the required holding time and the recovery for labeled isotope(s) was within QC acceptance limits. However, target analytes were detected in the re-extracted method blank.

Method PFC_IDA: The recovery for labeled isotope: d5-NEtFOSAA is outside the QC acceptance limits in the opening and closing continuing calibration verification standards. Since the recovery for the labeled isotope is within QC limits in the following sample(s): AB-042722 (410-82166-9), the data is reported.

Method PFC_IDA: The recovery for the injection standard peak area(s) and the sample labeled isotope(s) is outside of QC acceptance limits for the following sample: DSI-4 042722 (410-82166-6). The following action was taken: This sample was re-extracted within the method holding time and the recovery for the injection standard peak area(s) was within the QC acceptance limits. However, the sample labeled isotope(s) was again outside of QC acceptance limits and target analyte(s) were detected in the re-extracted method blank.

Method PFC_IDA: The recovery for the injection standard peak area(s) and the sample labeled isotope(s) is outside of QC acceptance limits for the following sample: DSI-6 042722 (410-82166-5). The following action was taken: This sample was re-extracted within the method holding time and the recovery for the injection standard peak area(s) was within the QC acceptance limits. However, the sample labeled isotope(s) was again outside of QC acceptance limits and target analyte(s) were detected in the re-extracted method blank.

Method PFC_IDA: The recovery for labeled isotope(s) in the background sample: MW-1 042722 (410-82166-2) is within of QC acceptance limits. However, the recovery for the labeled isotope(s) in the associated matrix spike and matrix spike duplicate samples is outside of the QC acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-82166-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFBA #	PFPeA #	C3PFBS #	13C5PHA #	C3PFHS #	C4PFHA #	M262FTS #	C8PFOA #
MW-2N 042722	410-82166-1	114 cn	87 cn	112 cn	108 cn	163 cn	140 cn	430 *5+ cn	116 cn
MW-1 042722	410-82166-2	128 cn	139 cn	144 cn	141 cn	134 cn	139 cn	166 cn	121 cn
DSI-1 042722	410-82166-3	119 cn	148 cn	167 cn	107 cn	130 cn	130 cn	249 *5+ cn	115 cn
DSI-3 042722	410-82166-4	127 cn	162 cn	232 *5+ cn	109 cn	153 cn	143 cn	387 *5+ cn	133 cn
DSI-6 042722	410-82166-5	108 cn	124 cn	180 cn	86 cn	125 cn	121 cn	349 *5+ cn	109 cn
DSI-4 042722	410-82166-6	78 cn	97 cn	286 *5+ cn	61 cn	270 *5+ cn	162 cn	1084 *5+ cn	132 cn
Dup-042722	410-82166-7	124 cn	96 cn	117 cn	109 cn	149 cn	132 cn	424 *5+ cn	119 cn
EB-042722	410-82166-8	125 cn	188 *5+ cn	180 cn	120 cn	137 cn	130 cn	153 cn	121 cn
AB-042722	410-82166-9	126	134	126	119	126	121	131	117
	MB 410-253970/1-A	118	121	115	126	117	119	137	112
	LCS 410-253970/2-A	115	111	106	121	126	122	131	114
MW-1 042722 MS MS	410-82166-2 MS	146	159	151	169	159	157	203 *5+	143
MW-1 042722 MSD MSD	410-82166-2 MSD	128	151	142	151	138	154	165	125

	QC LIMITS
PFBA = 13C4 PFBA	42-165
PFPeA = 13C5 PFPeA	38-187
C3PFBS = 13C3 PFBS	16-200
13C5PHA = 13C5 PFHxA	24-179
C3PFHS = 13C3 PFHxS	28-188
C4PFHA = 13C4 PFHpA	31-182
M262FTS = M2-6:2 FTS	17-200
C8PFOA = 13C8 PFOA	48-162

Column to be used to flag recovery values

FORM II 537 IDA

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-82166-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	C8PFOS #	C9PFNA #	C6PFDA #	M282FTS #	PFOSA #	d3NMFOS #	13C7PUA #	d5NEFOS #
MW-2N 042722	410-82166-1	119 cn	131 cn	96 cn	273 *5+ cn	17 cn	132 cn	110 cn	132 cn
MW-1 042722	410-82166-2	133 cn	141 cn	113 cn	106 cn	107 cn	161 cn	136 cn	163 cn
DSI-1 042722	410-82166-3	126 cn	141 cn	111 cn	142 cn	10 cn	143 cn	113 cn	130 cn
DSI-3 042722	410-82166-4	110 cn	155 cn	105 cn	177 cn	48 cn	109 cn	53 cn	104 cn
DSI-6 042722	410-82166-5	117 cn	128 cn	95 cn	232 *5+ cn	56 cn	127 cn	106 cn	142 cn
DSI-4 042722	410-82166-6	129 cn	126 cn	94 cn	343 *5+ cn	58 cn	123 cn	125 cn	166 cn
Dup-042722	410-82166-7	121 cn	143 cn	111 cn	263 *5+ cn	55 cn	135 cn	112 cn	150 cn
EB-042722	410-82166-8	129 cn	135 cn	113 cn	108 cn	106 cn	155 cn	117 cn	148 cn
AB-042722	410-82166-9	118	126	121	95	105	155	130	162 cn
	MB 410-253970/1-A	124	127	120	103	111	167	131	166
	LCS 410-253970/2-A	117	131	114	97	97	151	124	146
MW-1 042722 MS MS	410-82166-2 MS	151	165	126	116	116	182 *5+	133	162
MW-1 042722 MSD MSD	410-82166-2 MSD	132	136	126	120	121	182 *5+	139	175

	QC LIMITS
C8PFOS = 13C8 PFOS	51-159
C9PFNA = 13C9 PFNA	51-167
C6PFDA = 13C6 PFDA	49-163
M282FTS = M2-8:2 FTS	33-200
PFOSA = 13C8 FOSA	10-168
d3NMFOS = d3-NMeFOSAA	31-174
13C7PUA = 13C7 PFUnA	34-174
d5NEFOS = d5-NEtFOSAA	29-195

Column to be used to flag recovery values

FORM II 537 IDA

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-82166-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFDoDA #	PFTDA #
MW-2N 042722	410-82166-1	118 cn	127 cn
MW-1 042722	410-82166-2	122 cn	114 cn
DSI-1 042722	410-82166-3	106 cn	100 cn
DSI-3 042722	410-82166-4	13 *5-cn	0.9 *5-cn
DSI-6 042722	410-82166-5	96 cn	75 cn
DSI-4 042722	410-82166-6	108 cn	81 cn
Dup-042722	410-82166-7	116 cn	111 cn
EB-042722	410-82166-8	115 cn	120 cn
AB-042722	410-82166-9	125	132
	MB 410-253970/1-A	123	128
	LCS 410-253970/2-A	113	119
MW-1 042722 MS MS	410-82166-2 MS	126	134
MW-1 042722 MSD MSD	410-82166-2 MSD	141	135

	QC LIMITS
PFDoDA = 13C2-PFDoDA	17-176
PFTDA = 13C2 PFTeDA	10-179

Column to be used to flag recovery values

FORM II 537 IDA

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-82166-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFBA #	PFPeA #	C3PFBS #	13C5PHA #	C4PFHA #	C3PFHS #	M262FTS #	C8PFOA #
DSI-3 042722 RE	410-82166-4 RE	94	107	116	98	97	93	137	93
DSI-6 042722 RE	410-82166-5 RE	94	106	116	106	105	105	163	99
DSI-4 042722 RE	410-82166-6 RE	67	96	155	61	75	112	230 *5+	79
	MB 410-252952/1-A	62	62	59	64	62	63	71	62
	LCS 410-252952/3-A	77	78	78	73	78	80	83	77

	QC LIMITS
PFBA = 13C4 PFBA	42-165
PFPeA = 13C5 PFPeA	38-187
C3PFBS = 13C3 PFBS	16-200
13C5PHA = 13C5 PFHxA	24-179
C4PFHA = 13C4 PFHpA	31-182
C3PFHS = 13C3 PFHxS	28-188
M262FTS = M2-6:2 FTS	17-200
C8PFOA = 13C8 PFOA	48-162

Column to be used to flag recovery values

FORM II 537 IDA

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-82166-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	C8PFOS #	C9PFNA #	C6PFDA #	M282FTS #	PFOSA #	d3NMFOS #	13C7PUA #	d5NEFOS #
DSI-3 042722 RE	410-82166-4 RE	90	101	90	106	66	94	85	86
DSI-6 042722 RE	410-82166-5 RE	98	101	92	130	68	105	100	102
DSI-4 042722 RE	410-82166-6 RE	83	84	88	132	41	90	92	113
	MB 410-252952/1-A	65	69	62	65	46	60	61	53
	LCS 410-252952/3-A	78	84	74	84	56	79	76	71

	QC LIMITS
C8PFOS = 13C8 PFOS	51-159
C9PFNA = 13C9 PFNA	51-167
C6PFDA = 13C6 PFDA	49-163
M282FTS = M2-8:2 FTS	33-200
PFOSA = 13C8 FOSA	10-168
d3NMFOS = d3-NMeFOSAA	31-174
13C7PUA = 13C7 PFUnA	34-174
d5NEFOS = d5-NEtFOSAA	29-195

Column to be used to flag recovery values

FORM II 537 IDA

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-82166-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFDoDA #	PFTDA #
DSI-3 042722 RE	410-82166-4 RE	81	81
DSI-6 042722 RE	410-82166-5 RE	91	79
DSI-4 042722 RE	410-82166-6 RE	90	80
	MB 410-252952/1-A	57	64
	LCS 410-252952/3-A	72	70

	QC LIMITS
PFDoDA = 13C2-PFDoDA	17-176
PFTDA = 13C2 PFTeDA	10-179

Column to be used to flag recovery values

FORM II 537 IDA

FORM VIII
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-82166-1

SDG No.:

Instrument ID: 27632 Calibration Start Date: 05/10/2022 13:41

GC Column: Gemini C18 50mm ID: 3(mm) Calibration End Date: 05/10/2022 14:47

Calibration ID: 37941

		13C3PFBA		13PFOA		PFOS	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		1738217	3.40	1909157	4.96	781043	5.30
UPPER LIMIT		2607326	3.80	2863736	5.36	1171565	5.70
LOWER LIMIT		869109	3.00	954579	4.56	390522	4.90
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 410-253526/8		1599356	3.40	1804971	4.95	699538	5.29
ICV 410-253526/9		1959877	3.41	2273742	4.97	863134	5.30
CCV 410-254704/29		1631813	3.38	1648216	4.94	716477	5.28
MB 410-253970/1-A		1681553	3.39	1897849	4.95	739315	5.29
LCS 410-253970/2-A		1794035	3.40	1904168	4.95	760140	5.30
410-82166-1	MW-2N 042722	1098774	3.39	1171589	4.95	628708	5.29
410-82166-2	MW-1 042722	1607277	3.40	2099872	4.95	740791	5.29
410-82166-2 MS	MW-1 042722 MS MS	1336720	3.40	1650900	4.95	641598	5.29
410-82166-2 MSD	MW-1 042722 MSD MSD	1574369	3.40	1979416	4.96	745872	5.30
410-82166-3	DSI-1 042722	1129588	3.40	2104047	4.95	772805	5.29
410-82166-4	DSI-3 042722	714064*3	3.39	1753775	4.95	658670	5.29
410-82166-5	DSI-6 042722	779685*3	3.39	1824685	4.95	781087	5.29
410-82166-6	DSI-4 042722	290156*3	3.38	605766*3	4.95	598699	5.29
410-82166-7	Dup-042722	1204428	3.39	1491067	4.94	697845	5.28
410-82166-8	EB-042722	1182159	3.40	1954277	4.95	747204	5.29
CCV 410-254704/44		1665685	3.39	1863539	4.95	683148	5.29
CCV 410-254704/80		1646120	3.39	1841661	4.95	661602	5.30
410-82166-9	AB-042722	1664470	3.40	1930159	4.95	721997	5.30
CCV 410-254704/81		1670111	3.39	1844666	4.95	707340	5.29

13C3PFBA = 13C3-PFBA
13PFOA = 13C2 PFOA
PFOS = 13C4 PFOS

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.4 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537 IDA

FORM VIII
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-82166-1

SDG No.:

Instrument ID: 30731 Calibration Start Date: 05/10/2022 10:44

GC Column: Gemini C18 50mm ID: 3(mm) Calibration End Date: 05/10/2022 11:51

Calibration ID: 37916

		13C3PFBA		13PFOA		PFOS	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		859967	3.85	989015	5.67	1024313	5.99
UPPER LIMIT		1289951	4.25	1483523	6.07	1536470	6.39
LOWER LIMIT		429984	3.45	494508	5.27	512157	5.59
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 410-253329/8		911694	3.84	1148155	5.66	1086960	5.98
ICV 410-253329/9		981744	3.84	1220671	5.65	1200508	5.97
CCV 410-253572/1		896351	3.85	1033982	5.66	1038613	5.98
MB 410-252952/1-A		1183913	3.86	1430352	5.67	1378958	5.99
LCS 410-252952/3-A		996994	3.84	1272345	5.65	1214363	5.97
410-82166-4 RE	DSI-3 042722 RE	864665	3.82	1229109	5.64	1208462	5.97
410-82166-6 RE	DSI-4 042722 RE	453793	3.84	800313	5.65	1054158	5.98
CCV 410-253572/15		692660	3.84	817177	5.65	815001	5.98

13C3PFBA = 13C3-PFBA
13PFOA = 13C2 PFOA
PFOS = 13C4 PFOS

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.4 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537 IDA

FORM VIII
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-82166-1

SDG No.:

Instrument ID: 30731 Calibration Start Date: 05/10/2022 10:44

GC Column: Gemini C18 50mm ID: 3(mm) Calibration End Date: 05/10/2022 11:51

Calibration ID: 37916

		PFDA					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		1291271	6.31				
UPPER LIMIT		1936907	6.71				
LOWER LIMIT		645636	5.91				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 410-253329/8		1450982	6.31				
ICV 410-253329/9		1579854	6.30				
CCV 410-253572/1		1426764	6.30				
MB 410-252952/1-A		1891072	6.32				
LCS 410-252952/3-A		1589163	6.30				
410-82166-4 RE	DSI-3 042722 RE	1650968	6.29				
410-82166-6 RE	DSI-4 042722 RE	1349828	6.30				
CCV 410-253572/15		1089913	6.30				

PFDA = 13C2 PFDA

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.4 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537 IDA

FORM IV
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-82166-1

SDG No.:

Lab File ID: 22MAY10-34.d Lab Sample ID: MB 410-252952/1-A

Matrix: Water Date Extracted: 05/09/2022 08:14

Instrument ID: 30731 Date Analyzed: 05/10/2022 14:30

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 410-252952/3-A	22MAY10-36.d	05/10/2022 14:52
DSI-3 042722 RE	410-82166-4 RE	22MAY10-44.d	05/10/2022 16:20
DSI-4 042722 RE	410-82166-6 RE	22MAY10-46.d	05/10/2022 16:43

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-82166-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 410-252952/1-A

Matrix: Water Lab File ID: 22MAY10-34.d

Analysis Method: 537 IDA Date Collected:

Extraction Method: 537 IDA Date Extracted: 05/09/2022 08:14

Sample wt/vol: 250(mL) Date Analyzed: 05/10/2022 14:30

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 3(uL) GC Column: Gemini C18 50mm ID: 3(mm)

% Moisture: % Solids: GPC Cleanup:(Y/N) N

Cleanup Factor:

Analysis Batch No.: 253572 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
307-24-4	*Perfluorohexanoic acid*	*ND*		*2.0*	*0.50*
375-85-9	*Perfluoroheptanoic acid*	*ND*		*2.0*	*0.50*
335-67-1	*Perfluorooctanoic acid*	*ND*		*2.0*	*0.50*
375-95-1	*Perfluorononanoic acid*	*ND*		*2.0*	*0.50*
335-76-2	*Perfluorodecanoic acid*	*ND*		*2.0*	*0.50*
72629-94-8	*Perfluorotridecanoic acid*	*ND*		*2.0*	*0.50*
376-06-7	*Perfluorotetradecanoic acid*	*ND*		*2.0*	*0.50*
375-73-5	*Perfluorobutanesulfonic acid*	*ND*		*2.0*	*0.50*
355-46-4	*Perfluorohexanesulfonic acid*	*ND*		*2.0*	*0.50*
1763-23-1	*Perfluorooctanesulfonic acid*	*0.858*	*J*	*2.0*	*0.50*
2991-50-6	*NEtFOSAA*	*ND*		*3.0*	*0.50*
2355-31-9	*NMeFOSAA*	*ND*		*2.0*	*0.60*
375-92-8	*Perfluoroheptanesulfonic acid*	*ND*		*2.0*	*0.50*
335-77-3	*Perfluorodecanesulfonic acid*	*ND*		*2.0*	*0.50*
754-91-6	*Perfluorooctanesulfonamide*	*ND*		*2.0*	*0.50*
375-22-4	*Perfluorobutanoic acid*	*ND*		*5.0*	*2.0*
2058-94-8	*Perfluoroundecanoic acid*	*ND*		*2.0*	*0.50*
307-55-1	*Perfluorododecanoic acid*	*ND*		*2.0*	*0.50*
27619-97-2	*6:2 Fluorotelomer sulfonic acid*	*ND*		*5.0*	*2.0*
39108-34-4	*8:2 Fluorotelomer sulfonic acid*	*ND*		*3.0*	*1.0*
2706-90-3	*Perfluoropentanoic acid*	*ND*		*2.0*	*0.50*