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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Anchor QEA, LLC
720 Olive Way
Suite 1900
Seattle WA 98101

Report Date: February 04, 2019 12:34

Project: Portage Canal

Account #: 41773
Group Number: 2026128
SDG: ANC11
PO Number: 181779-03.01
State of Sample Origin: WI

Electronic Copy To Anchor QEA, LLC Attn: Delaney Peterson

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
2SDXX-01-190117-0-0 Sediment	01/17/2019 14:30	9972066
RB-201901171430 Solid	01/17/2019 14:30	9972067

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **2SDXX-01-190117-0-0 Sediment**
Portage Canal

Project Name: **Portage Canal**

Submittal Date/Time: 01/22/2019 10:00
Collection Date/Time: 01/17/2019 14:30
SDG#: ANC11-01

Anchor QEA, LLC
ELLE Sample #: **SW 9972066**
ELLE Group #: **2026128**
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/g**	**ng/g**	**ng/g**	
14027	10:2-fluorotelomersulfonate	120226-60-0	< 1.8	1.8	5.4	1
14027	4:2 fluorotelomersulfonate	757124-72-4	< 1.8	1.8	5.4	1
14027	6:2 fluorotelomersulfonate	27619-97-2	< 1.1	1.1	3.6	1
14027	8:2 fluorotelomersulfonate	39108-34-4	< 1.1	1.1	3.6	1
14027	NEtFOSAA	2991-50-6	< 0.90	0.90	3.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NEtPFOSA	4151-50-2	< 0.90	0.90	3.6	1
	NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide					
14027	NEtPFOSAE	1691-99-2	< 0.90	0.90	3.6	1
	NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol					
14027	NMeFOSAA	2355-31-9	< 0.90	0.90	3.6	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMePFOSA	31506-32-8	< 0.90	0.90	3.6	1
	NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide					
14027	NMePFOSAE	24448-09-7	< 0.90	0.90	3.6	1
	NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol					
14027	Perfluorobutanesulfonate	375-73-5	< 0.36	0.36	1.1	1
14027	Perfluorobutanoic acid	375-22-4	< 1.1	1.1	3.6	1
14027	Perfluorodecanesulfonate	335-77-3	< 0.54	0.54	1.8	1
14027	Perfluorodecanoic acid	335-76-2	< 0.36	0.36	1.1	1
14027	Perfluorododecanesulfonate	79780-39-5	< 0.54	0.54	1.6	1
14027	Perfluorododecanoic acid	307-55-1	< 0.36	0.36	1.1	1
14027	Perfluoroheptanesulfonate	375-92-8	< 0.36	0.36	1.1	1
14027	Perfluoroheptanoic acid	375-85-9	< 0.36	0.36	1.1	1
14027	Perfluorohexadecanoic acid	67905-19-5	< 0.36	0.36	1.1	1
14027	Perfluorohexanesulfonate	355-46-4	< 0.36	0.36	1.1	1
14027	Perfluorohexanoic acid	307-24-4	< 0.36	0.36	1.1	1
14027	Perfluorononanesulfonate	68259-12-1	< 0.36	0.36	1.1	1
14027	Perfluorononanoic acid	375-95-1	< 0.36	0.36	1.1	1
14027	Perfluorooctadecanoic acid	16517-11-6	< 0.36	0.36	1.1	1
14027	Perfluorooctanesulfonamide	754-91-6	< 0.36	0.36	1.1	1
14027	Perfluoro-octanesulfonate	1763-23-1	< 0.54	0.54	1.6	1
14027	Perfluorooctanoic acid	335-67-1	< 0.36	0.36	1.1	1
14027	Perfluoropentanesulfonate	2706-91-4	< 0.36	0.36	1.1	1
14027	Perfluoropentanoic acid	2706-90-3	< 0.36	0.36	1.1	1
14027	Perfluorotetradecanoic acid	376-06-7	< 0.36	0.36	1.1	1
14027	Perfluorotridecanoic acid	72629-94-8	< 0.36	0.36	1.1	1
14027	Perfluoroundecanoic acid	2058-94-8	< 0.36	0.36	1.1	1

The stated QC limits are advisory only until sufficient data points

*=This limit was used in the evaluation of the final result

Sample Description: **2SDXX-01-190117-0-0 Sediment**
Portage Canal

Project Name: **Portage Canal**

Submittal Date/Time: 01/22/2019 10:00
Collection Date/Time: 01/17/2019 14:30
SDG#: ANC11-01

Anchor QEA, LLC
ELLE Sample #: SW 9972066
ELLE Group #: 2026128
Matrix: Sediment

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
	can be obtained to calculate statistical limits. A target analyte(s) in the opening continuing calibration verification standard is outside the QC acceptance limits. Since the result is high and the target analyte(s) is not detected in the sample, the data is reported.					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	47.7	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

WI Cert #998035060. Note: Reported MDL(aka LOD) & LOQ are adjusted for dilution.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	PFAS in Soil by LC/MS/MS	EPA 537 Version 1.1 Modified	1	19031006	01/31/2019 21:00	Jason W Knight	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	2	19031006	01/31/2019 08:40	Courtney J Fatta	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	19023820001A	01/23/2019 12:20	William C Schwebel	1

*=This limit was used in the evaluation of the final result

Sample Description: **RB-201901171430 Solid**
Portage Canal

Project Name: **Portage Canal**

Submittal Date/Time: 01/22/2019 10:00
Collection Date/Time: 01/17/2019 14:30
SDG#: ANC11-02

Anchor QEA, LLC
ELLE Sample #: **SW 9972067**
ELLE Group #: **2026128**
Matrix: Solid

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/g**	**ng/g**	**ng/g**	
14027	10:2-fluorotelomersulfonate	120226-60-0	< 0.97	0.97	2.9	1
14027	4:2 fluorotelomersulfonate	757124-72-4	< 0.97	0.97	2.9	1
14027	6:2 fluorotelomersulfonate	27619-97-2	< 0.58	0.58	1.9	1
14027	8:2 fluorotelomersulfonate	39108-34-4	< 0.58	0.58	1.9	1
14027	NEtFOSAA	2991-50-6	< 0.49	0.49	1.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14027	NEtPFOSA	4151-50-2	< 0.49	0.49	1.9	1
	NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide					
14027	NEtPFOSAE	1691-99-2	< 0.49	0.49	1.9	1
	NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol					
14027	NMeFOSAA	2355-31-9	< 0.49	0.49	1.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14027	NMePFOSA	31506-32-8	< 0.49	0.49	1.9	1
	NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide					
14027	NMePFOSAE	24448-09-7	< 0.49	0.49	1.9	1
	NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol					
14027	Perfluorobutanesulfonate	375-73-5	< 0.19	0.19	0.58	1
14027	Perfluorobutanoic acid	375-22-4	< 0.58	0.58	1.9	1
14027	Perfluorodecanesulfonate	335-77-3	< 0.29	0.29	0.97	1
14027	Perfluorodecanoic acid	335-76-2	< 0.19	0.19	0.58	1
14027	Perfluorododecanesulfonate	79780-39-5	< 0.29	0.29	0.87	1
14027	Perfluorododecanoic acid	307-55-1	< 0.19	0.19	0.58	1
14027	Perfluoroheptanesulfonate	375-92-8	< 0.19	0.19	0.58	1
14027	Perfluoroheptanoic acid	375-85-9	< 0.19	0.19	0.58	1
14027	Perfluorohexadecanoic acid	67905-19-5	< 0.19	0.19	0.58	1
14027	Perfluorohexanesulfonate	355-46-4	< 0.19	0.19	0.58	1
14027	Perfluorohexanoic acid	307-24-4	< 0.19	0.19	0.58	1
14027	Perfluorononanesulfonate	68259-12-1	< 0.19	0.19	0.58	1
14027	Perfluorononanoic acid	375-95-1	< 0.19	0.19	0.58	1
14027	Perfluorooctadecanoic acid	16517-11-6	< 0.19	0.19	0.58	1
14027	Perfluorooctanesulfonamide	754-91-6	< 0.19	0.19	0.58	1
14027	Perfluoro-octanesulfonate	1763-23-1	< 0.29	0.29	0.87	1
14027	Perfluorooctanoic acid	335-67-1	< 0.19	0.19	0.58	1
14027	Perfluoropentanesulfonate	2706-91-4	< 0.19	0.19	0.58	1
14027	Perfluoropentanoic acid	2706-90-3	< 0.19	0.19	0.58	1
14027	Perfluorotetradecanoic acid	376-06-7	< 0.19	0.19	0.58	1
14027	Perfluorotridecanoic acid	72629-94-8	< 0.19	0.19	0.58	1
14027	Perfluoroundecanoic acid	2058-94-8	< 0.19	0.19	0.58	1

The stated QC limits are advisory only until sufficient data points

*=This limit was used in the evaluation of the final result

Sample Description: **RB-201901171430 Solid**
Portage Canal

Project Name: **Portage Canal**

Submittal Date/Time: 01/22/2019 10:00
Collection Date/Time: 01/17/2019 14:30
SDG#: ANC11-02

Anchor QEA, LLC
ELLE Sample #: **SW 9972067**
ELLE Group #: **2026128**
Matrix: Solid

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
	can be obtained to calculate statistical limits. A target analyte(s) in the opening continuing calibration verification standard is outside the QC acceptance limits. Since the result is high and the target analyte(s) is not detected in the sample, the data is reported.					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	< 0.50	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

WI Cert #998035060. Note: Reported MDL(aka LOD) & LOQ are adjusted for dilution.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14027	PFAS in Soil by LC/MS/MS	EPA 537 Version 1.1 Modified	1	19031006	01/31/2019 21:18	Jason W Knight	1
14090	PFAS Solid Prep	EPA 537 Version 1.1 Modified	2	19031006	01/31/2019 08:40	Courtney J Fatta	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	19023820001A	01/23/2019 12:20	William C Schwebel	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: Anchor QEA, LLC
Group Number: 2026128
Reported: 02/04/2019 12:34

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ng/g	ng/g	ng/g
Batch number: 19031006	Sample number(s): 9972066-9972067		
10:2-fluorotelomersulfonate	< 1.0	1.0	3.0
4:2 fluorotelomersulfonate	< 1.0	1.0	3.0
6:2 fluorotelomersulfonate	< 0.60	0.60	2.0
8:2 fluorotelomersulfonate	< 0.60	0.60	2.0
NEtFOSAA	< 0.50	0.50	2.0
NEtPFOSA	< 0.50	0.50	2.0
NEtPFOSAE	< 0.50	0.50	2.0
NMeFOSAA	< 0.50	0.50	2.0
NMePFOSA	< 0.50	0.50	2.0
NMePFOSAE	< 0.50	0.50	2.0
Perfluorobutanesulfonate	< 0.20	0.20	0.60
Perfluorobutanoic acid	< 0.60	0.60	2.0
Perfluorodecanesulfonate	< 0.30	0.30	1.0
Perfluorodecanoic acid	< 0.20	0.20	0.60
Perfluorododecanesulfonate	< 0.30	0.30	0.90
Perfluorododecanoic acid	< 0.20	0.20	0.60
Perfluoroheptanesulfonate	< 0.20	0.20	0.60
Perfluoroheptanoic acid	< 0.20	0.20	0.60
Perfluorohexadecanoic acid	< 0.20	0.20	0.60
Perfluorohexanesulfonate	< 0.20	0.20	0.60
Perfluorohexanoic acid	< 0.20	0.20	0.60
Perfluorononanesulfonate	< 0.20	0.20	0.60
Perfluorononanoic acid	< 0.20	0.20	0.60
Perfluorooctadecanoic acid	< 0.20	0.20	0.60
Perfluorooctanesulfonamide	< 0.20	0.20	0.60
Perfluoro-octanesulfonate	< 0.30	0.30	0.90
Perfluorooctanoic acid	< 0.20	0.20	0.60
Perfluoropentanesulfonate	< 0.20	0.20	0.60
Perfluoropentanoic acid	< 0.20	0.20	0.60
Perfluorotetradecanoic acid	< 0.20	0.20	0.60
Perfluorotridecanoic acid	< 0.20	0.20	0.60
Perfluoroundecanoic acid	< 0.20	0.20	0.60

LCS/LCSD

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: Anchor QEA, LLC
Reported: 02/04/2019 12:34

Group Number: 2026128

LCS/LCSD

Analysis Name	LCS Spike Added ng/g	LCS Conc ng/g	LCSD Spike Added ng/g	LCSD Conc ng/g	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 19031006	Sample number(s): 9972066-9972067								
10:2-fluorotelomersulfonate	3.86	3.03	3.86	3.36	79	87	54-150	10	30
4:2 fluorotelomersulfonate	3.74	3.23	3.74	3.10	87	83	77-143	4	30
6:2 fluorotelomersulfonate	3.79	2.81	3.79	2.99	74	79	58-148	6	30
8:2 fluorotelomersulfonate	3.83	3.03	3.83	2.91	79	76	65-147	4	30
NEtFOSAA	1.36	0.998	1.36	1.11	73	82	54-143	11	30
NEtPFOSA	1.36	0.985	1.36	0.873	72	64*	70-130	12	30
NEtPFOSAE	1.36	1.02	1.36	1.09	75	80	70-130	6	30
NMeFOSAA	1.36	1.18	1.36	1.11	87	82	51-157	6	30
NMePFOSA	1.36	1.01	1.36	1.11	75	81	70-130	9	30
NMePFOSAE	1.36	1.03	1.36	1.13	76	83	70-130	9	30
Perfluorobutanesulfonate	1.20	1.01	1.20	1.00	84	83	71-133	0	30
Perfluorobutanoic acid	1.36	1.16	1.36	1.15	85	85	75-148	1	30
Perfluorodecanesulfonate	1.31	0.936	1.31	0.993	71	76	63-153	6	30
Perfluorodecanoic acid	1.36	1.09	1.36	1.07	81	78	69-145	3	30
Perfluorododecanesulfonate	1.32	1.07	1.32	1.05	81	80	51-137	2	30
Perfluorododecanoic acid	1.36	1.11	1.36	1.16	81	86	76-137	5	30
Perfluoroheptanesulfonate	1.29	0.992	1.29	1.03	77	79	68-135	4	30
Perfluoroheptanoic acid	1.34	1.13	1.34	1.10	85	82	76-143	3	30
Perfluorohexadecanoic acid	1.36	1.30	1.36	1.08	95	79	63-153	19	30
Perfluorohexanesulfonate	1.29	0.975	1.29	1.00	76	78	68-132	3	30
Perfluorohexanoic acid	1.36	1.10	1.36	1.14	81	84	74-140	3	30
Perfluorononanesulfonate	1.36	1.14	1.36	1.03	84	76	58-141	10	30
Perfluorononanoic acid	1.36	1.23	1.36	1.16	90	85	71-146	6	30
Perfluorooctadecanoic acid	1.36	1.25	1.36	1.07	92	79	52-155	15	30
Perfluorooctanesulfonamide	1.36	1.04	1.36	1.14	76	84	70-131	9	30
Perfluoro-octanesulfonate	1.30	0.894	1.30	0.995	69	77	69-137	11	30
Perfluorooctanoic acid	1.36	1.11	1.36	1.16	82	85	74-146	4	30
Perfluoropentanesulfonate	1.28	1.20	1.28	1.21	94	95	67-146	1	30
Perfluoropentanoic acid	1.36	1.11	1.36	1.15	82	85	74-142	3	30
Perfluorotetradecanoic acid	1.36	1.14	1.37	1.16	84	84	76-138	1	30
Perfluorotridecanoic acid	1.36	1.13	1.36	1.15	83	84	62-153	2	30
Perfluoroundecanoic acid	1.36	1.14	1.36	1.06	84	78	71-143	7	30
	%	%	%	%					
Batch number: 19023820001A	Sample number(s): 9972066-9972067								
Moisture	89.5	89.43			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Anchor QEA, LLC
Reported: 02/04/2019 12:34

Group Number: 2026128

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/g	MS Spike Added ng/g	MS Conc ng/g	MSD Spike Added ng/g	MSD Conc ng/g	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 19031006	Sample number(s): 9972066-9972067 UNSPK: 9972066									
10:2-fluorotelomersulfonate	< 0.94	3.78	3.16			84		51-142		
4:2 fluorotelomersulfonate	< 0.94	3.66	2.80			76*		81-131		
6:2 fluorotelomersulfonate	< 0.57	3.72	2.87			77		59-154		
8:2 fluorotelomersulfonate	< 0.57	3.76	3.12			83		63-153		
NEtFOSAA	< 0.47	1.33	0.968			73		70-130		
NEtPFOSA	< 0.47	1.33	0.994			75		51-146		
NEtPFOSAE	< 0.47	1.33	1.01			76		70-130		
NMeFOSAA	< 0.47	1.33	1.21			91		49-167		
NMePFOSA	< 0.47	1.33	1.06			79		70-130		
NMePFOSAE	< 0.47	1.33	1.12			84		70-130		
Perfluorobutanesulfonate	< 0.19	1.18	0.994			84		61-142		
Perfluorobutanoic acid	< 0.57	1.33	1.13			85		64-145		
Perfluorodecanesulfonate	< 0.28	1.28	0.880			69		42-148		
Perfluorodecanoic acid	< 0.19	1.33	1.00			75		53-160		
Perfluorododecanesulfonate	< 0.28	1.29	0.928			72		33-168		
Perfluorododecanoic acid	< 0.19	1.33	1.08			81		64-152		
Perfluoroheptanesulfonate	< 0.19	1.27	1.07			85		58-148		
Perfluoroheptanoic acid	< 0.19	1.31	1.11			84		66-154		
Perfluorohexadecanoic acid	< 0.19	1.33	1.01			76		45-158		
Perfluorohexanesulfonate	< 0.19	1.26	0.966			77		70-132		
Perfluorohexanoic acid	< 0.19	1.33	1.03			77		62-152		
Perfluorononanesulfonate	< 0.19	1.33	1.03			77		62-145		
Perfluorononanoic acid	< 0.19	1.33	1.11			83		49-153		
Perfluorooctadecanoic acid	< 0.19	1.33	0.936			70		58-143		
Perfluorooctanesulfonamide	< 0.19	1.33	1.09			82		76-127		
Perfluoro-octanesulfonate	< 0.28	1.28	1.14			90		52-160		
Perfluorooctanoic acid	< 0.19	1.33	1.15			86		35-182		
Perfluoropentanesulfonate	< 0.19	1.25	1.14			91		36-193		
Perfluoropentanoic acid	< 0.19	1.33	1.07			80		37-169		
Perfluorotetradecanoic acid	< 0.19	1.33	1.18			89		67-153		
Perfluorotridecanoic acid	< 0.19	1.33	1.12			84		46-169		
Perfluoroundecanoic acid	< 0.19	1.33	1.06			80		50-152		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Anchor QEA, LLC
Reported: 02/04/2019 12:34

Group Number: 2026128

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Soil by LC/MS/MS
Batch number: 19031006

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
9972066	79	79	81	95	78	86
9972067	86	86	89	81	89	95
Blank	91	89	92	104	96	106
LCS	88	89	89	100	90	98
LCSD	87	86	88	93	86	95
MS	77	73	79	90	75	81
Limits:	32-120	26-123	22-130	10-174	22-127	30-123

	13C4-PFHpA	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA
9972066	78	128	77	80	79	80
9972067	85	119	89	94	86	91
Blank	93	129	96	91	85	95
LCS	90	122	90	88	80	87
LCSD	88	111	83	91	85	91
MS	73	121	74	81	79	82
Limits:	25-128	10-194	28-119	39-119	20-144	30-115

	13C2-8:2-FTS	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA
9972066	126	88	79	106	81	86
9972067	104	68	91	82	89	97
Blank	106	94	89	101	94	100
LCS	97	87	87	97	88	80
LCSD	94	93	92	99	88	99
MS	124	90	81	105	76	81
Limits:	10-200	10-140	24-124	10-150	17-124	11-123

	13C8-PFOSA	d7-NMePFOSAE	d9-NEtPFOSAE	d5-NEtPFOSA	d3-NMePFOSA
9972066	70	62	71	66	65
9972067	88	88	93	85	81
Blank	73	67	70	64	60
LCS	74	68	69	55	56
LCSD	76	70	76	65	59
MS	68	68	69	70	64
Limits:	16-113	10-134	10-126	10-115	10-112

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

41773/2026128/99720666-67

ANCHOR QEA
720 Olive Way Suite 1900 Seattle, Wa 98101

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

COC ID: ELLE-20190122-082755

POC: # Delaney Peterson (360-715-2707)
1605 Cornwall Avenue Bellingham, WA 98225

Project: Portage Canal
Client: Wisconsin DNR

Sample Custodian: JVANWIERINGEN
Lab: Eurofins Lancaster Lab

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	Containers #	Lab QC*	Test Request	Method	TAT**	Preservative
001	2SDXX-01-190117-0-0	N	SE	01/17/2019	14:30	1	☐				
								PFAS	E537M	10	< 6°C
								Total solids	SM2540G	10	< 6°C
002	RB-201901171430	RB	SQ	01/17/2019	14:30	1	☐				
								PFAS	E537M	10	< 6°C
								Total solids	SM2540G	10	< 6°C

Comment:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Print Name	Print Name	Print Name	Print Name	Print Name	Print Name
Company	Company	Company	Company	Company	Company
Date/Time	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

* Lab QC Requested for sample when box is checked ** TAT = Turn Around Time in DAYS # POC = Project Point of Contact

Date Printed: 1/22/2019

Page 1 of 1

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 41773 Group # 2026128 Sample # 9972066-67

COC # 572055

Client Information

Client: Anchor QEA	Acct. #:
Project Name/#: Portage Canal	PWSID #:
Project Manager: Mike Conese	P.O. #:
Sampler:	Quote #:
State where samples were collected: Portage, WI	For Compliance: Yes ☐ No ☐

Matrix

Soil ☐ Sediment ☒ Tissue ☐ Water ☐ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC: ____

SCR#: 237358

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PFAS	Moisture	Remarks
25JXX-01	1/17/19	2:30		X	2	X	X	
RB001-01	1/17/19	2:30	X		2	X	X	

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: ____

E-mail address: ____

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	1/9/19	3:00			
[signature]	1/21/19	9:30			
			[signature]	1/22/19	1000

EDD Required? Yes No

If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 1.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 239168

Group Number(s): 2026128

Client: Anchor Qea

Portage Canal

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	01/22/2019 10:00
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	WI		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	No
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 13:22 on 01/22/2019

Samples Chilled Details: Portage Canal

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.0	DT	Wet	Y	Bagged	N

Sample ID Discrepancy Details: Portage Canal

Sample ID on COC	Sample ID on Label	Comments
RB001-01	RBSD01-00	

Sample Date/Time Discrepancy Details: Portage Canal

Sample ID on COC	Date/Time on Label	Comments
2SDXX-01	1/17/2019 12:55	
RBSD01-00	1/17/2019 12:50	

General Comments: Received a 1,000 ml plastic bottle PFC Free Blank Water.

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.