

# POLLEN ENVIRONMENTAL, LLC.

3536 International Street  
 Fairbanks, AK 99701  
 (907) 479-8368 Phone (907) 452-6853 Fax  
 jerry@pollenenv.com

## CHAIN OF CUSTODY/WORKORDER FORM

COC# CONP 2018

<b>CLIENT INFORMATION</b>				Contact Person: <b>Paul Trissel</b>		<b>Requested Analysis</b>						Page 1 of 1
Company: <b>City of North Pole</b>						Preservative Added						<input type="checkbox"/> Normal Turnaround  <input type="checkbox"/> RUSH ___ day(s)
Address: <b>125 Snowman Lane</b>				WWTP APDES #:								
City, State Zip: <b>North Pole, AK 99705</b>				PWS ID #: <b>310675</b>								
Phone: <b>907-388-1907</b>				Send Results to ADEC:								
Fax: <b>907-488-1825</b>				v Yes <input type="checkbox"/> No								
Email: <b>northpoleutilities@alaska.net</b>				Purchase Order/Charge Code:								
Project Name: <b>Quarterly PFC Monitoring</b>				<b>2018-163</b>								
Sampled By: <b>JEP</b>						Number of Containers	<b>PFC'S</b>					
Sample Identification	Sample Date	Sample Time	Matrix	Lab ID#	Sub Lab ID#							Sample Comments
<b>Well A</b>	<b>3-6-18</b>	<b>1020am</b>	<b>W</b>	<b>PEF39441</b>		2	X					
<b>Possible Hazard Identification:</b>						<b>Sample Condition:</b>						
<input type="checkbox"/> Non-Hazardous <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Unknown						Pollen Env Temperature on arrival:    °C    COC Seal: <input type="checkbox"/> Intact <input type="checkbox"/> Broken <input type="checkbox"/> Absent Sub Lab Temperature on arrival:       °C    COC Seal: <input type="checkbox"/> Intact <input type="checkbox"/> Broken <input type="checkbox"/> Absent						
<b>Special Instructions/QC Requirements &amp; Comments:</b>												
Relinquished by: <i>Jerry Pollen</i>	Company: <i>Pollen Env</i>	Date & Time: <i>3-7-18 @0900</i>	Received by:			Company:	Date & Time:					
Relinquished by:	Company:	Date & Time:	Received by:			Company:	Date & Time:					
Relinquished by:	Company:	Date & Time:	Received by:			Company:	Date & Time:					



**CERTIFICATE OF ANALYSIS**

**City of North Pole WTP**  
 Attn: Paul Trissel  
 125 Snowman Lane  
 North Pole, AK 99705  
 Phone: 907-388-1907  
 Fax: 907-488-1825  
 northpoleutilities@alaska.net

Report Date: 3/28/2018  
 Sample Date: 3/6/2018  
 Sample Time: 10:20 AM  
 Sampled By: JEP

Project Name: **CONP WTP PFOS Monitoring**  
 Analysis: **PFC'S**  
 Analysis Method: **EPA 537**  
 COC#: **CONP 2018**  
 Sample Matrix: **Drinking Water**  
 PWS ID#: **AK2310675**

Attached are the results for analysis of your samples. This sample was analyzed by Eurofins Eaton Analytical in South Bend, IN.

<b>Client Sample ID:</b>	<b>Pollen Env ID:</b>	<b>Eurofins Eaton Analytical ID:</b>
Well A	PEF39441	3886188

**Jerry Pollen**  
**Pollen Environmental, LLC - Fairbanks**

## LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

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### STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Missouri	880
Alaska	IN00035	Montana	CERT0026
Arizona	AZ0432	Nebraska	NE-OS-05-04
Arkansas	IN00035	Nevada	IN00035
California	2920	New Hampshire*	2124
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New Mexico	IN00035
Connecticut	PH-0132	New York*	11398
Delaware	IN035	North Carolina	18700
Florida*	E87775	North Dakota	R-035
Georgia	929	Ohio	87775
Hawaii	IN035	Oklahoma	D9508
Idaho	IN00035	Oregon (Primary AB)*	4074-001
Illinois*	200001	Pennsylvania*	68-00466
Illinois Microbiology	17767	Puerto Rico	IN00035
Illinois Radiochemistry	IN00035	Rhode Island	LAO00343
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-15-8
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA180008	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	460275
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
EPA	IN00035		

\*NELAP/TNI Recognized Accreditation Bodies

110 South Hill Street  
 South Bend, IN 46617  
 Tel: (574) 233-4777  
 Fax: (574) 233-8207  
 1 800 332 4345

## Laboratory Report

Client: Pollen Environmental LLC  
  
 Attn: Jerry Pollen  
 3536 International Avenue  
 Fairbanks, AK 99701

Report: 410485  
 Priority: Standard Written  
 Status: Final  
 PWS ID: AK2310675  
 Alaska Lab ID #: IN00035

Sample Information					
EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3886188	PEF39441/Well A	537	03/06/18 10:20	Client	03/08/18 08:45

### Report Summary

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Traci Chlebowski at (574) 233-4777.

*Note: This report may not be reproduced, except in full, without written approval from EEA.*

 ASM

Authorized Signature

Title

03/28/2018

Date

Client Name: Pollen Environmental LLC  
 Report #: 410485

Sampling Point: PEF39441/Well A

PWS ID: AK2310675

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
375-73-5	Perfluorobutanesulfonic acid (PFBS) §	537	---	2.0	< 2.0	ng/L	03/19/18 08:09	03/20/18 01:37	3886188
335-76-2	Perfluorodecanoic acid (PFDA) §	537	---	2.0	< 2.0	ng/L	03/19/18 08:09	03/20/18 01:37	3886188
375-85-9	Perfluoroheptanoic acid (PFHpA) §	537	---	2.0	< 2.0	ng/L	03/19/18 08:09	03/20/18 01:37	3886188
355-46-4	Perfluorohexanesulfonic acid (PFHxS) §	537	---	2.0	< 2.0	ng/L	03/19/18 08:09	03/20/18 01:37	3886188
307-24-4	Perfluorohexanoic acid (PFHxA) §	537	---	2.0	< 2.0	ng/L	03/19/18 08:09	03/20/18 01:37	3886188
307-55-1	Perfluorododecanoic acid (PFDoA) §	537	---	2.0	< 2.0	ng/L	03/19/18 08:09	03/20/18 01:37	3886188
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	537	---	2.0	< 2.0	ng/L	03/19/18 08:09	03/20/18 01:37	3886188
375-95-1	Perfluorononanoic acid (PFNA) §	537	---	2.0	< 2.0	ng/L	03/19/18 08:09	03/20/18 01:37	3886188
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	537	---	2.0	< 2.0	ng/L	03/19/18 08:09	03/20/18 01:37	3886188
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	03/19/18 08:09	03/20/18 01:37	3886188
72629-94-8	Perfluorotridecanoic acid (PFTrDA) §	537	---	2.0	< 2.0	ng/L	03/19/18 08:09	03/20/18 01:37	3886188
2058-94-8	Perfluoroundecanoic acid (PFUnA) §	537	---	2.0	< 2.0	ng/L	03/19/18 08:09	03/20/18 01:37	3886188

§ The state of origin does not offer certification for this parameter.

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

## Lab Definitions

**Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC)** - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis. CCL, CCM, and CCH are the CCC standards at low, mid, and high concentration levels, respectively.

**Internal Standards (IS)** - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

**Laboratory Duplicate (LD)** - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

**Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS)** - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control. FBL, FBM, and FBH are the LFB samples at low, mid, and high concentration levels, respectively.

**Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB)** - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

**Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB)** - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

**Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD)** - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix. SDL, SDM, and SDH / LFSMDL, LFSMDM, and LFSMDH are the MSD or LFSMD at low, mid, and high concentration levels, respectively.

**Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM)** - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results. MSL, MSM, and MSH / LFSML, LFSMM, and LFSMH are the MS or LFSM at low, mid, and high concentration levels, respectively.

**Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV)** - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

**Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS)** - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

**Surrogate Standard (SS) / Surrogate Analyte (SUR)** - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

339250

# POLLEN ENVIRONMENTAL, LLC.

## CHAIN OF CUSTODY/WORKORDER FORM

3536 International Street  
 Fairbanks, AK 99701  
 (907) 479-8368 Phone (907) 452-6853 Fax  
 jerry@pollenenv.com

COC# COMP 2018  
 410485

<b>CLIENT INFORMATION</b>		Contact Person: <b>Paul Trissel</b>			Page 1 of 1							
Company: <b>City of North Pole</b>		WWTP APDES #:										
Address: <b>125 Snowman Lane</b>		PWS ID #: <b>310675</b>			Requested Analysis  Perservative Added     <input type="checkbox"/> Normal Turnaround  <input type="checkbox"/> RUSH ___ day(s)							
City, State Zip: <b>North Pole, AK 99705</b>		Send Results to ADEC: v Yes <input type="checkbox"/> No										
Phone: <b>907-388-1907</b>		Purchase Order/Charge Code: <b>2018-163</b>										
Fax: <b>907-488-1825</b>		Project Name: <b>Quarterly PFC Monitoring</b>										
Email: <b>northpoleutilities@alaska.net</b>		Sampled By: <b>JEP</b>										
Project Name: <b>Quarterly PFC Monitoring</b>					Number of Containers PFC'S <b>CLA 03082018 ID</b>							
Sample Identification	Sample Date	Sample Time	Matrix	Lab ID#					Sub Lab ID#	Requested Analysis		Sample Comments
<b>Well A</b>	<b>3-6-18</b>	<b>10:20 AM</b>	<b>W</b>	<b>PEF39441</b>						2	X	<b>3586 188</b>

**Possible Hazard Identification:**      **Sample Condition:**

<input type="checkbox"/> Non-Hazardous	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Unknown	Pollen Env Temperature on arrival: _____ °C	COC Seal: <input type="checkbox"/> Intact <input type="checkbox"/> Broken <input type="checkbox"/> Absent
				Sub Lab Temperature on arrival: <b>1.6</b> °C	COC Seal: <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Broken <input type="checkbox"/> Absent

**Special Instructions/QC Requirements & Comments:**

Relinquished by: <b>[Signature]</b>	Company: <b>Pollen Env</b>	Date & Time: <b>3-7-18 09:00</b>	Received by:	Company:	Date & Time:
Relinquished by:	Company:	Date & Time:	Received by:	Company:	Date & Time:
Relinquished by:	Company:	Date & Time:	Received by: <b>[Signature]</b>	Company: <b>EEH</b>	Date & Time: <b>3-8-18 08:45</b>



## Eurofins Eaton Analytical Run Log

Run ID: **241133**    Method: **537**

<u>Type</u>	<u>Sample Id</u>	<u>Sample Site</u>	<u>Matrix</u>	<u>Instrument ID</u>	<u>Analysis Date</u>	<u>Calibration File</u>
CCL	3892492		OS	FL	03/19/2018 18:21	031918M537a-FL-PFC14.mdb
LRB	3892483		RW	FL	03/19/2018 18:55	031918M537a-FL-PFC14.mdb
FBM	3892484		RW	FL	03/19/2018 19:28	031918M537a-FL-PFC14.mdb
CCM	3892493		OS	FL	03/20/2018 00:13	031918M537a-FL-PFC14.mdb
FS	3886188	PEF39441/Well A	DW	FL	03/20/2018 01:37	031918M537a-FL-PFC14.mdb
CCH	3892496		OS	FL	03/20/2018 02:11	031918M537a-FL-PFC14.mdb

# QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCL	IS-NiMeFOSAA-43	537	N/A	---		906092.00	906092	ng/L	100	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	IS-PFOA-13C2	537	N/A	---	1888350.00	1888350	ng/L	100	100	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	IS-PFOS-13C4	537	N/A	---	350271.00	350271	ng/L	100	100	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	SS-NEIFOSAA-45	537	N/A	---	205.6840	200	ng/L	103	103	70 - 130	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	SS-PFDA-13C2	537	N/A	---	99.7483	100	ng/L	100	100	70 - 130	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	SS-PFHXA-13C2	537	N/A	---	50.2367	50.0	ng/L	100	100	70 - 130	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---	1.9781	2.0	ng/L	99	99	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	Perfluorodecanoic acid (PFDA)	537	2.0	---	2.0099	2.0	ng/L	100	100	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	Perfluorheptanoic acid (PFHpA)	537	2.0	---	2.0123	2.0	ng/L	101	101	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	Perfluorhexanesulfonic acid (PFHxS)	537	2.0	---	1.9063	2.0	ng/L	95	95	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	Perfluorhexanoic acid (PFHxA)	537	2.0	---	2.0580	2.0	ng/L	103	103	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	Perfluorododecanoic acid (PFDoA)	537	2.0	---	2.1246	2.0	ng/L	106	106	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	Perfluorotetradecanoic acid (PFTeDA)	537	2.0	---	2.1100	2.0	ng/L	106	106	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	Perfluornonanoic acid (PFNA)	537	2.0	---	2.0384	2.0	ng/L	102	102	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	Perfluorooctanesulfonic acid (PFOS)	537	2.0	---	1.9657	2.0	ng/L	98	98	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	Perfluorooctanoic acid (PFOA)	537	2.0	---	2.0137	2.0	ng/L	101	101	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	Perfluorotridecanoic acid (PFTriDA)	537	2.0	---	2.1170	2.0	ng/L	106	106	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
CCL	Perfluoroundecanoic acid (PFUnA)	537	2.0	---	2.0863	2.0	ng/L	104	104	50 - 150	---	---	1.0	03/12/2018 11:40	03/19/2018 18:21	3892492
LRB	IS-NiMeFOSAA-43	537	N/A	---	835587.00	906092	ng/L	92	92	50 - 150	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	IS-PFOA-13C2	537	N/A	---	1770850.00	1888350	ng/L	94	94	50 - 150	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	IS-PFOS-13C4	537	N/A	---	330662.00	350271	ng/L	94	94	50 - 150	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	SS-NEIFOSAA-45	537	N/A	---	187.6360	200	ng/L	101	101	70 - 130	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	SS-PFDA-13C2	537	N/A	---	97.1816	100	ng/L	104	104	70 - 130	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	SS-PFHXA-13C2	537	N/A	---	48.2845	50.0	ng/L	104	104	70 - 130	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---	2.0		ng/L	---	---	---	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	Perfluorodecanoic acid (PFDA)	537	2.0	---	2.0		ng/L	---	---	---	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	Perfluorheptanoic acid (PFHpA)	537	2.0	---	2.0		ng/L	---	---	---	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	Perfluorhexanesulfonic acid (PFHxS)	537	2.0	---	2.0		ng/L	---	---	---	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	Perfluorhexanoic acid (PFHxA)	537	2.0	---	2.0		ng/L	---	---	---	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	Perfluorododecanoic acid (PFDoA)	537	2.0	---	2.0		ng/L	---	---	---	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	Perfluorotetradecanoic acid (PFTeDA)	537	2.0	---	2.0		ng/L	---	---	---	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	Perfluornonanoic acid (PFNA)	537	2.0	---	2.0		ng/L	---	---	---	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	Perfluorooctanesulfonic acid (PFOS)	537	2.0	---	2.0		ng/L	---	---	---	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	Perfluorooctanoic acid (PFOA)	537	2.0	---	2.0		ng/L	---	---	---	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	Perfluorotridecanoic acid (PFTriDA)	537	2.0	---	2.0		ng/L	---	---	---	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	Perfluoroundecanoic acid (PFUnA)	537	2.0	---	2.0		ng/L	---	---	---	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
LRB	Perfluoroundecanoic acid (PFUnA)	537	2.0	---	2.0		ng/L	---	---	---	---	---	0.93	03/19/2018 08:09	03/19/2018 18:55	3892483
TFBM	IS-NiMeFOSAA-43	537	N/A	---	959970.00	906092	ng/L	106	106	50 - 150	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
QFBM	IS-PFOA-13C2	537	N/A	---	2002880.00	1888350	ng/L	106	106	50 - 150	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
QFBM	IS-PFOS-13C4	537	N/A	---	364906.00	350271	ng/L	104	104	50 - 150	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
QFBM	SS-NEIFOSAA-45	537	N/A	---	182.4890	200	ng/L	91	91	70 - 130	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FBM	SS-PFDA-13C2	537	N/A	---		100.5050	100	ng/L	101	70 - 130	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
FBM	SS-PFHXA-13C2	537	N/A	---	49.2381	50.0	ng/L	98	70 - 130	---	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
FBM	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---	99.6991	100	ng/L	100	70 - 130	---	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
FBM	Perfluorodecanoic acid (PFDA)	537	2.0	---	96.1608	100	ng/L	96	70 - 130	---	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
FBM	Perfluorheptanoic acid (PFHpA)	537	2.0	---	96.3457	100	ng/L	96	70 - 130	---	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
FBM	Perfluorhexanesulfonic acid (PFHxS)	537	2.0	---	99.7623	100	ng/L	100	70 - 130	---	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
FBM	Perfluorhexanoic acid (PFHxA)	537	2.0	---	95.3999	100	ng/L	95	70 - 130	---	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
FBM	Perfluorododecanoic acid (PFDoA)	537	2.0	---	94.7498	100	ng/L	95	70 - 130	---	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
FBM	Perfluorotetradecanoic acid (PFTeDA)	537	2.0	---	94.5857	100	ng/L	95	70 - 130	---	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
FBM	Perfluorononanoic acid (PFNA)	537	2.0	---	97.3303	100	ng/L	97	70 - 130	---	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
FBM	Perfluorooctanesulfonic acid (PFOS)	537	2.0	---	98.5757	100	ng/L	99	70 - 130	---	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
FBM	Perfluorooctanoic acid (PFOA)	537	2.0	---	96.8510	100	ng/L	97	70 - 130	---	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
FBM	Perfluorotridecanoic acid (PFTriDA)	537	2.0	---	95.4333	100	ng/L	95	70 - 130	---	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
FBM	Perfluoroundecanoic acid (PFUnA)	537	2.0	---	94.6185	100	ng/L	95	70 - 130	---	---	---	1.0	03/19/2018 08:09	03/19/2018 19:28	3892484
CCM	IS-NMeFOSAA-43	537	N/A	---	91.15560.00	91.1558	ng/L	100	50 - 150	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	IS-PFOA-13C2	537	N/A	---	1782580.00	1782580	ng/L	100	50 - 150	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	IS-PFOS-13C4	537	N/A	---	330572.00	330572	ng/L	100	50 - 150	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	SS-NEIFOSAA-45	537	N/A	---	201.9040	200	ng/L	101	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	SS-PFDA-13C2	537	N/A	---	104.8370	100	ng/L	105	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	SS-PFHXA-13C2	537	N/A	---	52.4006	50.0	ng/L	105	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---	103.2670	100	ng/L	103	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	Perfluorodecanoic acid (PFDA)	537	2.0	---	100.6640	100	ng/L	101	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	Perfluorheptanoic acid (PFHpA)	537	2.0	---	101.8440	100	ng/L	102	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	Perfluorhexanesulfonic acid (PFHxS)	537	2.0	---	98.2785	100	ng/L	98	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	Perfluorhexanoic acid (PFHxA)	537	2.0	---	103.5700	100	ng/L	104	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	Perfluorododecanoic acid (PFDoA)	537	2.0	---	106.0680	100	ng/L	106	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	Perfluorotetradecanoic acid (PFTeDA)	537	2.0	---	106.7160	100	ng/L	107	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	Perfluorononanoic acid (PFNA)	537	2.0	---	100.4180	100	ng/L	100	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	Perfluorooctanesulfonic acid (PFOS)	537	2.0	---	98.6399	100	ng/L	99	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	Perfluorooctanoic acid (PFOA)	537	2.0	---	98.8997	100	ng/L	99	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	Perfluorotridecanoic acid (PFTriDA)	537	2.0	---	106.5380	100	ng/L	107	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
CCM	Perfluoroundecanoic acid (PFUnA)	537	2.0	---	103.8200	100	ng/L	104	70 - 130	---	---	---	1.0	03/12/2018 11:40	03/20/2018 00:13	3892493
FS	IS-NMeFOSAA-43	537	N/A	PEF39441/Well A		962081.00	91.1558	ng/L	108	50 - 150	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	IS-PFOA-13C2	537	N/A	PEF39441/Well A		1864970.00	1782580	ng/L	105	50 - 150	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	IS-PFOS-13C4	537	N/A	PEF39441/Well A		346217.00	330572	ng/L	105	50 - 150	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	SS-NEIFOSAA-45	537	N/A	PEF39441/Well A		182.9110	200	ng/L	90	70 - 130	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	SS-PFDA-13C2	537	N/A	PEF39441/Well A		103.1470	100	ng/L	101	70 - 130	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	SS-PFHXA-13C2	537	N/A	PEF39441/Well A		53.4018	50.0	ng/L	105	70 - 130	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	Perfluorobutanesulfonic acid (PFBS)	537	2.0	PEF39441/Well A	<	2.0		ng/L	---	---	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	Perfluorodecanoic acid (PFDA)	537	2.0	PEF39441/Well A	<	2.0		ng/L	---	---	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	Perfluorheptanoic acid (PFHpA)	537	2.0	PEF39441/Well A	<	2.0		ng/L	---	---	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188

QC Summary Report (cont.)

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	PEF39441/Well A	<	2.0		ng/L	---	---	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	Perfluorohexanoic acid (PFHxA)	537	2.0	PEF39441/Well A	<	2.0		ng/L	---	---	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	Perfluorododecanoic acid (PFDoA)	537	2.0	PEF39441/Well A	<	2.0		ng/L	---	---	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	Perfluorotetradecanoic acid (PFTeDA)	537	2.0	PEF39441/Well A	<	2.0		ng/L	---	---	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	Perfluorooctanoic acid (PFNA)	537	2.0	PEF39441/Well A	<	2.0		ng/L	---	---	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	Perfluorooctanesulfonic acid (PFOS)	537	2.0	PEF39441/Well A	<	2.0		ng/L	---	---	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	Perfluorooctanoic acid (PFOA)	537	2.0	PEF39441/Well A	<	2.0		ng/L	---	---	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	Perfluorotridecanoic acid (PFTrDA)	537	2.0	PEF39441/Well A	<	2.0		ng/L	---	---	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
FS	Perfluoroundecanoic acid (PFUnA)	537	2.0	PEF39441/Well A	<	2.0		ng/L	---	---	---	---	1.02	03/19/2018 08:09	03/20/2018 01:37	3886188
CCH	IS-NiMeFOSAA-d3	537	N/A	---		955414.00	955414	ng/L	100	50 - 150	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	IS-PFOA-13C2	537	N/A	---		1772820.00	1772820	ng/L	100	50 - 150	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	IS-PFOS-13C4	537	N/A	---		331169.00	331169	ng/L	100	50 - 150	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	SS-NEIFOSAA-d5	537	N/A	---		194.3720	200	ng/L	97	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	SS-PFDA-13C2	537	N/A	---		106.3690	100	ng/L	106	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	SS-PFHxA-13C2	537	N/A	---		51.7691	50.0	ng/L	104	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---		209.0190	200	ng/L	105	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	Perfluorodecanoic acid (PFDA)	537	2.0	---		214.4120	200	ng/L	107	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	Perfluoroheptanoic acid (PFHpA)	537	2.0	---		207.0190	200	ng/L	104	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---		200.9820	200	ng/L	100	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	Perfluorohexanoic acid (PFHxA)	537	2.0	---		212.6020	200	ng/L	106	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	Perfluorododecanoic acid (PFDoA)	537	2.0	---		217.0680	200	ng/L	109	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	Perfluorotetradecanoic acid (PFTeDA)	537	2.0	---		218.1600	200	ng/L	109	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	Perfluorooctanoic acid (PFNA)	537	2.0	---		206.0530	200	ng/L	103	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	Perfluorooctanesulfonic acid (PFOS)	537	2.0	---		200.6340	200	ng/L	100	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	Perfluorooctanoic acid (PFOA)	537	2.0	---		202.0610	200	ng/L	101	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	Perfluorotridecanoic acid (PFTrDA)	537	2.0	---		218.4790	200	ng/L	109	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496
CCH	Perfluoroundecanoic acid (PFUnA)	537	2.0	---		212.1560	200	ng/L	106	70 - 130	---	---	1.0	03/12/2018 11:40	03/20/2018 02:11	3892496

## Sample Type Key

<u>Type (Abbr.)</u>	<u>Sample Type</u>	<u>Type (Abbr.)</u>	<u>Sample Type</u>
CCH	Continuing Calibration High		
CCL	Continuing Calibration Low		
CCM	Continuing Calibration Mid		
FS	Field Sample		
FBM	Fortified Blank Mid		
LRB	Laboratory Reagent Blank		

END OF REPORT