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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*	LA170006	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

Revision date: 08/28/2017

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

Laboratory Report

Client: Brown & Caldwell

Attn: Scot Middlebrook
2828 Kraft Avenue SE
Suite 156
Grand Rapids, MI 49512

Report: 401715
Priority: Standard Written
Status: Final
PWS ID: Not Supplied

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3811283	3855 Dunlop Lk	537	10/31/17 11:50	Client	11/01/17 08:30
3811284	FTB	537	10/31/17 14:00	Client	11/01/17 08:30

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 James Van Fleit at (574) 233-4777.

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

Jim Van Fleit ASM

Authorized Signature | Title | 11/10/2017 Date

Client Name: Brown & Caldwell
Report #: 401715

Client Name: Brown & Caldwell

Report #: 401715

Sampling Point: 3855 Dunlop Lk

PWS ID: Not Supplied

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	11/02/17 07:52	11/02/17 22:45	3811283
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	2.0	< 2.0	ng/L	11/02/17 07:52	11/02/17 22:45	3811283
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	2.0	< 2.0	ng/L	11/02/17 07:52	11/02/17 22:45	3811283
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	11/02/17 07:52	11/02/17 22:45	3811283
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	2.0	< 2.0	ng/L	11/02/17 07:52	11/02/17 22:45	3811283
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	11/02/17 07:52	11/02/17 22:45	3811283

Sampling Point: FTB

PWS ID: Not Supplied

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	11/06/17 08:06	11/06/17 22:06	3811284
375-85-9	Perfluoroheptanoic acid (PFHpA)	537	---	2.0	< 2.0	ng/L	11/06/17 08:06	11/06/17 22:06	3811284
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537	---	2.0	< 2.0	ng/L	11/06/17 08:06	11/06/17 22:06	3811284
375-95-1	Perfluorononanoic acid (PFNA)	537	---	2.0	< 2.0	ng/L	11/06/17 08:06	11/06/17 22:06	3811284
1763-23-1	Perfluorooctane sulfonate (PFOS)	537	---	2.0	< 2.0	ng/L	11/06/17 08:06	11/06/17 22:06	3811284
335-67-1	Perfluorooctanoic acid (PFOA)	537	---	2.0	< 2.0	ng/L	11/06/17 08:06	11/06/17 22:06	3811284

† 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:	*	^	!

Client Name: Brown & Caldwell Report #: 401715

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.

328699

401715

Internal Use Only

TestAmerica EEA South Bend, IN

THE LEADER IN ENVIRONMENTAL TESTING

WASTE MANAGEMENT CHAIN OF CUSTODY

Sampler Name (Print): J. Overroorde	Signature: J Overroorde
Site Name: State Disposal LF	Spec Request: AC
Site Location: Grand Rapids, MI	Event Name: Residential Oct '17

INDICATE PRESERVATIVE BY USING KEY BELOW (OPTIONAL)
INDICATE CONTAINER BY USING KEY BELOW

TA Sample No.	Client Sample ID	Sampling Date	Sampling Time	MATRIX	COMP / GRAB	8260VOA	T-METALS	D-METALS	CHLORIDE/SULFATE/NITRATE PH, TSS, TDS	ALK / CARB / BICARB	HARDNESS	NH_3 / COD	TOC	UCMR3 PFC						Additional Analysis/Remarks
										Cl-Ass										
3811283	3855 Dunlop Lk	10/31/17	1150	W	G					↓				X	(2)					
3811284	FTB	10/31/17	1400							↓				X	(1)	> ss 11-1-17				
																				0.8°C wet

Cross Off on COC by Client

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
J Overroorde	Brown + Caldwell	10/31/17	1400	Fed Ex		10/31/17	
				[signature]	EEA	11-1-17	0830

Matrix Key
WW = Wastewater
W = Water/Groundwater
S = Solid
SI = Sludge
MS = Miscellaneous Solids
OI = Oil
A = Air
O = _____

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservation Key
1. HCl, Cool to 4°
2. H_2SO_4, Cool to 4°
3. HNO_3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn Acetate, Cool to 4°
6. Cool to 4°
7. None

COMMENTS

Courier:

Bill of Lading:

TAL-8219 (1108)

Eurofins Eaton Analytical
Run Log

Run ID: **236195** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3812093		OS	FL	11/02/2017 19:40	110217M537a-FL-PFC-Ext.mdb
LRB	3812029		RW	FL	11/02/2017 20:14	110217M537a-FL-PFC-Ext.mdb
FBM	3812030		RW	FL	11/02/2017 20:48	110217M537a-FL-PFC-Ext.mdb
FS	3811282		DW	FL	11/02/2017 22:28	110217M537a-FL-PFC-Ext.mdb
FS	3811283	3855 Dunlop Lk	DW	FL	11/02/2017 22:45	110217M537a-FL-PFC-Ext.mdb
CCM	3812064		OS	FL	11/03/2017 00:26	110217M537a-FL-PFC-Ext.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-NMeFOSAA-d3	537	N/A	---		579487.00	579487	ng/L	100	50 - 150	---	---	1.0	10/31/2017 14:47	11/02/2017 19:40	3812093
CCL	IS-PFOA-13C2	537	N/A	---		1339090.00	1339090	ng/L	100	50 - 150	---	---	1.0	10/31/2017 14:47	11/02/2017 19:40	3812093
CCL	IS-PFOS-13C4	537	N/A	---		257281.00	257281	ng/L	100	50 - 150	---	---	1.0	10/31/2017 14:47	11/02/2017 19:40	3812093
CCL	IS-GenX-13C3	537	N/A	---		2928.72	2928.72	ng/L	100	50 - 150	---	---	1.0	10/31/2017 14:47	11/02/2017 19:40	3812093
CCL	SS-NEtFOSAA-d5	537	N/A	---		200.2150	200	ng/L	100	70 - 130	---	---	1.0	10/31/2017 14:47	11/02/2017 19:40	3812093
CCL	SS-PFDA-13C2	537	N/A	---		93.0847	100	ng/L	93	70 - 130	---	---	1.0	10/31/2017 14:47	11/02/2017 19:40	3812093
CCL	SS-PFHxA-13C2	537	N/A	---		50.4891	50.0	ng/L	101	70 - 130	---	---	1.0	10/31/2017 14:47	11/02/2017 19:40	3812093
CCL	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---		1.9530	2.0	ng/L	98	50 - 150	---	---	1.0	10/31/2017 14:47	11/02/2017 19:40	3812093
CCL	Perfluoroheptanoic acid (PFHpA)	537	2.0	---		1.8649	2.0	ng/L	93	50 - 150	---	---	1.0	10/31/2017 14:47	11/02/2017 19:40	3812093
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---		1.8543	2.0	ng/L	93	50 - 150	---	---	1.0	10/31/2017 14:47	11/02/2017 19:40	3812093
CCL	Perfluorononanoic acid (PFNA)	537	2.0	---		1.8592	2.0	ng/L	93	50 - 150	---	---	1.0	10/31/2017 14:47	11/02/2017 19:40	3812093
CCL	Perfluorooctane sulfonate (PFOS)	537	2.0	---		1.8533	2.0	ng/L	93	50 - 150	---	---	1.0	10/31/2017 14:47	11/02/2017 19:40	3812093
CCL	Perfluorooctanoic acid (PFOA)	537	2.0	---		1.8835	2.0	ng/L	94	50 - 150	---	---	1.0	10/31/2017 14:47	11/02/2017 19:40	3812093
LRB	IS-NMeFOSAA-d3	537	N/A	---		588909.00	579487	ng/L	102	50 - 150	---	---	0.96	11/02/2017 07:52	11/02/2017 20:14	3812029
LRB	IS-PFOA-13C2	537	N/A	---		1379030.00	1339090	ng/L	103	50 - 150	---	---	0.96	11/02/2017 07:52	11/02/2017 20:14	3812029
LRB	IS-PFOS-13C4	537	N/A	---		266017.00	257281	ng/L	103	50 - 150	---	---	0.96	11/02/2017 07:52	11/02/2017 20:14	3812029
LRB	IS-GenX-13C3	537	N/A	---		2873.05	2928.72	ng/L	98	50 - 150	---	---	0.96	11/02/2017 07:52	11/02/2017 20:14	3812029
LRB	SS-NEtFOSAA-d5	537	N/A	---		168.6190	200	ng/L	88	70 - 130	---	---	0.96	11/02/2017 07:52	11/02/2017 20:14	3812029
LRB	SS-PFDA-13C2	537	N/A	---		87.3062	100	ng/L	91	70 - 130	---	---	0.96	11/02/2017 07:52	11/02/2017 20:14	3812029
LRB	SS-PFHxA-13C2	537	N/A	---		46.0556	50.0	ng/L	96	70 - 130	---	---	0.96	11/02/2017 07:52	11/02/2017 20:14	3812029
LRB	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.96	11/02/2017 07:52	11/02/2017 20:14	3812029
LRB	Perfluoroheptanoic acid (PFHpA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.96	11/02/2017 07:52	11/02/2017 20:14	3812029
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.96	11/02/2017 07:52	11/02/2017 20:14	3812029
LRB	Perfluorononanoic acid (PFNA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.96	11/02/2017 07:52	11/02/2017 20:14	3812029
LRB	Perfluorooctane sulfonate (PFOS)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.96	11/02/2017 07:52	11/02/2017 20:14	3812029
LRB	Perfluorooctanoic acid (PFOA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.96	11/02/2017 07:52	11/02/2017 20:14	3812029
FBM	IS-NMeFOSAA-d3	537	N/A	---		589971.00	579487	ng/L	102	50 - 150	---	---	1.0	11/02/2017 07:52	11/02/2017 20:48	3812030
FBM	IS-PFOA-13C2	537	N/A	---		1390120.00	1339090	ng/L	104	50 - 150	---	---	1.0	11/02/2017 07:52	11/02/2017 20:48	3812030
FBM	IS-PFOS-13C4	537	N/A	---		274857.00	257281	ng/L	107	50 - 150	---	---	1.0	11/02/2017 07:52	11/02/2017 20:48	3812030
FBM	IS-GenX-13C3	537	N/A	---		2956.44	2928.72	ng/L	101	50 - 150	---	---	1.0	11/02/2017 07:52	11/02/2017 20:48	3812030
FBM	SS-NEtFOSAA-d5	537	N/A	---		176.8730	200	ng/L	88	70 - 130	---	---	1.0	11/02/2017 07:52	11/02/2017 20:48	3812030
FBM	SS-PFDA-13C2	537	N/A	---		90.2938	100	ng/L	90	70 - 130	---	---	1.0	11/02/2017 07:52	11/02/2017 20:48	3812030
FBM	SS-PFHxA-13C2	537	N/A	---		46.8661	50.0	ng/L	94	70 - 130	---	---	1.0	11/02/2017 07:52	11/02/2017 20:48	3812030
FBM	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---		103.0380	100	ng/L	103	70 - 130	---	---	1.0	11/02/2017 07:52	11/02/2017 20:48	3812030
FBM	Perfluoroheptanoic acid (PFHpA)	537	2.0	---		99.1051	100	ng/L	99	70 - 130	---	---	1.0	11/02/2017 07:52	11/02/2017 20:48	3812030
FBM	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---		100.0430	100	ng/L	100	70 - 130	---	---	1.0	11/02/2017 07:52	11/02/2017 20:48	3812030
FBM	Perfluorononanoic acid (PFNA)	537	2.0	---		101.2010	100	ng/L	101	70 - 130	---	---	1.0	11/02/2017 07:52	11/02/2017 20:48	3812030
FBM	Perfluorooctane sulfonate (PFOS)	537	2.0	---		99.0493	100	ng/L	99	70 - 130	---	---	1.0	11/02/2017 07:52	11/02/2017 20:48	3812030
FBM	Perfluorooctanoic acid (PFOA)	537	2.0	---		98.6060	100	ng/L	99	70 - 130	---	---	1.0	11/02/2017 07:52	11/02/2017 20:48	3812030

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	IS-NMeFOSAA-d3	537	N/A	3855 Dunlop Lk		667963.00	579487	ng/L	115	50 - 150	---	---	0.9	11/02/2017 07:52	11/02/2017 22:45	3811283
FS	IS-PFOA-13C2	537	N/A	3855 Dunlop Lk		1537140.00	1339090	ng/L	115	50 - 150	---	---	0.9	11/02/2017 07:52	11/02/2017 22:45	3811283
FS	IS-PFOS-13C4	537	N/A	3855 Dunlop Lk		290375.00	257281	ng/L	113	50 - 150	---	---	0.9	11/02/2017 07:52	11/02/2017 22:45	3811283
FS	IS-GenX-13C3	537	N/A	3855 Dunlop Lk		3041.20	2928.72	ng/L	104	50 - 150	---	---	0.9	11/02/2017 07:52	11/02/2017 22:45	3811283
FS	SS-NEtFOSAA-d5	537	N/A	3855 Dunlop Lk		165.1340	200	ng/L	92	70 - 130	---	---	0.9	11/02/2017 07:52	11/02/2017 22:45	3811283
FS	SS-PFDA-13C2	537	N/A	3855 Dunlop Lk		79.2766	100	ng/L	88	70 - 130	---	---	0.9	11/02/2017 07:52	11/02/2017 22:45	3811283
FS	SS-PFHxA-13C2	537	N/A	3855 Dunlop Lk		44.5386	50.0	ng/L	99	70 - 130	---	---	0.9	11/02/2017 07:52	11/02/2017 22:45	3811283
FS	Perfluorobutanesulfonic acid (PFBS)	537	2.0	3855 Dunlop Lk	<	2.0		ng/L	---	---	---	---	0.9	11/02/2017 07:52	11/02/2017 22:45	3811283
FS	Perfluoroheptanoic acid (PFHpA)	537	2.0	3855 Dunlop Lk	<	2.0		ng/L	---	---	---	---	0.9	11/02/2017 07:52	11/02/2017 22:45	3811283
FS	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	3855 Dunlop Lk	<	2.0		ng/L	---	---	---	---	0.9	11/02/2017 07:52	11/02/2017 22:45	3811283
FS	Perfluorononanoic acid (PFNA)	537	2.0	3855 Dunlop Lk	<	2.0		ng/L	---	---	---	---	0.9	11/02/2017 07:52	11/02/2017 22:45	3811283
FS	Perfluorooctane sulfonate (PFOS)	537	2.0	3855 Dunlop Lk	<	2.0		ng/L	---	---	---	---	0.9	11/02/2017 07:52	11/02/2017 22:45	3811283
FS	Perfluorooctanoic acid (PFOA)	537	2.0	3855 Dunlop Lk	<	2.0		ng/L	---	---	---	---	0.9	11/02/2017 07:52	11/02/2017 22:45	3811283
CCM	IS-NMeFOSAA-d3	537	N/A	---		630906.00	630906	ng/L	100	50 - 150	---	---	1.0	10/31/2017 14:47	11/03/2017 00:26	3812064
CCM	IS-PFOA-13C2	537	N/A	---		1395120.00	1395120	ng/L	100	50 - 150	---	---	1.0	10/31/2017 14:47	11/03/2017 00:26	3812064
CCM	IS-PFOS-13C4	537	N/A	---		279242.00	279242	ng/L	100	50 - 150	---	---	1.0	10/31/2017 14:47	11/03/2017 00:26	3812064
CCM	IS-GenX-13C3	537	N/A	---		3206.40	3206.4	ng/L	100	50 - 150	---	---	1.0	10/31/2017 14:47	11/03/2017 00:26	3812064
CCM	SS-NEtFOSAA-d5	537	N/A	---		202.9350	200	ng/L	101	70 - 130	---	---	1.0	10/31/2017 14:47	11/03/2017 00:26	3812064
CCM	SS-PFDA-13C2	537	N/A	---		95.8561	100	ng/L	96	70 - 130	---	---	1.0	10/31/2017 14:47	11/03/2017 00:26	3812064
CCM	SS-PFHxA-13C2	537	N/A	---		50.5710	50.0	ng/L	101	70 - 130	---	---	1.0	10/31/2017 14:47	11/03/2017 00:26	3812064
CCM	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---		107.1330	100	ng/L	107	70 - 130	---	---	1.0	10/31/2017 14:47	11/03/2017 00:26	3812064
CCM	Perfluoroheptanoic acid (PFHpA)	537	2.0	---		102.6610	100	ng/L	103	70 - 130	---	---	1.0	10/31/2017 14:47	11/03/2017 00:26	3812064
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---		99.9008	100	ng/L	100	70 - 130	---	---	1.0	10/31/2017 14:47	11/03/2017 00:26	3812064
CCM	Perfluorononanoic acid (PFNA)	537	2.0	---		96.5597	100	ng/L	97	70 - 130	---	---	1.0	10/31/2017 14:47	11/03/2017 00:26	3812064
CCM	Perfluorooctane sulfonate (PFOS)	537	2.0	---		97.9461	100	ng/L	98	70 - 130	---	---	1.0	10/31/2017 14:47	11/03/2017 00:26	3812064
CCM	Perfluorooctanoic acid (PFOA)	537	2.0	---		98.5748	100	ng/L	99	70 - 130	---	---	1.0	10/31/2017 14:47	11/03/2017 00:26	3812064

Eurofins Eaton Analytical
Run Log

Run ID: **236303** Method: **537**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	3814378		OS	CY	11/06/2017 20:09	110617M537a-CY-PFC12.mdb
LRB	3814363		RW	CY	11/06/2017 20:43	110617M537a-CY-PFC12.mdb
FBM	3814364		RW	CY	11/06/2017 21:16	110617M537a-CY-PFC12.mdb
FTB	3811284	FTB	RW	CY	11/06/2017 22:06	110617M537a-CY-PFC12.mdb
CCM	3814380		OS	CY	11/07/2017 02:33	110617M537a-CY-PFC12.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-PFOA-13C2	537	N/A	---		1636.46	1636.46	ng/L	100	50 - 150	---	---	1.0	10/31/2017 14:47	11/06/2017 20:09	3814378
CCL	IS-PFOS-13C4	537	N/A	---		1692.01	1692.01	ng/L	100	50 - 150	---	---	1.0	10/31/2017 14:47	11/06/2017 20:09	3814378
CCL	SS-PFDA-13C2	537	N/A	---		98.5713	100	ng/L	99	70 - 130	---	---	1.0	10/31/2017 14:47	11/06/2017 20:09	3814378
CCL	SS-PFHxA-13C2	537	N/A	---		49.2521	50.0	ng/L	99	70 - 130	---	---	1.0	10/31/2017 14:47	11/06/2017 20:09	3814378
CCL	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---		1.6612	2.0	ng/L	83	50 - 150	---	---	1.0	10/31/2017 14:47	11/06/2017 20:09	3814378
CCL	Perfluoroheptanoic acid (PFHpA)	537	2.0	---		1.6809	2.0	ng/L	84	50 - 150	---	---	1.0	10/31/2017 14:47	11/06/2017 20:09	3814378
CCL	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---		1.7065	2.0	ng/L	85	50 - 150	---	---	1.0	10/31/2017 14:47	11/06/2017 20:09	3814378
CCL	Perfluorononanoic acid (PFNA)	537	2.0	---		2.0805	2.0	ng/L	104	50 - 150	---	---	1.0	10/31/2017 14:47	11/06/2017 20:09	3814378
CCL	Perfluorooctane sulfonate (PFOS)	537	2.0	---		1.6015	2.0	ng/L	80	50 - 150	---	---	1.0	10/31/2017 14:47	11/06/2017 20:09	3814378
CCL	Perfluorooctanoic acid (PFOA)	537	2.0	---		1.6167	2.0	ng/L	81	50 - 150	---	---	1.0	10/31/2017 14:47	11/06/2017 20:09	3814378
LRB	IS-PFOA-13C2	537	N/A	---		1647.26	1636.46	ng/L	101	50 - 150	---	---	0.98	11/06/2017 08:06	11/06/2017 20:43	3814363
LRB	IS-PFOS-13C4	537	N/A	---		1646.68	1692.01	ng/L	97	50 - 150	---	---	0.98	11/06/2017 08:06	11/06/2017 20:43	3814363
LRB	SS-PFDA-13C2	537	N/A	---		95.3247	100	ng/L	97	70 - 130	---	---	0.98	11/06/2017 08:06	11/06/2017 20:43	3814363
LRB	SS-PFHxA-13C2	537	N/A	---		42.6650	50.0	ng/L	87	70 - 130	---	---	0.98	11/06/2017 08:06	11/06/2017 20:43	3814363
LRB	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.98	11/06/2017 08:06	11/06/2017 20:43	3814363
LRB	Perfluoroheptanoic acid (PFHpA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.98	11/06/2017 08:06	11/06/2017 20:43	3814363
LRB	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.98	11/06/2017 08:06	11/06/2017 20:43	3814363
LRB	Perfluorononanoic acid (PFNA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.98	11/06/2017 08:06	11/06/2017 20:43	3814363
LRB	Perfluorooctane sulfonate (PFOS)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.98	11/06/2017 08:06	11/06/2017 20:43	3814363
LRB	Perfluorooctanoic acid (PFOA)	537	2.0	---	<	2.0		ng/L	---	---	---	---	0.98	11/06/2017 08:06	11/06/2017 20:43	3814363
FBM	IS-PFOA-13C2	537	N/A	---		1590.00	1636.46	ng/L	97	50 - 150	---	---	1.0	11/06/2017 08:06	11/06/2017 21:16	3814364
FBM	IS-PFOS-13C4	537	N/A	---		1607.74	1692.01	ng/L	95	50 - 150	---	---	1.0	11/06/2017 08:06	11/06/2017 21:16	3814364
FBM	SS-PFDA-13C2	537	N/A	---		102.4400	100	ng/L	102	70 - 130	---	---	1.0	11/06/2017 08:06	11/06/2017 21:16	3814364
FBM	SS-PFHxA-13C2	537	N/A	---		49.5181	50.0	ng/L	99	70 - 130	---	---	1.0	11/06/2017 08:06	11/06/2017 21:16	3814364
FBM	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---		88.3204	100	ng/L	88	70 - 130	---	---	1.0	11/06/2017 08:06	11/06/2017 21:16	3814364
FBM	Perfluoroheptanoic acid (PFHpA)	537	2.0	---		91.0962	100	ng/L	91	70 - 130	---	---	1.0	11/06/2017 08:06	11/06/2017 21:16	3814364
FBM	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---		93.6740	100	ng/L	94	70 - 130	---	---	1.0	11/06/2017 08:06	11/06/2017 21:16	3814364
FBM	Perfluorononanoic acid (PFNA)	537	2.0	---		90.5151	100	ng/L	91	70 - 130	---	---	1.0	11/06/2017 08:06	11/06/2017 21:16	3814364
FBM	Perfluorooctane sulfonate (PFOS)	537	2.0	---		96.2392	100	ng/L	96	70 - 130	---	---	1.0	11/06/2017 08:06	11/06/2017 21:16	3814364
FBM	Perfluorooctanoic acid (PFOA)	537	2.0	---		91.9797	100	ng/L	92	70 - 130	---	---	1.0	11/06/2017 08:06	11/06/2017 21:16	3814364
FTB	IS-PFOA-13C2	537	N/A	FTB		1643.45	1636.46	ng/L	100	50 - 150	---	---	0.9	11/06/2017 08:06	11/06/2017 22:06	3811284
FTB	IS-PFOS-13C4	537	N/A	FTB		1668.43	1692.01	ng/L	99	50 - 150	---	---	0.9	11/06/2017 08:06	11/06/2017 22:06	3811284
FTB	SS-PFDA-13C2	537	N/A	FTB		86.1404	100	ng/L	96	70 - 130	---	---	0.9	11/06/2017 08:06	11/06/2017 22:06	3811284
FTB	SS-PFHxA-13C2	537	N/A	FTB		41.0321	50.0	ng/L	91	70 - 130	---	---	0.9	11/06/2017 08:06	11/06/2017 22:06	3811284
FTB	Perfluorobutanesulfonic acid (PFBS)	537	2.0	FTB	<	2.0		ng/L	---	---	---	---	0.9	11/06/2017 08:06	11/06/2017 22:06	3811284
FTB	Perfluoroheptanoic acid (PFHpA)	537	2.0	FTB	<	2.0		ng/L	---	---	---	---	0.9	11/06/2017 08:06	11/06/2017 22:06	3811284
FTB	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	FTB	<	2.0		ng/L	---	---	---	---	0.9	11/06/2017 08:06	11/06/2017 22:06	3811284
FTB	Perfluorononanoic acid (PFNA)	537	2.0	FTB	<	2.0		ng/L	---	---	---	---	0.9	11/06/2017 08:06	11/06/2017 22:06	3811284
FTB	Perfluorooctane sulfonate (PFOS)	537	2.0	FTB	<	2.0		ng/L	---	---	---	---	0.9	11/06/2017 08:06	11/06/2017 22:06	3811284
FTB	Perfluorooctanoic acid (PFOA)	537	2.0	FTB	<	2.0		ng/L	---	---	---	---	0.9	11/06/2017 08:06	11/06/2017 22:06	3811284

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 #
CCM	IS-PFOA-13C2	537	N/A	---		1544.87	1544.87	ng/L	100	50 - 150	---	---	1.0	10/31/2017 14:47	11/07/2017 02:33	3814380
CCM	IS-PFOS-13C4	537	N/A	---		1616.60	1616.6	ng/L	100	50 - 150	---	---	1.0	10/31/2017 14:47	11/07/2017 02:33	3814380
CCM	SS-PFDA-13C2	537	N/A	---		98.4431	100	ng/L	98	70 - 130	---	---	1.0	10/31/2017 14:47	11/07/2017 02:33	3814380
CCM	SS-PFHxA-13C2	537	N/A	---		49.0897	50.0	ng/L	98	70 - 130	---	---	1.0	10/31/2017 14:47	11/07/2017 02:33	3814380
CCM	Perfluorobutanesulfonic acid (PFBS)	537	2.0	---		96.3909	100	ng/L	96	70 - 130	---	---	1.0	10/31/2017 14:47	11/07/2017 02:33	3814380
CCM	Perfluoroheptanoic acid (PFHpA)	537	2.0	---		97.5816	100	ng/L	98	70 - 130	---	---	1.0	10/31/2017 14:47	11/07/2017 02:33	3814380
CCM	Perfluorohexanesulfonic acid (PFHxS)	537	2.0	---		95.8982	100	ng/L	96	70 - 130	---	---	1.0	10/31/2017 14:47	11/07/2017 02:33	3814380
CCM	Perfluorononanoic acid (PFNA)	537	2.0	---		97.3199	100	ng/L	97	70 - 130	---	---	1.0	10/31/2017 14:47	11/07/2017 02:33	3814380
CCM	Perfluorooctane sulfonate (PFOS)	537	2.0	---		96.2701	100	ng/L	96	70 - 130	---	---	1.0	10/31/2017 14:47	11/07/2017 02:33	3814380
CCM	Perfluorooctanoic acid (PFOA)	537	2.0	---		100.3600	100	ng/L	100	70 - 130	---	---	1.0	10/31/2017 14:47	11/07/2017 02:33	3814380

Sample Type Key

Type (Abbr.)	Sample Type	Type (Abbr.)	Sample Type
CCL	Continuing Calibration Low		
CCM	Continuing Calibration Mid		
FS	Field Sample		
FTB	Field Trip Blank		
FBM	Fortified Blank Mid		
LRB	Laboratory Reagent Blank		

EPA-R5-2018-004776_0000030

END OF REPORT