Massachusetts Department of Environmental Protection - Drinking Water Program **PFAS**

Per- and Polyfluoroalkyl Substances (PFAS) Report

I. PWS INFORMATION: Please refer to your MassDEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: 4244001 **City / Town:** Randolph

PWS Name: Randolph Holbrook Joint Water Board **PWS Class:** COM ☒ NTNC ☐ TNC ☐

MassDEP Location (LOC) ID#	MassDEP Location Name	Sample Information		Date Collected	Collected By
10296	Great Pond WTP	☐ (M)ultiple ☒ (S)ingle	☐ (R)aw ☒ (F)inished	04/19/2021	P. Hennessy

Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below: (1) Reason for Resubmission	(2) Collection Date of Original Sample
☒ RS ☐ SS	☒ Original ☐ Resubmitted ☐ Confirmation	☐ Resample ☐ Reanalysis ☐ Report Correction	

SAMPLE COMMENTS - Such as, if a Manifold/Multiple sample, list the source(s) that were on-line during sample collection or if this is a field reagent blank

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab Cert. #: M-MA022 **Primary Lab Name:** Analytical Balance **Subcontracted? (Y/N)** Y

Analysis Lab Cert. #: M-IN035 **Analysis Lab Name:** EEA

If Analysis Lab is not certified by MassDEP or U.S. EPA, list certification authority:

Lab Method	Date Extracted	Date Analyzed	Dilution Factor	Lab Sample IDs#	
EPA 537.1	04/19/2021	04/19/2021		Primary Lab:	57315-01
				Subcontracted Lab:	4874924

CAS#	REGULATED PFAS CONTAMINANTS	Result[1] ng/L	Result[2] Qualifier	MCL* ng/L	MDL ng/L	MRL ng/L
1763-23-1	Perfluorooctane Sulfonic Acid (PFOS)	8.9			0.40	2.0
335-67-1	Perfluorooctanoic Acid (PFOA)	5.3			0.40	2.0
355-46-4	Perfluorohexane Sulfonic Acid (PFHxS)	2.2			0.50	2.0
375-95-1	Perfluorononanoic Acid (PFNA)	0.86	J	-	0.50	2.0
375-85-9	Perfluorohepatanoic Acid (PFHpA)	2.4			0.40	2.0
335-76-2	Perfluorodecanoic acid (PFDA)	ND			0.50	2.0
PFAS6 (sum of PFOS, PFOA, PFHxS, PFNA, PFHpA and PFDA; only include Results at or above the MRL; do not include estimated Results as described by a Result Qualifier in the next column)	=	18.8	--	20	-	-
	UNREGULATED PFAS CONTAMINANTS					
375-73-5	Perfluorobutane sulfonic acid (PFBS)	2.0			0.40	2.0
307-55-1	Perfluorododecanoic acid (PFDoA)	ND			0.40	2.0
307-24-4	Perfluorohexanoic acid (PFHxA)	3.2			0.40	2.0
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND			0.60	2.0
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	ND			0.50	2.0
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND			0.50	2.0
2991-50-6	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		-	0.60	2.0
2355-31-9	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND			0.50	2.0
763051-92-9	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND			0.50	2.0
756426-58-1	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	ND			0.50	2.0
919005-14-4	4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND			0.61	2.0
13252-13-6	Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND			0.50	2.0

[1] A field reagent blank (FRB) must be analyzed and reported on a separate PFAS form if any PFAS are detected above the MRL.
[2] All qualifiers must be described under Lab Analysis Comments on page 2.

Massachusetts Department of Environmental Protection - Drinking Water Program **PFAS**

Per- and Polyfluoroalkyl Substances (PFAS) Report

PWS ID#: 4244001

Lab Sample ID#:

Primary Lab:	57315-01
Subcontracted Lab:	4874924

CAS#	UNREGULATED PFAS CONTAMINANTS	Result[1] ng/L	Result[2] Qualifier	MCL * ng/L	MDL ng/L	MRL ng/L

Surrogate Name	% Recovery (70 – 130%)	Alternate Surrogate (must document reason for change)
$^{13}C_2$-PFHxA	95	
$^{13}C_2$-PFDA	95	
d_5-NEtFOSAA	89	
$^{13}C_3$-HFPO-DA	97	

Note: $^{13}C_3$-HFPO-DA is not required for EPA Method 537 v1.1

In addition to the SUR above you must attach the results of the ongoing QC results as specified by the method for the sample's extraction batch.

☒ **Laboratory analytical report with QC attached (check one item below).**

☒ All associated QC criteria reported within control limits including Lab Reagent/Method Blank (LRB), Field Reagent Blank (FRB), Surrogate Standards (SUR), Laboratory Fortified Blank (LFB), Matrix Spike/Duplicate (LFSM/LFSMD or FD) and RPD.

☐ All associated sample and/or QC batch criteria not met. See Lab Analysis Comments below and narrative in attached report.

Lab Analysis Comments: (include sample/method parameters outside of or affecting QC controls/limits and result qualifiers)

Result Qualifier	Qualifier Description
J	Estimated concentration
Other Analysis Comments:	

* MCL or proposed MCL

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Authorized Laboratory Signature: Nellie A da Costa Digitally signed by Nellie A da Costa DN: Nellie A da Costa, OU=US - UNITED STATES, O=Analytical Balance Corp., E=nellie@nzotest.net

Date: 04/26/2021

If not submitting these results electronically, mail TWO copies of this report to your MassDEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner. Note that during the Massachusetts COVID-19 state of emergency, in addition to submitting by mail reports may be emailed to program.director-dwp@mass.gov.

MassDEP REVIEW STATUS (Initial & Date)			
☐ Accepted _____ ☐ Disapproved	Review Comments		☐ WQTS Data Entered

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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.

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	IN00035	New Jersey*	IN598
Colorado Radiochemistry	IN00035	New Mexico	IN00035
Connecticut	PH-0132	New York*	11398
Delaware	IN035	North Carolina	18700
Florida(Primary AB)*	E87775	North Dakota	R-035
Georgia	929	Ohio	87775
Hawaii	IN035	Oklahoma	D9508
Idaho	IN00035	Oregon*	4156
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
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA014	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: 09/29/2020

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

Laboratory Report

Client: Analytical Balance Corporation

Attn: Amanda Cronin
422 West Grove Street
Middleboro, MA 02346

Report: 515038
Priority: Rush Written
Status: Final
PWS ID: MA4244001

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
4874924	57315-01	537.1	04/12/21 09:50	Client	04/13/21 08:30
4874925	57315-01 FTB	537.1	04/12/21 09:50	Client	04/13/21 08:30

Report Summary

J=This is an estimated value greater than the current MDL and less than the current MRL. MDLs listed on the MA state form are the same throughout this report. If a result is reported as <2.0, it has also been determined to be below the MDL.

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 Pat Muff at (574) 233-4777.

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

Pat Muff ASM — 04/23/2021

Authorized Signature — Title — Date

Client Name: Analytical Balance Corporation
Report #: 515038

Client Name: Analytical Balance Corporation Report #: 515038

Sampling Point: 57315-01 PWS ID: MA4244001

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
335-67-1	Perfluorooctanoic acid (PFOA)	537.1	---	2.0	**5.3**	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	537.1	---	2.0	**8.9**	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537.1	---	2.0	**2.0**	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
375-85-9	Perfluoroheptanoic acid (PFHpA)	537.1	---	2.0	**2.4**	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537.1	---	2.0	**2.2**	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
375-95-1	Perfluorononanoic acid (PFNA)	537.1	---	2.0	**0.86 J**	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
335-76-2	Perfluorodecanoic acid (PFDA)	537.1	---	2.0	< 2.0	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
307-24-4	Perfluorohexanoic acid (PFHxA)	537.1	---	2.0	**3.2**	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
307-55-1	Perfluorododecanoic acid (PFDoA)	537.1	---	2.0	< 2.0	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	537.1	---	2.0	< 2.0	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
2058-94-8	Perfluoroundecanoic acid (PFUnA)	537.1	---	2.0	< 2.0	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
2991-50-6	N-ethyl Perfluorooctanesulfonamidoacetic acid	537.1	---	2.0	< 2.0	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
2355-31-9	N-methyl Perfluorooctanesulfonamidoacetic acid	537.1	---	2.0	< 2.0	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
13252-13-6	HFPO-DA/GenX	537.1	---	2.0	< 2.0	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
919005-14-4	ADONA	537.1	---	2.0	< 2.0	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
756426-58-1	9Cl-PF3ONS/F-53B Major	537.1	---	2.0	< 2.0	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
763051-92-9	11Cl-PF3OUdS/F-53B Minor	537.1	---	2.0	< 2.0	ng/L	04/19/21 06:20	04/19/21 23:36	4874924
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	537.1	---	2.0	< 2.0	ng/L	04/19/21 06:20	04/19/21 23:36	4874924

Sampling Point: 57315-01 FTB PWS ID: MA4244001

EEA Methods									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
335-67-1	Perfluorooctanoic acid (PFOA)	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
375-73-5	Perfluorobutanesulfonic acid (PFBS)	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
375-85-9	Perfluoroheptanoic acid (PFHpA)	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
375-95-1	Perfluorononanoic acid (PFNA)	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
335-76-2	Perfluorodecanoic acid (PFDA)	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
307-24-4	Perfluorohexanoic acid (PFHxA)	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
307-55-1	Perfluorododecanoic acid (PFDoA)	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
2058-94-8	Perfluoroundecanoic acid (PFUnA)	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
2991-50-6	N-ethyl Perfluorooctanesulfonamidoacetic acid	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
2355-31-9	N-methyl Perfluorooctanesulfonamidoacetic acid	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
13252-13-6	HFPO-DA/GenX	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
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756426-58-1	9Cl-PF3ONS/F-53B Major	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
763051-92-9	11Cl-PF3OUdS/F-53B Minor	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	537.1	---	2.0	< 2.0	ng/L	04/21/21 08:06	04/22/21 02:20	4874925

† 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.

If applicable, the calculation of the matrix spike (MS) or matrix spike duplicate (MSD) percent recovery is as follows: (MS or MSD value - Sample value) * 100 / spike target / dilution factor = **Recovery %**

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.

Massachusetts Department of Environmental Protection - Drinking Water Program **PFAS**

Per- and Polyfluoroalkyl Substances (PFAS) Report

I. PWS INFORMATION: Please refer to your MassDEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: 4244001 **City / Town:**

PWS Name: RANDOLPH/HOLBROOK WATER BOARD **PWS Class:** COM ☐ NTNC ☐ TNC ☐

MassDEP Location (LOC) ID#	MassDEP Location Name	Sample Information		Date Collected	Collected By
		☐ (M)ultiple ☐ (S)ingle	☐ (R)aw ☐ (F)inished	4/12/2021	P.H.

Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:	
		(1) Reason for Resubmission	(2) Collection Date of Original Sample
☐ RS ☐ SS	☐ Original ☐ Resubmitted ☐ Confirmation	☐ Resample ☐ Reanalysis ☐ Report Correction	

SAMPLE COMMENTS - Such as, if a Manifold/Multiple sample, list the source(s) that were on-line during sample collection or if this is a field reagent blank

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab Cert. #: **Primary Lab Name:** Analytical Balance **Subcontracted? (Y/N)** Y

Analysis Lab Cert. #: M-IN035 **Analysis Lab Name:** Eurofins Eaton Analytical

If Analysis Lab is not certified by MassDEP or U.S. EPA, list certification authority:

Lab Method	Date Extracted	Date Analyzed	Dilution Factor	Lab Sample IDs#	
537.1	4/19/2021	4/19/2021	1	Primary Lab:	57315-01
				Subcontracted Lab:	4874924

CAS#	REGULATED PFAS CONTAMINANTS	Result[1] ng/L	Result[2] Qualifier	MCL* ng/L	MDL ng/L	MRL ng/L
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335-67-1	Perfluorooctanoic Acid (PFOA)	5.3			0.40	2.0
355-46-4	Perfluorohexane Sulfonic Acid (PFHxS)	2.2			0.50	2.0
375-95-1	Perfluorononanoic Acid (PFNA)	0.86	J	-	0.50	2.0
375-85-9	Perfluorohepatanoic Acid (PFHpA)	2.4			0.40	2.0
335-76-2	Perfluorodecanoic acid (PFDA)	ND			0.50	2.0
PFAS6 (sum of PFOS, PFOA, PFHxS, PFNA, PFHpA and PFDA; only include Results at or above the MRL; do not include estimated Results as described by a Result Qualifier in the next column)	=	18.8	--	20	-	-
	UNREGULATED PFAS CONTAMINANTS					
375-73-5	Perfluorobutane sulfonic acid (PFBS)	2.0			0.40	2.0
307-55-1	Perfluorododecanoic acid (PFDoA)	ND			0.40	2.0
307-24-4	Perfluorohexanoic acid (PFHxA)	3.2			0.40	2.0
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND			0.60	2.0
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	ND			0.50	2.0
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND			0.50	2.0
2991-50-6	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		-	0.60	2.0
2355-31-9	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND			0.50	2.0
763051-92-9	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND			0.50	2.0
756426-58-1	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	ND			0.50	2.0
919005-14-4	4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND			0.61	2.0
13252-13-6	Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND			0.50	2.0

[1] A field reagent blank (FRB) must be analyzed and reported on a separate PFAS form if any PFAS are detected above the MRL.
[2] All qualifiers must be described under Lab Analysis Comments on page 2.

Massachusetts Department of Environmental Protection - Drinking Water Program

PFAS

Per- and Polyfluoroalkyl Substances (PFAS) Report

PWS ID#: 4244001

Lab Sample ID#:

Primary Lab:	57315-01
Subcontracted Lab:	4874924

CAS#	UNREGULATED PFAS CONTAMINANTS	Result[1] ng/L	Result[2] Qualifier	MCL * ng/L	MDL ng/L	MRL ng/L
				-		

Surrogate Name	% Recovery (70 – 130%)	Alternate Surrogate (must document reason for change)
$^{13}C_2$-PFHxA	95	
$^{13}C_2$-PFDA	95	
d_5-NEtFOSAA	89	
$^{13}C_3$-HFPO-DA	97	

Note: $^{13}C_3$-HFPO-DA is not required for EPA Method 537 v1.1

In addition to the SUR above you must attach the results of the ongoing QC results as specified by the method for the sample's extraction batch.

☒ **Laboratory analytical report with QC attached (check one item below).**

☒ All associated QC criteria reported within control limits including Lab Reagent/Method Blank (LRB), Field Reagent Blank (FRB), Surrogate Standards (SUR), Laboratory Fortified Blank (LFB), Matrix Spike/Duplicate (LFSM/LFSMD or FD) and RPD.

☐ All associated sample and/or QC batch criteria not met. See Lab Analysis Comments below and narrative in attached report.

Lab Analysis Comments: (include sample/method parameters outside of or affecting QC controls/limits and result qualifiers)

Result Qualifier	Qualifier Description
J	Estimated concentration
Other Analysis Comments:	

* MCL or proposed MCL

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature: C.S. Manager

Date: 4/23/2021

If not submitting these results electronically, mail TWO copies of this report to your MassDEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner. Note that during the Massachusetts COVID-19 state of emergency, in addition to submitting by mail reports may be emailed to program.director-dwp@mass.gov.

MassDEP REVIEW STATUS (Initial & Date)	Review Comments		☐ WQTS Data Entered
☐ Accepted _____ ☐ Disapproved			

423449 cross off on COC from Client -AC 4/13/2021

eurofins | Eaton Analytical

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # ~~423449~~ 423449
Batch # 515038

www.EurofinsUS.com/Eaton

CHAIN OF CUSTODY RECORD

Shaded area for EEA use only

REPORT TO: ANALYTICAL BALANCE CORP. 422 West Grove St. Middleboro, MA 02346

BILL TO:

SAMPLER (Signature): P. Hennessy

PWS ID #: 4244001

STATE (sample origin): MA

PROJECT NAME: Raytheon Aldoradc

PO#: 57315

COMPLIANCE MONITORING: Yes ✓ / No

POPULATION SERVED: COM

SOURCE WATER:

Preservative Checks

LAB Number	COLLECTION DATE	COLLECTION TIME	AM	PM	SAMPLING SITE	TEST NAME	pH accep-table? √	Residual Chlorine (P/A)	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	4/12	9:36			RR 57315-01	RFAS							
2	4847924												
3													
4	4847925				~~EAB~~ FTB 04132021D								
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													

RELINQUISHED BY:(Signature)	DATE	TIME AM/PM	RECEIVED BY:(Signature)	DATE	TIME AM/PM
RELINQUISHED BY:(Signature)	DATE	TIME AM/PM	RECEIVED BY:(Signature)	DATE	TIME AM/PM
RELINQUISHED BY:(Signature)	DATE	TIME AM/PM	RECEIVED FOR LABORATORY BY: K	DATE 4-13-2021	TIME 0830 AM/PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS

CONDITIONS UPON RECEIPT (check one): ___ Ice: Wet/Blue ___ Ambient X 2.4 °C Upon Receipt ___ N/A

MATRIX CODES:
DW-DRINKING WATER RW-REAGENT WATER GW-GROUND WATER EW-EXPOSURE WATER SW-SURFACE WATER PW-POOL WATER WW-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES
SW = Standard Written: (15 working days) 0% RV* = Rush Verbal: (5 working days)
50% RW* = Rush Written: (5 working days) 75%
* Please call, expedited service not available for all testing

IV* = Immediate Verbal: (3 working days) IW* =Immediate Written: (3 working days) SP* = Weekend, Holiday STAT* = Less than 48 hours
100%
125%
CALL
CALL

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges.
06-LO-F0435 Issue 8.0 Effective Date: 2020-05-15

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Eurofins Eaton Analytical
Run Log

Run ID: **287874** Method: **537.1**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	4880179		OS	DQ	04/19/2021 19:44	041921M537_1a-DQ.mdb
LRB	4880136		RW	DQ	04/19/2021 20:10	041921M537_1a-DQ.mdb
FBL	4880140		RW	DQ	04/19/2021 20:23	041921M537_1a-DQ.mdb
FBH	4880142		RW	DQ	04/19/2021 20:36	041921M537_1a-DQ.mdb
CCM	4880181		OS	DQ	04/19/2021 23:11	041921M537_1a-DQ.mdb
FS	4874924	57315-01	DW	DQ	04/19/2021 23:36	041921M537_1a-DQ.mdb
CCH	4880183		OS	DQ	04/20/2021 00:41	041921M537_1a-DQ.mdb

QC Summary Report

Sample Type	Analyte	Method	MDA95	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCL	Perfluorooctanoic acid (PFOA)	537.1	2.0	—		1.9413	2.0	ng/L	97	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	Perfluorooctanesulfonic acid (PFOS)	537.1	2.0	—		2.0003	2.0	ng/L	100	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	IS-NMeFOSAA-d3	537.1	N/A	—		170798	170798	ng/L	100	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	IS-PFOA-13C2	537.1	N/A	—		384461	384461	ng/L	100	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	IS-PFOS-13C4	537.1	N/A	—		192212	192212	ng/L	100	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	SS-NEtFOSAA-d5	537.1	N/A	—		163.5340	160	ng/L	102	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	SS-PFDA-13C2	537.1	N/A	—		41.2237	40.0	ng/L	103	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	SS-PFHxA-13C2	537.1	N/A	—		41.1065	40.0	ng/L	103	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	Perfluorobutanesulfonic acid (PFBS)	537.1	2.0	—		1.7250	2.0	ng/L	86	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	Perfluoroheptanoic acid (PFHpA)	537.1	2.0	—		1.8576	2.0	ng/L	93	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	Perfluorohexanesulfonic acid (PFHxS)	537.1	2.0	—		1.8111	2.0	ng/L	91	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	Perfluorononanoic acid (PFNA)	537.1	2.0	—		1.9935	2.0	ng/L	100	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	Perfluorodecanoic acid (PFDA)	537.1	2.0	—		1.9455	2.0	ng/L	97	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	Perfluorohexanoic acid (PFHxA)	537.1	2.0	—		1.8853	2.0	ng/L	94	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	Perfluorododecanoic acid (PFDoA)	537.1	2.0	—		1.9138	2.0	ng/L	96	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	Perfluorotridecanoic acid (PFTrDA)	537.1	2.0	—		1.9084	2.0	ng/L	95	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	Perfluoroundecanoic acid (PFUnA)	537.1	2.0	—		1.7954	2.0	ng/L	90	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	N-ethyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		2.1515	2.0	ng/L	108	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	N-methyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		1.8795	2.0	ng/L	94	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	HFPO-DA/GenX	537.1	2.0	—		1.9757	2.0	ng/L	99	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	ADONA	537.1	2.0	—		2.0200	2.0	ng/L	101	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	9Cl-PF3ONS/F-53B Major	537.1	2.0	—		1.9846	2.0	ng/L	99	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	11Cl-PF3OUdS/F-53B Minor	537.1	2.0	—		2.0826	2.0	ng/L	104	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	Perfluorotetradecanoic acid (PFTeDA)	537.1	2.0	—		1.9859	2.0	ng/L	99	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
CCL	SS-HFPO-DA-13C3	537.1	N/A	—		42.5396	40.0	ng/L	106	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 19:44	4880179
LRB	Perfluorooctanoic acid (PFOA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	Perfluorooctanesulfonic acid (PFOS)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	IS-NMeFOSAA-d3	537.1	N/A	—		176140	170798	ng/L	103	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	IS-PFOA-13C2	537.1	N/A	—		407946	384461	ng/L	106	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	IS-PFOS-13C4	537.1	N/A	—		197904	192212	ng/L	103	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	SS-NEtFOSAA-d5	537.1	N/A	—		145.0010	160	ng/L	91	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	SS-PFDA-13C2	537.1	N/A	—		38.2090	40.0	ng/L	96	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	SS-PFHxA-13C2	537.1	N/A	—		36.3885	40.0	ng/L	91	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	Perfluorobutanesulfonic acid (PFBS)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	Perfluoroheptanoic acid (PFHpA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	Perfluorohexanesulfonic acid (PFHxS)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	Perfluorononanoic acid (PFNA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	Perfluorodecanoic acid (PFDA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	Perfluorohexanoic acid (PFHxA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	Perfluorododecanoic acid (PFDoA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136

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 #
LRB	Perfluorotridecanoic acid (PFTrDA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	Perfluoroundecanoic acid (PFUnA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	N-ethyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	N-methyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	HFPO-DA/GenX	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	ADONA	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	9Cl-PF3ONS/F-53B Major	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	11Cl-PF3OUdS/F-53B Minor	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	Perfluorotetradecanoic acid (PFTeDA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
LRB	SS-HFPO-DA-13C3	537.1	N/A	—		37.1025	40.0	ng/L	93	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:10	4880136
FBL	Perfluorooctanoic acid (PFOA)	537.1	2.0	—		1.7796	2.0	ng/L	89	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	Perfluorooctanesulfonic acid (PFOS)	537.1	2.0	—		1.8182	2.0	ng/L	91	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	IS-NMeFOSAA-d3	537.1	N/A	—		178448	170798	ng/L	104	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	IS-PFOA-13C2	537.1	N/A	—		413811	384461	ng/L	108	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	IS-PFOS-13C4	537.1	N/A	—		198010	192212	ng/L	103	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	SS-NEtFOSAA-d5	537.1	N/A	—		149.6210	160	ng/L	94	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	SS-PFDA-13C2	537.1	N/A	—		39.1331	40.0	ng/L	98	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	SS-PFHxA-13C2	537.1	N/A	—		37.6410	40.0	ng/L	94	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	Perfluorobutanesulfonic acid (PFBS)	537.1	2.0	—		1.5498	2.0	ng/L	77	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	Perfluoroheptanoic acid (PFHpA)	537.1	2.0	—		1.7097	2.0	ng/L	85	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	Perfluorohexanesulfonic acid (PFHxS)	537.1	2.0	—		1.6736	2.0	ng/L	84	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	Perfluorononanoic acid (PFNA)	537.1	2.0	—		1.7893	2.0	ng/L	89	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	Perfluorodecanoic acid (PFDA)	537.1	2.0	—		1.8299	2.0	ng/L	91	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	Perfluorohexanoic acid (PFHxA)	537.1	2.0	—		1.6237	2.0	ng/L	81	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	Perfluorododecanoic acid (PFDoA)	537.1	2.0	—		1.6476	2.0	ng/L	82	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	Perfluorotridecanoic acid (PFTrDA)	537.1	2.0	—		1.6833	2.0	ng/L	84	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	Perfluoroundecanoic acid (PFUnA)	537.1	2.0	—		1.6422	2.0	ng/L	82	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	N-ethyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		1.6265	2.0	ng/L	81	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	N-methyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		1.6443	2.0	ng/L	82	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	HFPO-DA/GenX	537.1	2.0	—		1.6047	2.0	ng/L	80	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	ADONA	537.1	2.0	—		1.7263	2.0	ng/L	86	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	9Cl-PF3ONS/F-53B Major	537.1	2.0	—		1.7739	2.0	ng/L	89	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	11Cl-PF3OUdS/F-53B Minor	537.1	2.0	—		1.8325	2.0	ng/L	92	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	Perfluorotetradecanoic acid (PFTeDA)	537.1	2.0	—		1.6402	2.0	ng/L	82	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBL	SS-HFPO-DA-13C3	537.1	N/A	—		38.8313	40.0	ng/L	97	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:23	4880140
FBH	Perfluorooctanoic acid (PFOA)	537.1	2.0	—		190.3460	200	ng/L	95	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	Perfluorooctanesulfonic acid (PFOS)	537.1	2.0	—		194.1160	200	ng/L	97	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	IS-NMeFOSAA-d3	537.1	N/A	—		175866	170798	ng/L	103	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	IS-PFOA-13C2	537.1	N/A	—		400557	384461	ng/L	104	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	IS-PFOS-13C4	537.1	N/A	—		204508	192212	ng/L	106	50 - 150	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	SS-NEtFOSAA-d5	537.1	N/A	—		144.4850	160	ng/L	90	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142

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 #
FBH	SS-PFDA-13C2	537.1	N/A	—		39.8266	40.0	ng/L	100	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	SS-PFHxA-13C2	537.1	N/A	—		39.1985	40.0	ng/L	98	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	Perfluorobutanesulfonic acid (PFBS)	537.1	2.0	—		183.3560	200	ng/L	92	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	Perfluoroheptanoic acid (PFHpA)	537.1	2.0	—		189.8040	200	ng/L	95	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	Perfluorohexanesulfonic acid (PFHxS)	537.1	2.0	—		198.3210	200	ng/L	99	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	Perfluorononanoic acid (PFNA)	537.1	2.0	—		187.9220	200	ng/L	94	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	Perfluorodecanoic acid (PFDA)	537.1	2.0	—		188.8510	200	ng/L	94	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	Perfluorohexanoic acid (PFHxA)	537.1	2.0	—		186.0710	200	ng/L	93	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	Perfluorododecanoic acid (PFDoA)	537.1	2.0	—		181.3490	200	ng/L	91	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	Perfluorotridecanoic acid (PFTrDA)	537.1	2.0	—		180.7340	200	ng/L	90	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	Perfluoroundecanoic acid (PFUnA)	537.1	2.0	—		182.6760	200	ng/L	91	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	N-ethyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		179.2260	200	ng/L	90	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	N-methyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		183.0820	200	ng/L	92	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	HFPO-DA/GenX	537.1	2.0	—		184.2570	200	ng/L	92	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	ADONA	537.1	2.0	—		187.3080	200	ng/L	94	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	9Cl-PF3ONS/F-53B Major	537.1	2.0	—		191.4660	200	ng/L	96	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	11Cl-PF3OUdS/F-53B Minor	537.1	2.0	—		177.0390	200	ng/L	89	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	Perfluorotetradecanoic acid (PFTeDA)	537.1	2.0	—		178.9110	200	ng/L	89	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
FBH	SS-HFPO-DA-13C3	537.1	N/A	—		38.9031	40.0	ng/L	97	70 - 130	—	—	1.0	04/19/2021 06:20	04/19/2021 20:36	4880142
CCM	Perfluorooctanoic acid (PFOA)	537.1	2.0	—		98.3926	100	ng/L	98	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	Perfluorooctanesulfonic acid (PFOS)	537.1	2.0	—		99.6539	100	ng/L	100	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	IS-NMeFOSAA-d3	537.1	N/A	—		171690	171690	ng/L	100	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	IS-PFOA-13C2	537.1	N/A	—		392123	392123	ng/L	100	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	IS-PFOS-13C4	537.1	N/A	—		187041	187041	ng/L	100	50 - 150	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	SS-NEtFOSAA-d5	537.1	N/A	—		152.4510	160	ng/L	95	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	SS-PFDA-13C2	537.1	N/A	—		38.4940	40.0	ng/L	96	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	SS-PFHxA-13C2	537.1	N/A	—		38.6982	40.0	ng/L	97	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	Perfluorobutanesulfonic acid (PFBS)	537.1	2.0	—		101.8090	100	ng/L	102	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	Perfluoroheptanoic acid (PFHpA)	537.1	2.0	—		98.0330	100	ng/L	98	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	Perfluorohexanesulfonic acid (PFHxS)	537.1	2.0	—		104.0280	100	ng/L	104	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	Perfluorononanoic acid (PFNA)	537.1	2.0	—		96.8640	100	ng/L	97	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	Perfluorodecanoic acid (PFDA)	537.1	2.0	—		95.7782	100	ng/L	96	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	Perfluorohexanoic acid (PFHxA)	537.1	2.0	—		96.4322	100	ng/L	96	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	Perfluorododecanoic acid (PFDoA)	537.1	2.0	—		94.6657	100	ng/L	95	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	Perfluorotridecanoic acid (PFTrDA)	537.1	2.0	—		95.3372	100	ng/L	95	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	Perfluoroundecanoic acid (PFUnA)	537.1	2.0	—		95.3378	100	ng/L	95	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	N-ethyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		95.7486	100	ng/L	96	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	N-methyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		96.2045	100	ng/L	96	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	HFPO-DA/GenX	537.1	2.0	—		95.1797	100	ng/L	95	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	ADONA	537.1	2.0	—		98.3786	100	ng/L	98	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	9Cl-PF3ONS/F-53B Major	537.1	2.0	—		102.5320	100	ng/L	103	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181

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	11Cl-PF3OUdS/F-53B Minor	537.1	2.0	—		100.6550	100	ng/L	101	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	Perfluorotetradecanoic acid (PFTeDA)	537.1	2.0	—		94.7014	100	ng/L	95	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
CCM	SS-HFPO-DA-13C3	537.1	N/A	—		38.6510	40.0	ng/L	97	70 - 130	—	—	1.0	04/16/2021 12:14	04/19/2021 23:11	4880181
FS	Perfluorooctanoic acid (PFOA)	537.1	2.0	57315-01		5.3		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	Perfluorooctanesulfonic acid (PFOS)	537.1	2.0	57315-01		8.9		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	IS-NMeFOSAA-d3	537.1	N/A	57315-01		178131	171690	ng/L	104	50 - 150	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	IS-PFOA-13C2	537.1	N/A	57315-01		423785	392123	ng/L	108	50 - 150	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	IS-PFOS-13C4	537.1	N/A	57315-01		198058	187041	ng/L	106	50 - 150	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	SS-NEtFOSAA-d5	537.1	N/A	57315-01		128.5040	160	ng/L	89	70 - 130	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	SS-PFDA-13C2	537.1	N/A	57315-01		34.2453	40.0	ng/L	95	70 - 130	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	SS-PFHxA-13C2	537.1	N/A	57315-01		34.2542	40.0	ng/L	95	70 - 130	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	Perfluorobutanesulfonic acid (PFBS)	537.1	2.0	57315-01		2.0		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	Perfluoroheptanoic acid (PFHpA)	537.1	2.0	57315-01		2.4		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	Perfluorohexanesulfonic acid (PFHxS)	537.1	2.0	57315-01		2.2		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	Perfluorononanoic acid (PFNA)	537.1	2.0	57315-01	J	0.86		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	Perfluorodecanoic acid (PFDA)	537.1	2.0	57315-01	<	2.0		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	Perfluorohexanoic acid (PFHxA)	537.1	2.0	57315-01		3.2		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	Perfluorododecanoic acid (PFDoA)	537.1	2.0	57315-01	<	2.0		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	Perfluorotridecanoic acid (PFTrDA)	537.1	2.0	57315-01	<	2.0		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	Perfluoroundecanoic acid (PFUnA)	537.1	2.0	57315-01	<	2.0		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	N-ethyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	57315-01	<	2.0		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	N-methyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	57315-01	<	2.0		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	HFPO-DA/GenX	537.1	2.0	57315-01	<	2.0		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	ADONA	537.1	2.0	57315-01	<	2.0		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	9Cl-PF3ONS/F-53B Major	537.1	2.0	57315-01	<	2.0		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	11Cl-PF3OUdS/F-53B Minor	537.1	2.0	57315-01	<	2.0		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	Perfluorotetradecanoic acid (PFTeDA)	537.1	2.0	57315-01	<	2.0		ng/L	—	—	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
FS	SS-HFPO-DA-13C3	537.1	N/A	57315-01		34.8187	40.0	ng/L	97	70 - 130	—	—	0.9	04/19/2021 06:20	04/19/2021 23:36	4874924
CCH	Perfluorooctanoic acid (PFOA)	537.1	2.0	—		204.5370	200	ng/L	102	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	Perfluorooctanesulfonic acid (PFOS)	537.1	2.0	—		203.0590	200	ng/L	102	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	IS-NMeFOSAA-d3	537.1	N/A	—		166245	166245	ng/L	100	50 - 150	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	IS-PFOA-13C2	537.1	N/A	—		377170	377170	ng/L	100	50 - 150	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	IS-PFOS-13C4	537.1	N/A	—		189342	189342	ng/L	100	50 - 150	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	SS-NEtFOSAA-d5	537.1	N/A	—		156.3850	160	ng/L	98	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	SS-PFDA-13C2	537.1	N/A	—		39.6551	40.0	ng/L	99	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	SS-PFHxA-13C2	537.1	N/A	—		39.3730	40.0	ng/L	98	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	Perfluorobutanesulfonic acid (PFBS)	537.1	2.0	—		205.8790	200	ng/L	103	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	Perfluoroheptanoic acid (PFHpA)	537.1	2.0	—		205.1070	200	ng/L	103	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	Perfluorohexanesulfonic acid (PFHxS)	537.1	2.0	—		208.7090	200	ng/L	104	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	Perfluorononanoic acid (PFNA)	537.1	2.0	—		198.8630	200	ng/L	99	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	Perfluorodecanoic acid (PFDA)	537.1	2.0	—		198.3260	200	ng/L	99	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183

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 #
CCH	Perfluorohexanoic acid (PFHxA)	537.1	2.0	—		200.8220	200	ng/L	100	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	Perfluorododecanoic acid (PFDoA)	537.1	2.0	—		197.8040	200	ng/L	99	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	Perfluorotridecanoic acid (PFTrDA)	537.1	2.0	—		199.1870	200	ng/L	100	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	Perfluoroundecanoic acid (PFUnA)	537.1	2.0	—		197.8460	200	ng/L	99	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	N-ethyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		200.1150	200	ng/L	100	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	N-methyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		205.7220	200	ng/L	103	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	HFPO-DA/GenX	537.1	2.0	—		200.7100	200	ng/L	100	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	ADONA	537.1	2.0	—		205.2780	200	ng/L	103	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	9Cl-PF3ONS/F-53B Major	537.1	2.0	—		200.7320	200	ng/L	100	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	11Cl-PF3OUdS/F-53B Minor	537.1	2.0	—		205.7430	200	ng/L	103	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	Perfluorotetradecanoic acid (PFTeDA)	537.1	2.0	—		199.3270	200	ng/L	100	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183
CCH	SS-HFPO-DA-13C3	537.1	N/A	—		40.0318	40.0	ng/L	100	70 - 130	—	—	1.0	04/16/2021 12:14	04/20/2021 00:41	4880183

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Run Log

Run ID: **287982** Method: **537.1**

Type	Sample Id	Sample Site	Matrix	Instrument ID	Analysis Date	Calibration File
CCL	4882260		OS	GA	04/21/2021 21:55	042121M537.1b.wiff
LRB	4882263		RW	GA	04/21/2021 22:16	042121M537.1b.wiff
FBL	4882264		RW	GA	04/21/2021 22:27	042121M537.1b.wiff
FTB	4874925	57315-01 FTB	RW	GA	04/22/2021 02:20	042121M537.1b.wiff
CCM	4882261		OS	GA	04/22/2021 04:17	042121M537.1b.wiff

QC Summary Report

Sample Type	Analyte	Method	MDA95	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
CCL	Perfluorooctanoic acid (PFOA)	537.1	2.0	—		2.1425	2.0	ng/L	107	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	Perfluorooctanesulfonic acid (PFOS)	537.1	2.0	—		1.9796	2.0	ng/L	99	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	IS-NMeFOSAA-d3	537.1	N/A	—		950400	950400.09	ng/L	100	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	IS-PFOA-13C2	537.1	N/A	—		1192333	1192332.79	ng/L	100	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	IS-PFOS-13C4	537.1	N/A	—		4943256	4943255.84	ng/L	100	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	SS-NEtFOSAA-d5	537.1	N/A	—		164.0139	160	ng/L	103	70 - 130	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	SS-PFDA-13C2	537.1	N/A	—		41.5573	40.0	ng/L	104	70 - 130	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	SS-PFHxA-13C2	537.1	N/A	—		40.2583	40.0	ng/L	101	70 - 130	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	Perfluorobutanesulfonic acid (PFBS)	537.1	2.0	—		1.9738	2.0	ng/L	99	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	Perfluoroheptanoic acid (PFHpA)	537.1	2.0	—		2.1261	2.0	ng/L	106	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	Perfluorohexanesulfonic acid (PFHxS)	537.1	2.0	—		2.0798	2.0	ng/L	104	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	Perfluorononanoic acid (PFNA)	537.1	2.0	—		2.1468	2.0	ng/L	107	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	Perfluorodecanoic acid (PFDA)	537.1	2.0	—		2.0658	2.0	ng/L	103	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	Perfluorohexanoic acid (PFHxA)	537.1	2.0	—		1.7349	2.0	ng/L	87	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	Perfluorododecanoic acid (PFDoA)	537.1	2.0	—		1.9534	2.0	ng/L	98	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	Perfluorotridecanoic acid (PFTrDA)	537.1	2.0	—		2.0810	2.0	ng/L	104	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	Perfluoroundecanoic acid (PFUnA)	537.1	2.0	—		1.8892	2.0	ng/L	94	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	N-ethyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		2.4080	2.0	ng/L	120	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	N-methyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		2.4382	2.0	ng/L	122	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	HFPO-DA/GenX	537.1	2.0	—		1.9569	2.0	ng/L	98	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	ADONA	537.1	2.0	—		2.0967	2.0	ng/L	105	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	9Cl-PF3ONS/F-53B Major	537.1	2.0	—		2.0218	2.0	ng/L	101	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	11Cl-PF3OUdS/F-53B Minor	537.1	2.0	—		1.9692	2.0	ng/L	98	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	Perfluorotetradecanoic acid (PFTeDA)	537.1	2.0	—		1.9538	2.0	ng/L	98	50 - 150	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
CCL	SS-HFPO-DA-13C3	537.1	N/A	—		40.8614	40.0	ng/L	102	70 - 130	—	—	1.0	04/21/2021 10:23	04/21/2021 21:55	4882260
LRB	Perfluorooctanoic acid (PFOA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	Perfluorooctanesulfonic acid (PFOS)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	IS-NMeFOSAA-d3	537.1	N/A	—		940383	950400.09	ng/L	99	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	IS-PFOA-13C2	537.1	N/A	—		1108938	1192332.79	ng/L	93	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	IS-PFOS-13C4	537.1	N/A	—		4828650	4943255.84	ng/L	98	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	SS-NEtFOSAA-d5	537.1	N/A	—		160.2142	160	ng/L	100	70 - 130	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	SS-PFDA-13C2	537.1	N/A	—		44.7635	40.0	ng/L	112	70 - 130	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	SS-PFHxA-13C2	537.1	N/A	—		41.5557	40.0	ng/L	104	70 - 130	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	Perfluorobutanesulfonic acid (PFBS)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	Perfluoroheptanoic acid (PFHpA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	Perfluorohexanesulfonic acid (PFHxS)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	Perfluorononanoic acid (PFNA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	Perfluorodecanoic acid (PFDA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	Perfluorohexanoic acid (PFHxA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	Perfluorododecanoic acid (PFDoA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263

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 #
LRB	Perfluorotridecanoic acid (PFTrDA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	Perfluoroundecanoic acid (PFUnA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	N-ethyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	N-methyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	HFPO-DA/GenX	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	ADONA	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	9Cl-PF3ONS/F-53B Major	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	11Cl-PF3OUdS/F-53B Minor	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	Perfluorotetradecanoic acid (PFTeDA)	537.1	2.0	—	<	2.0		ng/L	—	—	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
LRB	SS-HFPO-DA-13C3	537.1	N/A	—		38.5248	40.0	ng/L	96	70 - 130	—	—	1.0	04/21/2021 08:06	04/21/2021 22:16	4882263
FBL	Perfluorooctanoic acid (PFOA)	537.1	2.0	—		2.2643	2.0	ng/L	113	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	Perfluorooctanesulfonic acid (PFOS)	537.1	2.0	—		2.0724	2.0	ng/L	104	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	IS-NMeFOSAA-d3	537.1	N/A	—		933483	950400.09	ng/L	98	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	IS-PFOA-13C2	537.1	N/A	—		1101804	1192332.79	ng/L	92	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	IS-PFOS-13C4	537.1	N/A	—		4739620	4943255.84	ng/L	96	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	SS-NEtFOSAA-d5	537.1	N/A	—		161.0098	160	ng/L	101	70 - 130	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	SS-PFDA-13C2	537.1	N/A	—		42.5573	40.0	ng/L	106	70 - 130	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	SS-PFHxA-13C2	537.1	N/A	—		42.1297	40.0	ng/L	105	70 - 130	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	Perfluorobutanesulfonic acid (PFBS)	537.1	2.0	—		1.9897	2.0	ng/L	99	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	Perfluoroheptanoic acid (PFHpA)	537.1	2.0	—		1.9340	2.0	ng/L	97	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	Perfluorohexanesulfonic acid (PFHxS)	537.1	2.0	—		2.0459	2.0	ng/L	102	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	Perfluorononanoic acid (PFNA)	537.1	2.0	—		2.2479	2.0	ng/L	112	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	Perfluorodecanoic acid (PFDA)	537.1	2.0	—		2.1935	2.0	ng/L	110	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	Perfluorohexanoic acid (PFHxA)	537.1	2.0	—		2.0209	2.0	ng/L	101	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	Perfluorododecanoic acid (PFDoA)	537.1	2.0	—		2.0151	2.0	ng/L	101	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	Perfluorotridecanoic acid (PFTrDA)	537.1	2.0	—		2.0242	2.0	ng/L	101	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	Perfluoroundecanoic acid (PFUnA)	537.1	2.0	—		2.0248	2.0	ng/L	101	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	N-ethyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		2.0610	2.0	ng/L	103	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	N-methyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		1.6939	2.0	ng/L	85	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	HFPO-DA/GenX	537.1	2.0	—		2.0621	2.0	ng/L	103	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	ADONA	537.1	2.0	—		2.1757	2.0	ng/L	109	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	9Cl-PF3ONS/F-53B Major	537.1	2.0	—		2.0090	2.0	ng/L	100	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	11Cl-PF3OUdS/F-53B Minor	537.1	2.0	—		1.9536	2.0	ng/L	98	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	Perfluorotetradecanoic acid (PFTeDA)	537.1	2.0	—		2.0065	2.0	ng/L	100	50 - 150	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FBL	SS-HFPO-DA-13C3	537.1	N/A	—		36.6385	40.0	ng/L	92	70 - 130	—	—	1.0	04/21/2021 08:06	04/21/2021 22:27	4882264
FTB	Perfluorooctanoic acid (PFOA)	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	Perfluorooctanesulfonic acid (PFOS)	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	IS-NMeFOSAA-d3	537.1	N/A	57315-01 FTB		875881	950400.09	ng/L	92	50 - 150	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	IS-PFOA-13C2	537.1	N/A	57315-01 FTB		1017585	1192332.79	ng/L	85	50 - 150	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	IS-PFOS-13C4	537.1	N/A	57315-01 FTB		4554299	4943255.84	ng/L	92	50 - 150	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	SS-NEtFOSAA-d5	537.1	N/A	57315-01 FTB		155.8607	160	ng/L	109	70 - 130	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925

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 #
FTB	SS-PFDA-13C2	537.1	N/A	57315-01 FTB		42.3082	40.0	ng/L	119	70 - 130	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	SS-PFHxA-13C2	537.1	N/A	57315-01 FTB		37.9960	40.0	ng/L	107	70 - 130	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	Perfluorobutanesulfonic acid (PFBS)	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	Perfluoroheptanoic acid (PFHpA)	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	Perfluorohexanesulfonic acid (PFHxS)	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	Perfluorononanoic acid (PFNA)	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	Perfluorodecanoic acid (PFDA)	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	Perfluorohexanoic acid (PFHxA)	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	Perfluorododecanoic acid (PFDoA)	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	Perfluorotridecanoic acid (PFTrDA)	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	Perfluoroundecanoic acid (PFUnA)	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	N-ethyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	N-methyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	HFPO-DA/GenX	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	ADONA	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	9Cl-PF3ONS/F-53B Major	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	11Cl-PF3OUdS/F-53B Minor	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	Perfluorotetradecanoic acid (PFTeDA)	537.1	2.0	57315-01 FTB	<	2.0		ng/L	—	—	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
FTB	SS-HFPO-DA-13C3	537.1	N/A	57315-01 FTB		37.1431	40.0	ng/L	104	70 - 130	—	—	0.89	04/21/2021 08:06	04/22/2021 02:20	4874925
CCM	Perfluorooctanoic acid (PFOA)	537.1	2.0	—		99.5045	100	ng/L	100	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	Perfluorooctanesulfonic acid (PFOS)	537.1	2.0	—		98.3353	100	ng/L	98	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	IS-NMeFOSAA-d3	537.1	N/A	—		929182	929181.83	ng/L	100	50 - 150	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	IS-PFOA-13C2	537.1	N/A	—		1178748	1178748.14	ng/L	100	50 - 150	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	IS-PFOS-13C4	537.1	N/A	—		4792757	4792756.55	ng/L	100	50 - 150	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	SS-NEtFOSAA-d5	537.1	N/A	—		162.2850	160	ng/L	101	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	SS-PFDA-13C2	537.1	N/A	—		39.8055	40.0	ng/L	100	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	SS-PFHxA-13C2	537.1	N/A	—		38.9763	40.0	ng/L	97	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	Perfluorobutanesulfonic acid (PFBS)	537.1	2.0	—		98.2160	100	ng/L	98	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	Perfluoroheptanoic acid (PFHpA)	537.1	2.0	—		102.1618	100	ng/L	102	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	Perfluorohexanesulfonic acid (PFHxS)	537.1	2.0	—		99.7738	100	ng/L	100	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	Perfluorononanoic acid (PFNA)	537.1	2.0	—		99.3537	100	ng/L	99	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	Perfluorodecanoic acid (PFDA)	537.1	2.0	—		102.7682	100	ng/L	103	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	Perfluorohexanoic acid (PFHxA)	537.1	2.0	—		100.9518	100	ng/L	101	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	Perfluorododecanoic acid (PFDoA)	537.1	2.0	—		97.5806	100	ng/L	98	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	Perfluorotridecanoic acid (PFTrDA)	537.1	2.0	—		100.5861	100	ng/L	101	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	Perfluoroundecanoic acid (PFUnA)	537.1	2.0	—		100.2691	100	ng/L	100	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	N-ethyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		101.7645	100	ng/L	102	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	N-methyl Perfluorooctanesulfonamidoacetic acid	537.1	2.0	—		103.5527	100	ng/L	104	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	HFPO-DA/GenX	537.1	2.0	—		118.3776	100	ng/L	118	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	ADONA	537.1	2.0	—		99.0847	100	ng/L	99	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	9Cl-PF3ONS/F-53B Major	537.1	2.0	—		98.3445	100	ng/L	98	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261

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	11Cl-PF3OUdS/F-53B Minor	537.1	2.0	—		101.1060	100	ng/L	101	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	Perfluorotetradecanoic acid (PFTeDA)	537.1	2.0	—		97.3425	100	ng/L	97	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261
CCM	SS-HFPO-DA-13C3	537.1	N/A	—		36.9773	40.0	ng/L	92	70 - 130	—	—	1.0	04/21/2021 10:23	04/22/2021 04:17	4882261

Sample Type Key

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