RESPONSE TO 26 AUG 2021
COMPLIANCE COMMUNICATION NO. CC-003495

WASTE WATER TREATMENT PLANT
GROUND WATER DISCHARGE PERMIT GW1810158
CAMP GRAYLING JOINT MANEUVER TRAINING CENTER

29 OCT 2021

PREPARED BY:
ENVIRONMENTAL SECTION
CONSTRUCTION FACILITIES MAINTENANCE OFFICE
MICHIGAN DEPARTMENT OF MILITARY AND VETERANS AFFAIRS

SUBMITTED TO:
EMERGING POLLUTANTS SECTION
WATER RESOURCES DIVISION
MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

RESPONSE TO 26 AUG 2021 COMPLIANCE COMMUNCIATION NO. CC-003495
WASTE WATER TREATMENT PLANT
GROUNDWATER DISCHARGE PERMIT GW1810158
CAMP GRAYLING JOINT MANEUVER TRAINING CENTER

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ATTACHMENTS

LIST OF ACRONYMS

ARNG	Army National Guard
CGJMTC	Camp Grayling Joint Maneuver Training Center
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	Certificate of Coverage
DMVA	Department of Military and Veterans Affairs
EGLE	(Michigan Department of) Environment, Great Lakes, and Energy
GAAF	Grayling Army Airfield
MATES	Mobilization and Training Equipment Site
NREPA	Natural Resources and Environmental Protection Act 1994 PA 451
NPDES	National Pollutant Discharge Elimination System
PFAS	Per- and Polyfluoroalkyl Substances
PFOA	Perfluorooctanoic acid
RI	Remedial Investigation
WRD	Water Resources Division
WWTP	Waste Water Treatment Plant

1. PURPOSE

The purpose of this report is to provide information to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) in response to Compliance Communication CC-003495 dated 26 August 2021 (**Attachment A)** regarding the Camp Grayling Joint Maneuver Training Center (CGJMTC) Waste Water Treatment Plant (WWTP). EGLE requested that CGJMTC:

- Collect samples of WWTP influent and effluent.
- Collect samples of groundwater from monitoring wells MW-08, MW-10, MW-11, and MW-14.
- Analyze all samples for PFAS listed on EGLE's PFAS Minimum Laboratory Analyte List.

2. SITE DESCRIPTION

CGJMTC is a 147,000-acre military training installation located in the northern lower peninsula of Michigan (**Figure 1**). CGJMTC is comprised of: North Camp ranges and training areas; South Camp ranges, training areas and Cantonment; the Mobilization and Training Equipment Site (MATES); the Grayling Army Airfield (GAAF). With the exception of 1,050 acres that are owned by the federal government, CGJMTC is owned by the State of Michigan.

The 1,243-acre Cantonment is characterized by approximately 600 acres of administrative offices, barracks, and various support buildings.

- Cantonment storm water is monitored pursuant to the National Pollutant Discharge Elimination System (NPDES) general permit and Certificate of Coverage (COC) number MIS110546 issued by the EGLE.
- Potable water is sourced by groundwater and accessed via non-community non-transient groundwater source wells located on the Cantonment.
- Sewerage and wash rack water is directed from the Cantonment to the WWTP located north of the Cantonment.

The WWTP operates under Groundwater Discharge Permit GW1810158. The WWTP is comprised of four passive settling lagoons aligned in series (**Figure 2**). Western-most Lagoon #4 was constructed in 2020. Although Lagoon #4 is functional it has not gone on-line primarily due to the current interruptions in the global supply chain for microchips. Water discharged to the 35-acre spray irrigation field in 2021 was pumped from Lagoon #3. When Lagoon #4 is plumbed on-line, water discharged to the spray irrigation field will be pumped from Lagoon #4.

3. FIELD EVENT

On 21 September 2021 Wood Engineering personnel, on behalf of DMVA, collected the six samples requested by EGLE.

- The influent and effluent grab samples were collected using dip methodology photo-documented in the Photograph Log (**Attachment B**). The samples were collected in accordance with the *Wastewater PFAS Sampling Guidance* developed by the Michigan Department of Environmental Quality (MDEQ, now EGLE) dated 17 October 2019 available at https://www.michigan.gov/documents/pfasresponse/Wastewater_PFAS_Sampling_Guidance_636791_7.pdf.

- The groundwater samples were collected using low-flow methodology. The samples were collected in accordance with the *Groundwater PFAS Sampling Guidance* developed by the MDEQ dated October 2018 available at https://www.michigan.gov/documents/pfasresponse/Groundwtaer_PFAS_Sampleing_Guidance_637871_7.pdf.

- The six samples were properly labelled, packaged, and submitted to Vista Laboratory in El Dorado Hills, California, an EGLE-approved laboratory.

4. ANALYTICAL RESULTS

The samples were analyzed by Vista Laboratory for compounds on EGLE's *PFAS Minimum Laboratory Analyte List* available at https://www.michigan.gov/pfasresponse/0.9038.7-365-88059_95747---.00.html. The analytical report (**Attachment C**) was received on October 26, 2021. A summary of analytical results is provided in **Table 1**.

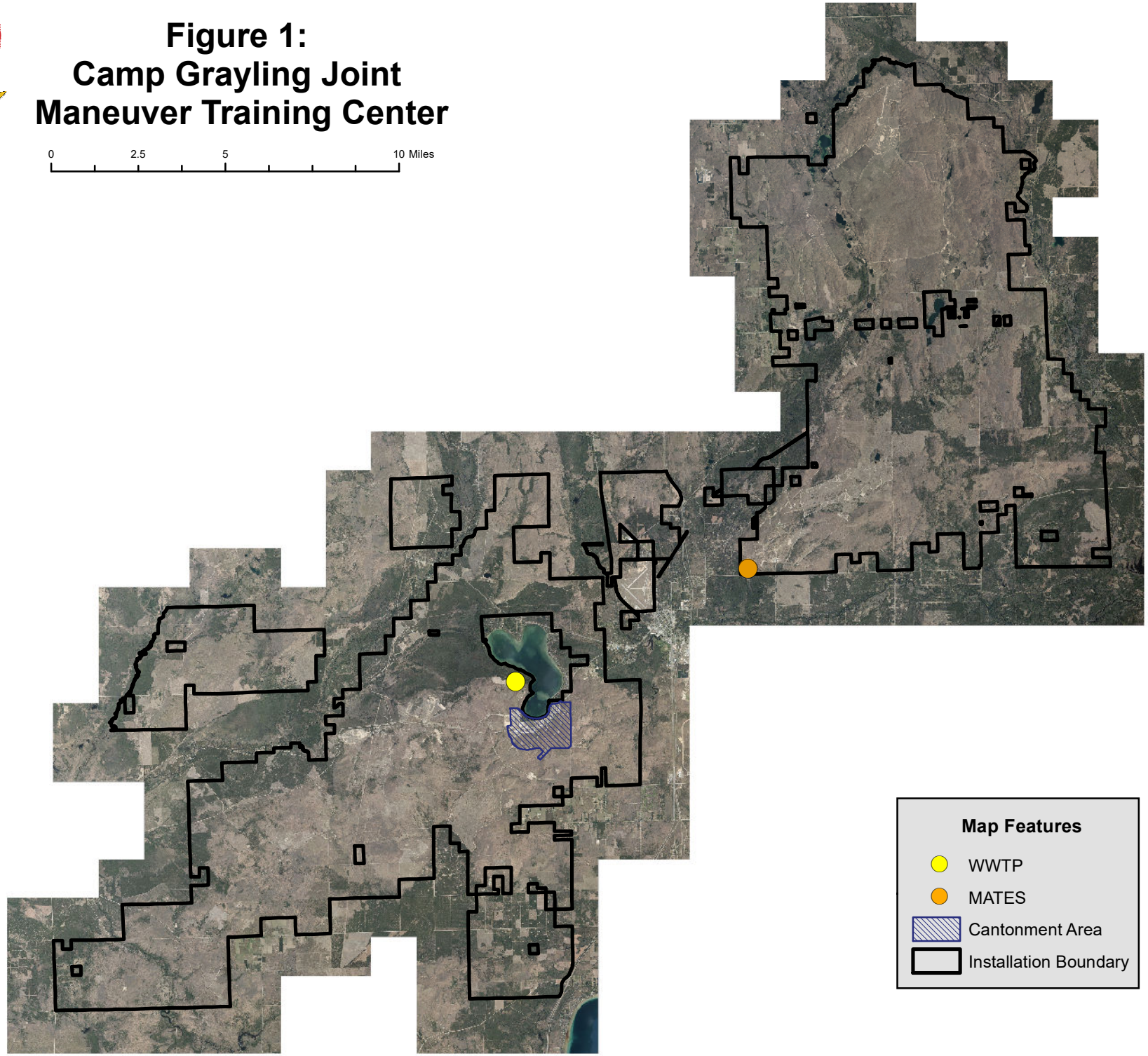
5. STATUS OF CERCLA PFAS INVESTIGATION

A Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Remedial Investigation (RI) will be conducted. During the RI, the Army National Guard (ARNG) will collect detailed information to characterize site conditions, determine the nature and extent of the contamination, and evaluate risks to human health and the environment posed by the site conditions by conducting a baseline ecological and human health risk assessment. A contract for an RI was awarded in September 2021. The RI Work Plan is currently in development and the Agency will initiate engagement of regulatory stakeholders by early 2022. Any remedial action associated with releases of PFAS from the WWTP will be conducted as part of the CERCLA process.

Figure 1:
Camp Grayling Joint Maneuver Training Center

0 2.5 5 10 Miles

N



Map Features

- WWTP
- MATES
- Cantonment Area
- Installation Boundary

989-344-6180
MIARNG-CG-ENV
Oct 2021
Figure1

Bear Swamp

MW-11

MW-10

MW-7

MW-6

MW-13

MW-14

MW-12s/d

MW-1

MW-15

MW-8

MW-9

Groundwater Flow Direction

Spray Irrigation Area

McAvley Rd.

Lagoon #4

Lagoon #3

Lagoon #2

Lagoon #1

MW-5

MW-4

MW-3

LEGEND

IRRIGATION SPRAY RADIUS

ZONE 1 IRRIGATION PIPING

ZONE 2 IRRIGATION PIPING

ACCESS ROAD

MONITORING WELL LOCATION

N

0 150 300

Prepared/Date: ARW 09/25/2019
Checked/Date: RJL 09/25/2019

P:\CG — MATES & WWTP Plans\MACTEC Drawings & Prints\0819\Spray Irrigation Location.dwg Fri, 15 Oct 2021 — 6:11pm adam.weeks

CAMP GRAYLING WWTP GRAYLING, MICHIGAN	wood.	WWTP Footprint FIGURE 2

Table 1.
Analytical Results (ppt)
21 September 2021 Field Event
Waste Water Treatment Plant Influent, Effluent and Montitoring Wells
Camp Grayling Joint Maneuver Training Center

LINE ITEM	ANALYTE ACRONYM	ANALYTE	DETECTED CONCENTRATION (ppt)								
			Lab # 01	Lab #02	Lab # 06	Lab # 05	Lab # 04	Lab # 03	Lab # 07	Lab # 08	Lab # 09
			Influent	Effluent	MW-08	MW-10	MW-11	MW-14	BLIND DUPLICATE	TRIP BLANK	FIELD BLANK
1	PFOA	Perfluoro octanoic acid	**17.9**	**15.5**	**7.28**	ND	ND	ND	ND	ND	ND
2	PFOS	Perfluoro octanesulfonic acid	**5.85**	**6.48**	**16.5**	ND	ND	ND	ND	ND	ND
3	PFNA	Perfluoro nonanoic acid	**2.9**	**2.56**	ND	ND	ND	ND	ND	ND	ND
4	PFHxA	Perfluoro hexanoic acid	**15.5**	**15.7**	**15.1**	ND	ND	ND	**2.93**	ND	ND
5	PFHxS	Perfluoro hexanesulfonic acid	**1.54**	**2.44**	**29.8**	**3.44**	ND	**38.2**	**36.3**	ND	ND
6	PFBS	Perfluoro butanesulfonic acid	**4.5**	**3.07**	**12.6**	ND	ND	**5.69**	**6.3**	ND	ND
7	HFPO-DA	Hexa fluoro propylene oxide dimer acid	ND	ND	ND	ND	ND	ND	ND	ND	ND
8	PFTeDA	Perfluoro tetradecanoic acid	ND	ND	ND	ND	ND	ND	ND	ND	ND
9	PFTriDA	Perfluoro tridecanoic acid	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	PFDoA	Perfluoro dodecanoic acid	ND	ND	ND	ND	ND	ND	ND	ND	ND
11	PFUnA	Perfluoro undecanoic acid	ND	ND	ND	ND	ND	ND	ND	ND	ND
12	PFDA	Perfluoro decanoic acid	**2.41**	**1.48**	ND	ND	ND	ND	ND	ND	ND
13	PFHpA	Perfluoro heptanoic acid	**8.04**	**6.13**	**7.69**	ND	ND	**2.95**	**2.9**	ND	ND
14	PFPeA	Perfluoro pentanoic acid	**17.9**	**15.3**	**17.7**	ND	ND	**1.61**	**1.08**	ND	ND
15	PFBA	Perfluoro butanoic acid	**8.6**	**8.78**	**14.4**	ND	ND	**3.32**	**3.82**	ND	ND
16	PFDS	Perfluoro deanesulfonic acid	ND	ND	ND	ND	ND	ND	ND	ND	ND
17	PFNS	Perfluoro nonanesulfonic acid	ND	ND	ND	ND	ND	ND	ND	ND	ND
18	PFHpS	Perfluoro heptanesulfonic acid	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	PFPeS	Perfluoro pentanesulfonic acid	ND	ND	ND	ND	ND	ND	ND	ND	ND
20	PFOSA	Perfluoro octanesulfonamide	ND	ND	ND	ND	ND	ND	ND	ND	ND
21	FtS 8:2	Fluorotelomer sulphonic acid 8:2	ND	ND	ND	ND	ND	ND	ND	ND	ND
22	FtS 6:2	Fluorotelomer sulphonic acid 6:2	ND	ND	ND	ND	ND	ND	ND	ND	ND
23	FtS 4:2	Fluorotelomer sulphonic acid 4:2	ND	ND	ND	ND	ND	ND	ND	ND	ND
24	N-EtFOSAA	Ethylper fluoro octanedulfonamido acetic acid	**2.84**	ND	ND	ND	ND	ND	ND	ND	ND
25	N-MeFOSAA	Methylper fluoro octanesulfonamido acetic acid	ND	ND	ND	ND	ND	ND	ND	ND	ND
26	11Cl-PF3OUdS	11-chloroeicosa fluoro-3-oxaundecane-1-sulfonic acid	ND	ND	ND	ND	ND	ND	ND	ND	ND
27	9Cl-PF3ONS	9-chlorohexadeca fluoro-3-oxanone-1-sulfonic acid	ND	ND	ND	ND	ND	ND	ND	ND	ND
28	ADONA	4,8-dioxa-3H-perfluoro nonanoic acid	ND	ND	ND	ND	ND	ND	ND	ND	ND

ppt : parts per tillion (equal to nanograms per liter)
ND : Not detected.

RESPONSE TO 26 AUG 2021 COMPLIANCE COMMUNCIATION NO. CC-003495
WASTE WATER TREATMENT PLANT
GROUNDWATER DISCHARGE PERMIT GW1810158
CAMP GRAYLING JOINT MANEUVER TRAINING CENTER

ATTACHMENT A

Compliance Communication CC-003495

STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
LANSING

GRETCHEN WHITMER
GOVERNOR

LIESL EICHLER CLARK
DIRECTOR

August 26, 2021

Compliance Communication No. CC-003495

VIA E-MAIL

Ms. Carla Lange
Camp Grayling
Environmental Office
Building 100A
Grayling, Michigan 49739

Dear Ms. Lange:

SUBJECT: Groundwater Discharge Permit No. GW1810158
Designated Name: MDMVA-Camp Grayling
Part 22 Rules Request
Per- and Polyfluoroalkyl Substances (PFAS)
Compliance Communication

On July 27, 2020, the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division (WRD), received the results of the groundwater monitoring well sampling conducted on April 22 and 30, 2019, at the Michigan Department of Military and Veteran Affairs (MDMVA)-Camp Grayling site (MDMVA Camp Grayling), located at the Environmental Office, Building 100A, Grayling, Michigan. Groundwater monitoring for PFAS was conducted as part of the Site Inspection and reported in the *Final Site Inspection Camp Grayling JMTC, Cantonment and Lake Margrethe, MI*, dated July 2020. The sampling results indicated that environmental contamination is present in the groundwater at several of the MDMVA-Camp Grayling monitoring wells. Michigan's environmental cleanup law, Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); and the Part 22, Groundwater Quality, Administrative Rules promulgated pursuant to Part 31, Water Resources Protection, of the NREPA (Part 22 Rules); identify actions or precautions an entity needs to take with respect to environmental contamination. Owners and operators of contaminated property may have responsibilities associated with that contamination.

Sample results identified groundwater impacts of perfluorooctanoic acid (PFOA) above the applicable criteria contained in the Administrative Rules of Part 201 of the NREPA that became effective on August 3, 2020. The sample results exceeding groundwater protection criteria are summarized below:

Sample Location	Sample Date	Pollutant	Result (ng/L)	Applicable Criteria (ng/L)
AOI 20-MW-01	4/22/19	PFOA	11.7	8
A01 20-MW-15	4/22/19	PFOA	18.4	8

The concentrations of PFOA in groundwater that exceed the applicable Part 201 criteria in compliance Monitoring Wells AOI 20-MW-01 and AOI 20-MW-15 are a violation of Rule 323.2204 and constitute a violation of Groundwater Discharge Permit No. GW1810158.

EGLE is requesting additional sampling per Rule 2227 to further evaluate the cause of PFAS in the groundwater at MDMVA-Camp Grayling.

Please conduct the following sampling and submit a report, including the analytical lab reports and a description of the sampling methods used, to EGLE via MiWaters by October 29, 2021.

1. Sample the WWTP influent and effluent.

    a. Sampling guidance for wastewater is available at: https://www.michigan.gov/documents/pfasresponse/Wastewater_PFAS_Sampling_Guidance_636791_7.pdf

2. Sample downgradient groundwater Monitoring Wells MW-8, MW-10, MW-11, and MW-14 for PFAS.

    a. Sampling guidance for groundwater is available at: https://www.michigan.gov/documents/pfasresponse/Groundwater_PFAS_Sampling_Guidance_637871_7.pdf

Note, all samples shall be analyzed for EGLE's PFAS Minimum Laboratory Analyte List (https://www.michigan.gov/pfasresponse/0,9038,7-365-88059_95747---,00.html).

EGLE encourages the MDMVA to become familiar with Part 201 of the NREPA and the Part 22 Rules, and requests that the MDMVA take the necessary steps to comply with the provisions of the law that may apply. The MDMVA may want to confer with an environmental consultant to assist in complying with the provisions of Part 201 of the NREPA and the Part 22 Rules. The explanations of Part 201 of the NREPA and the Part 22 Rules in this Compliance Communication should not be considered a complete listing of the MDMVA's legal obligations under the law. The Part 201 statute and rules can be found in their entirety at the EGLE Web site: www.michigan.gov/egle, by clicking on 'Land,' 'Remediation,' then 'Site Investigation and Remediation.' The Part 22 Rules can be found at: http://www.deq.state.mi.us/documents/deq-wmd-gwp-part22.pdf.

If the MDMVA has factual information it would like EGLE to consider regarding this Compliance Communication, please provide this with the written response.

Compliance with the terms of Compliance Communication No. CC-003495 does not relieve the MDMVA of any liability, past or present, from the failure to meet the conditions specified in, or failure to comply with, Groundwater Discharge Permit No. GW1810158, Part 201 of the NREPA, and the Part 22 Rules of the NREPA.

EGLE appreciates the MDMVA's cooperation in addressing this matter. Should the MDMVA require further information regarding this Compliance Communication, please contact Mr. Matthew Pfister, Environmental Quality Analyst, Emerging Pollutants Section, at

517-667-1073; PfisterM@michigan.gov; or EGLE, WRD, Emerging Pollutants Section, 525 West Allegan Street, P.O. Box 30473, Lansing, Michigan 48909-7973.

Sincerely,

Stephanie Kammer, Manager
Emerging Pollutants Section
WRD, EGLE
517-897-1597

sk/sea

cc: Mr. Jonathon, Edgerly, MDMVA (electronic)
Ms. Amy Handley, MDMVA (electronic)
Ms. Patricia Lyman, MDMVA (electronic)
Mr. Jon Russell, EGLE
Mr. Brian Jankowski, EGLE
Ms. Sydney Ruhala, EGLE
Mr. Mathew Pfister, EGLE
Ms. Kristine Rendon, EGLE
Ms. Marissa Buehler, EGLE
Mr. Dave Walters, EGLE
Mr. Randy Rothe, EGLE
Mr. Christiaan Bon, EGLE

RESPONSE TO 26 AUG 2021 COMPLIANCE COMMUNCIATION NO. CC-003495
WASTE WATER TREATMENT PLANT
GROUNDWATER DISCHARGE PERMIT GW1810158
CAMP GRAYLING JOINT MANEUVER TRAINING CENTER

ATTACHMENT B

Photograph Log

PHOTOGRAPH LOG – CAMP GRAYLING WWTP
RESPONSE TO EGLE AUGUST 26, 2021 COMPLIANCE COMMUNICATIONS CC-003495

 PHOTO 1. SUBJECT: Grab sample collection method at WWTP influent, Lagoon #1. DATE: 21 September 2021. PHOTOGRAPHER: C.J.Lange.	 PHOTO 2. SUBJECT: Grab sample collection method at WWTP effluent, Lagoon 3. DATE: 21 September 2021. PHOTOGRAPHER: C.J.Lange.

RESPONSE TO 26 AUG 2021 COMPLIANCE COMMUNCIATION NO. CC-003495
WASTE WATER TREATMENT PLANT
GROUNDWATER DISCHARGE PERMIT GW1810158
CAMP GRAYLING JOINT MANEUVER TRAINING CENTER

ATTACHMENT C

Vista Laboratory Analytical Report

October 26, 2021

Vista Work Order No. 2109229

Ms. Ashlee Charters
Wood Environment & Infrastructure
41 Hughest Drive
Traverse City, MI 49696

Dear Ms. Charters,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on September 22, 2021 under your Project Name 'CG WWTP'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at jfox@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Jamie Fox
Laboratory Director

Vista Work Order No. 2109229
Case Narrative

Sample Condition on Receipt:

Nine groundwater samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The samples were received in good condition and within the recommended temperature requirements.

Analytical Notes:

PFAS Isotope Dilution/LC-MSMS Method Compliant with Table B-15 of DoD QSM 5.3 (Aqueous)

Samples "Influent-WWTP 21921" and "Effluent-WWTP 21921" contained particulate and were centrifuged prior to extraction.

The samples were extracted and analyzed for a selected list of PFAS using Isotope Dilution and LC-MS/MS compliant with Table B-15 of DoD QSM 5.3. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 of the LOQ concentrations. The recovery of 9Cl-PF3OUdS was greater than 135% in the LCS. This analyte was not detected in the samples. The RPDs of 9Cl-PF3OUdS, 8:2 FTS and PFNS were greater than 30%. The recoveries and RPDs of all other analytes were within the acceptance criteria.

The labeled standard recoveries outside the acceptance criteria are flagged with an "H" qualifier. The responses of the internal standards with low recoveries were greater than 10:1 signal-to-noise, which is the limit generally considered acceptable for accurate quantitation by isotope dilution analysis.

TABLE OF CONTENTS

Sample Inventory Report

Vista
an Enthalpy Analytical Laboratory

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2109229-01	Influent-WWTP 21921	21-Sep-21 10:30	22-Sep-21 12:06	Polypropylene, 250mL
				Polypropylene, 250mL
2109229-02	Effluent-WWTP 21921	21-Sep-21 10:40	22-Sep-21 12:06	Polypropylene, 250mL
				Polypropylene, 250mL
2109229-03	MW-14 21921	21-Sep-21 12:14	22-Sep-21 12:06	Polypropylene, 250mL
				Polypropylene, 250mL
2109229-04	MW-11 21921	21-Sep-21 13:04	22-Sep-21 12:06	Polypropylene, 250mL
				Polypropylene, 250mL
2109229-05	MW-10 21921	21-Sep-21 13:41	22-Sep-21 12:06	Polypropylene, 250mL
				Polypropylene, 250mL
2109229-06	MW-8 21921	21-Sep-21 14:21	22-Sep-21 12:06	Polypropylene, 250mL
				Polypropylene, 250mL
2109229-07	BD-02 WWTP 21921	21-Sep-21 00:00	22-Sep-21 12:06	Polypropylene, 250mL
				Polypropylene, 250mL
2109229-08	TB-02 WWTP 21921	21-Sep-21 10:20	22-Sep-21 12:06	Polypropylene, 250mL
				Polypropylene, 250mL
2109229-09	FB-02 WWTP 21921	21-Sep-21 12:00	22-Sep-21 12:06	Polypropylene, 250mL

ANALYTICAL RESULTS

Sample ID: Method Blank — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Aqueous	Lab Sample:	B110177-BLK1	Column:	BEH C18
Project:	CG WWTP						

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFPeA	2706-90-3	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFBS	375-73-5	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
4:2 FTS	757124-72-4	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFHxA	307-24-4	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFPeS	2706-91-4	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
HFPO-DA	13252-13-6	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFHpA	375-85-9	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
ADONA	919005-14-4	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFHxS	355-46-4	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
6:2 FTS	27619-97-2	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFOA	335-67-1	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFHpS	375-92-8	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	21-Oct-21 23:45	1
PFNA	375-95-1	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFOSA	754-91-6	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFOS	1763-23-1	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	21-Oct-21 23:45	1
9Cl-PF3ONS	756426-58-1	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFDA	335-76-2	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
8:2 FTS	39108-34-4	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFNS	68259-12-1	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
MeFOSAA	2355-31-9	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
EtFOSAA	2991-50-6	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFUnA	2058-94-8	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFDS	335-77-3	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	21-Oct-21 23:45	1
11Cl-PF3OUdS	763051-92-9	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFDoA	307-55-1	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFTrDA	72629-94-8	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
PFTeDA	376-06-7	ND	1.00	2.00	4.00		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	58.9	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C3-PFPeA	IS	62.0	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C3-PFBS	IS	78.5	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C3-HFPO-DA	IS	59.7	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C2-4:2 FTS	IS	87.3	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C2-PFHxA	IS	59.9	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C4-PFHpA	IS	66.2	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C3-PFHxS	IS	90.6	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C2-6:2 FTS	IS	62.1	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1

Vista
an Eurofins Analytical Laboratory

Sample ID: Method Blank — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Aqueous	Lab Sample:	B110177-BLK1	Column:	BEH C18
Project:	CG WWTP						

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C5-PFNA	IS	61.3	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C8-PFOSA	IS	21.9	50 - 150	H	B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C2-PFOA	IS	62.9	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C8-PFOS	IS	60.7	50 - 150		B110177	03-Oct-21	0.250 L	21-Oct-21 23:45	1
13C2-PFDA	IS	73.5	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C2-8:2 FTS	IS	95.2	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
d3-MeFOSAA	IS	64.7	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C2-PFUnA	IS	55.2	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
d5-EtFOSAA	IS	59.3	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C2-PFDoA	IS	61.1	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1
13C2-PFTeDA	IS	63.8	50 - 150		B110177	03-Oct-21	0.250 L	20-Oct-21 00:19	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL.

When reported, PFHxS, PFDA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes

Sample ID: LCSD **PFAS Isotope Dilution Table B-15**

Name:	Wood Environment & Infrastructure	Lab Sample:	B110177-BS1/B110177-BSD1
Project:	CG WWTP	QC Batch:	B110177
Matrix:	Aqueous	Samp Size:	0.250/0.250 L
		Date Extracted:	03-Oct-21
		Column:	BEH C18

Analyte	CAS Number	LCS (ng/L)	LCS Spike	LCS % Rec	LCS Quals	LCSD (ng/L)	LCSD Spike	LCSD % Rec	RPD	LCSD Quals	%Rec Limits	RPD Limits	LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
PFBA	375-22-4	40.8	40.0	102		39.2	40.0	97.9	3.97		73-129	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFPeA	2706-90-3	45.2	40.0	113		43.1	40.0	108	4.63		72-129	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFBS	375-73-5	44.1	40.0	110		39.8	40.0	99.4	10.3		72-130	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
4:2 FTS	757124-72-4	46.1	40.0	115		41.3	40.0	103	11.2		63-143	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFHxA	307-24-4	43.2	40.0	108		39.6	40.0	99.1	8.52		72-129	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFPeS	2706-91-4	46.2	40.0	116		45.7	40.0	114	1.08		71-127	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
HFPO-DA	13252-13-6	50.4	40.0	126		43.8	40.0	110	14.0		65-135	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFHpA	375-85-9	41.7	40.0	104		43.6	40.0	109	4.32		72-130	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
ADONA	919005-14-4	39.3	40.0	98.3		38.8	40.0	97.0	1.41		65-135	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFHxS	355-46-4	42.8	40.0	107		37.3	40.0	93.1	13.9		68-131	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
6:2 FTS	27619-97-2	45.5	40.0	114		42.0	40.0	105	8.01		64-140	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFOA	335-67-1	36.1	40.0	90.2		39.4	40.0	98.5	8.82		71-133	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFHpS	375-92-8	36.7	40.0	91.8		39.4	40.0	98.5	7.06		69-134	30	21-Oct-21 23:55	1	22-Oct-21 00:06	1
PFNA	375-95-1	44.4	40.0	111		42.4	40.0	106	4.55		69-130	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFOSA	754-91-6	37.9	40.0	94.7		42.8	40.0	107	12.3		67-137	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFOS	1763-23-1	38.2	40.0	95.4		44.6	40.0	112	15.6		65-140	30	21-Oct-21 23:55	1	22-Oct-21 00:06	1
9Cl-PF3ONS	756426-58-1	60.6	40.0	151	H	41.4	40.0	103	37.6	H	65-135	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFDA	335-76-2	35.9	40.0	89.9		37.9	40.0	94.7	5.25		71-129	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
8:2 FTS	39108-34-4	26.9	40.0	67.1		37.7	40.0	94.3	33.6	H	67-138	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFNS	68259-12-1	49.4	40.0	123		27.6	40.0	68.9	56.7	H	69-127	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
MeFOSAA	2355-31-9	45.8	40.0	114		41.2	40.0	103	10.4		65-136	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
EtFOSAA	2991-50-6	43.2	40.0	108		48.0	40.0	120	10.7		61-135	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFUnA	2058-94-8	39.9	40.0	99.7		46.7	40.0	117	15.7		69-133	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFDS	335-77-3	38.2	40.0	95.6		38.3	40.0	95.9	0.252		53-142	30	21-Oct-21 23:55	1	22-Oct-21 00:06	1
11Cl-PF3OUdS	763051-92-9	39.6	40.0	99.0		43.0	40.0	107	8.23		65-135	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFDoA	307-55-1	40.1	40.0	100		45.5	40.0	114	12.5		72-134	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFTrDA	72629-94-8	37.9	40.0	94.8		44.9	40.0	112	16.8		65-144	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1
PFTeDA	376-06-7	42.7	40.0	107		44.7	40.0	112	4.62		71-132	30	20-Oct-21 00:30	1	20-Oct-21 00:40	1

Labeled Standards	Type	LCS % Rec	LCS Quals	LCSD % Rec	LCSD Quals	Limits	LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
13C3-PFBA	IS	63.4		59.6		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C3-PFPeA	IS	62.2		59.9		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C3-PFBS	IS	88.7		85.4		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1

Vista
an Enthalpy Analytical Laboratory

Sample ID: LCSD **PFAS Isotope Dilution Table B-15**

Name:	Wood Environment & Infrastructure	Lab Sample:	B110177-BS1/B110177-BSD1		
Project:	CG WWTP	QC Batch:	B110177	Date Extracted:	03-Oct-21
Matrix:	Aqueous	Samp Size:	0.250/0.250 L	Column:	BEH C18

Labeled Standards	Type	LCS % Rec	LCS Quals	LCSD % Rec	LCSD Quals	Limits	LCS Analyzed	LCS Dil	LCSD Analyzed	LCSD Dil
13C3-HFPO-DA	IS	55.2		53.2		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C2-4 2 FTS	IS	80.2		80.8		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C2-PFHxA	IS	58.1		56.7		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C4-PFHpA	IS	70.5		63.6		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C3-PFHxS	IS	90.1		85.0		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C2-6 2 FTS	IS	76.9		86.4		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C5-PFNA	IS	77.5		71.9		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C8-PFOSA	IS	36.7	H	21.5	H	50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C2-PFOA	IS	81.4		68.1		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C8-PFOS	IS	70.6		64.3		50 - 150	21-Oct-21 23:55	1	22-Oct-21 00:06	1
13C2-PFDA	IS	77.1		72.6		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C2-8.2 FTS	IS	115		82.2		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
d3-MeFOSAA	IS	71.4		69.6		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C2-PFUnA	IS	67.0		56.4		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
d5-EtFOSAA	IS	64.6		56.4		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C2-PFDoA	IS	60.1		50.1		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1
13C2-PFTeDA	IS	73.2		64.2		50 - 150	20-Oct-21 00:30	1	20-Oct-21 00:40	1

Sample ID: Influent-WWTP 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-01	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 10:30	Date Received:	22-Sep-21 12:06		

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	8.60	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFPeA	2706-90-3	17.9	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFBS	375-73-5	4.50	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
4:2 FTS	757124-72-4	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFHxA	307-24-4	15.5	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFPeS	2706-91-4	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
HFPO-DA	13252-13-6	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFHpA	375-85-9	8.04	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
ADONA	919005-14-4	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFHxS	355-46-4	1.54	1.11	2.22	4.44	J	B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
6:2 FTS	27619-97-2	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFOA	335-67-1	17.9	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFHpS	375-92-8	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	22-Oct-21 00:16	1
PFNA	375-95-1	2.90	1.11	2.22	4.44	J	B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFOSA	754-91-6	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFOS	1763-23-1	5.85	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	22-Oct-21 00:16	1
9Cl-PF3ONS	756426-58-1	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFDA	335-76-2	2.41	1.11	2.22	4.44	J, Q	B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
8:2 FTS	39108-34-4	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFNS	68259-12-1	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
MeFOSAA	2355-31-9	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
EtFOSAA	2991-50-6	2.84	1.11	2.22	4.44	J, Q	B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFUnA	2058-94-8	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFDS	335-77-3	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	22-Oct-21 00:16	1
11Cl-PF3OUdS	763051-92-9	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFDoA	307-55-1	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFTrDA	72629-94-8	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
PFTeDA	376-06-7	ND	1.11	2.22	4.44		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	67.7	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C3-PFPeA	IS	67.7	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C3-PFBS	IS	81.0	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C3-HFPO-DA	IS	66.0	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C2-4:2 FTS	IS	88.5	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C2-PFHxA	IS	72.6	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C4-PFHpA	IS	67.9	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C3-PFHxS	IS	94.7	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1

Sample ID: Influent-WWTP 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-01	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 10:30	Date Received:	22-Sep-21 12:06		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-6:2 FTS	IS	76.8	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C5-PFNA	IS	62.4	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C8-PFOSA	IS	23.5	50 - 150	H	B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C2-PFOA	IS	64.0	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C8-PFOS	IS	65.2	50 - 150		B110177	03-Oct-21	0.225 L	22-Oct-21 00:16	1
13C2-PFDA	IS	63.7	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C2-8:2 FTS	IS	74.7	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
d3-MeFOSAA	IS	62.6	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C2-PFUnA	IS	47.9	50 - 150	H	B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
d5-EtFOSAA	IS	53.2	50 - 150		B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C2-PFDoA	IS	35.6	50 - 150	H	B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1
13C2-PFTeDA	IS	37.9	50 - 150	H	B110177	03-Oct-21	0.225 L	20-Oct-21 00:51	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes

Sample ID: Effluent-WWTP 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-02	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 10:40	Date Received:	22-Sep-21 12:06		

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	8.78	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFPeA	2706-90-3	15.3	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFBS	375-73-5	3.07	1.00	2.01	4.01	J	B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
4:2 FTS	757124-72-4	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFHxA	307-24-4	15.7	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFPeS	2706-91-4	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
HFPO-DA	13252-13-6	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFHpA	375-85-9	6.13	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
ADONA	919005-14-4	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFHxS	355-46-4	2.44	1.00	2.01	4.01	J	B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
6:2 FTS	27619-97-2	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFOA	335-67-1	15.5	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFHpS	375-92-8	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	22-Oct-21 00:27	1
PFNA	375-95-1	2.56	1.00	2.01	4.01	J	B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFOSA	754-91-6	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFOS	1763-23-1	6.48	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	22-Oct-21 00:27	1
9Cl-PF3ONS	756426-58-1	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFDA	335-76-2	1.48	1.00	2.01	4.01	J, Q	B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
8:2 FTS	39108-34-4	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFNS	68259-12-1	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
MeFOSAA	2355-31-9	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
EtFOSAA	2991-50-6	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFUnA	2058-94-8	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFDS	335-77-3	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	22-Oct-21 00:27	1
11Cl-PF3OUdS	763051-92-9	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFDoA	307-55-1	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFTrDA	72629-94-8	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
PFTeDA	376-06-7	ND	1.00	2.01	4.01		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	73.5	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C3-PFPeA	IS	76.9	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C3-PFBS	IS	89.6	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C3-HFPO-DA	IS	66.3	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C2-4:2 FTS	IS	91.1	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C2-PFHxA	IS	75.8	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C4-PFHpA	IS	87.2	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C3-PFHxS	IS	79.3	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1

Sample ID: Effluent-WWTP 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-02	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 10:40	Date Received:	22-Sep-21 12:06		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-6:2 FTS	IS	78.6	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C5-PFNA	IS	71.8	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C8-PFOSA	IS	25.8	50 - 150	H	B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C2-PFOA	IS	72.2	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C8-PFOS	IS	68.5	50 - 150		B110177	03-Oct-21	0.249 L	22-Oct-21 00:27	1
13C2-PFDA	IS	58.7	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C2-8:2 FTS	IS	85.5	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
d3-MeFOSAA	IS	50.8	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C2-PFUnA	IS	42.4	50 - 150	H	B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
d5-EtFOSAA	IS	53.2	50 - 150		B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C2-PFDoA	IS	31.7	50 - 150	H	B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1
13C2-PFTeDA	IS	33.2	50 - 150	H	B110177	03-Oct-21	0.249 L	20-Oct-21 01:01	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL.
When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes

Vista
an Enthalpy Analytical Laboratory

Sample ID: MW-14 21921 **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-03	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 12:14	Date Received:	22-Sep-21 12:06		

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	3.32	1.05	2.09	4.19	J	B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFPeA	2706-90-3	1.61	1.05	2.09	4.19	J	B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFBS	375-73-5	5.69	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
4:2 FTS	757124-72-4	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFHxA	307-24-4	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFPeS	2706-91-4	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
HFPO-DA	13252-13-6	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFHpA	375-85-9	2.95	1.05	2.09	4.19	J	B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
ADONA	919005-14-4	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFHxS	355-46-4	38.2	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
6:2 FTS	27619-97-2	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFOA	335-67-1	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFHpS	375-92-8	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	22-Oct-21 00:37	1
PFNA	375-95-1	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFOSA	754-91-6	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFOS	1763-23-1	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	22-Oct-21 00:37	1
9Cl-PF3ONS	756426-58-1	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFDA	335-76-2	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
8:2 FTS	39108-34-4	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFNS	68259-12-1	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
MeFOSAA	2355-31-9	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
EtFOSAA	2991-50-6	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFUnA	2058-94-8	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFDS	335-77-3	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	22-Oct-21 00:37	1
11Cl-PF3OUdS	763051-92-9	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFDoA	307-55-1	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFTrDA	72629-94-8	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
PFTeDA	376-06-7	ND	1.05	2.09	4.19		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	65.3	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C3-PFPeA	IS	70.1	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C3-PFBS	IS	76.4	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C3-HFPO-DA	IS	63.4	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C2-4:2 FTS	IS	72.4	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C2-PFHxA	IS	65.8	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C4-PFHpA	IS	64.2	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C3-PFHxS	IS	89.0	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1

Vista
an Eurofins Analytical Laboratory

Sample ID: MW-14 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-03	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 12:14	Date Received:	22-Sep-21 12:06		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-6:2 FTS	IS	64.2	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C5-PFNA	IS	70.1	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C8-PFOSA	IS	32.7	50 - 150	H	B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C2-PFOA	IS	69.2	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C8-PFOS	IS	61.5	50 - 150		B110177	03-Oct-21	0.239 L	22-Oct-21 00:37	1
13C2-PFDA	IS	68.6	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C2-8:2 FTS	IS	82.3	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
d3-MeFOSAA	IS	65.1	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C2-PFUnA	IS	66.6	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
d5-EtFOSAA	IS	55.7	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C2-PFDoA	IS	64.8	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1
13C2-PFTeDA	IS	66.3	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 01:12	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL.
When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes

Sample ID: MW-11 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-04	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 13:04	Date Received:	22-Sep-21 12:06		

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFPeA	2706-90-3	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFBS	375-73-5	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
4:2 FTS	757124-72-4	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFHxA	307-24-4	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFPeS	2706-91-4	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
HFPO-DA	13252-13-6	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFHpA	375-85-9	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
ADONA	919005-14-4	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFHxS	355-46-4	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
6:2 FTS	27619-97-2	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFOA	335-67-1	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFHpS	375-92-8	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	22-Oct-21 00:48	1
PFNA	375-95-1	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFOSA	754-91-6	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFOS	1763-23-1	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	22-Oct-21 00:48	1
9Cl-PF3ONS	756426-58-1	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFDA	335-76-2	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
8:2 FTS	39108-34-4	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFNS	68259-12-1	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
MeFOSAA	2355-31-9	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
EtFOSAA	2991-50-6	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFUnA	2058-94-8	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFDS	335-77-3	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	22-Oct-21 00:48	1
11Cl-PF3OUdS	763051-92-9	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFDoA	307-55-1	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFTrDA	72629-94-8	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
PFTeDA	376-06-7	ND	1.02	2.05	4.09		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	68.3	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C3-PFPeA	IS	70.7	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C3-PFBS	IS	93.1	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C3-HFPO-DA	IS	76.7	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C2-4:2 FTS	IS	91.7	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C2-PFHxA	IS	70.3	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C4-PFHpA	IS	70.5	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C3-PFHxS	IS	90.9	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1

Sample ID: MW-11 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-04	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 13:04	Date Received:	22-Sep-21 12:06		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-6:2 FTS	IS	79.7	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C5-PFNA	IS	76.2	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C8-PFOSA	IS	42.6	50 - 150	H	B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C2-PFOA	IS	75.0	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C8-PFOS	IS	68.9	50 - 150		B110177	03-Oct-21	0.244 L	22-Oct-21 00:48	1
13C2-PFDA	IS	74.7	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C2-8:2 FTS	IS	80.1	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
d3-MeFOSAA	IS	70.6	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C2-PFUnA	IS	64.4	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
d5-EtFOSAA	IS	58.9	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C2-PFDoA	IS	57.2	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1
13C2-PFTeDA	IS	66.1	50 - 150		B110177	03-Oct-21	0.244 L	20-Oct-21 01:22	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL.
When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: MW-10 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-05	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 13:41	Date Received:	22-Sep-21 12:06		

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFPeA	2706-90-3	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFBS	375-73-5	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
4:2 FTS	757124-72-4	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFHxA	307-24-4	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFPeS	2706-91-4	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
HFPO-DA	13252-13-6	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFHpA	375-85-9	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
ADONA	919005-14-4	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFHxS	355-46-4	3.44	1.07	2.13	4.26	J, Q	B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
6:2 FTS	27619-97-2	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFOA	335-67-1	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFHpS	375-92-8	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	22-Oct-21 00:58	1
PFNA	375-95-1	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFOSA	754-91-6	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFOS	1763-23-1	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	22-Oct-21 00:58	1
9Cl-PF3ONS	756426-58-1	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFDA	335-76-2	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
8:2 FTS	39108-34-4	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFNS	68259-12-1	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
MeFOSAA	2355-31-9	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
EtFOSAA	2991-50-6	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFUnA	2058-94-8	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFDS	335-77-3	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	22-Oct-21 00:58	1
11Cl-PF3OUdS	763051-92-9	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFDoA	307-55-1	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFTrDA	72629-94-8	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
PFTeDA	376-06-7	ND	1.07	2.13	4.26		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	78.6	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C3-PFPeA	IS	81.4	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C3-PFBS	IS	97.1	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C3-HFPO-DA	IS	80.3	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C2-4:2 FTS	IS	105	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C2-PFHxA	IS	82.1	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C4-PFHpA	IS	77.9	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C3-PFHxS	IS	113	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1

Vista
an Enthalpy Analytical Laboratory

Sample ID: MW-10 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-05	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 13:41	Date Received:	22-Sep-21 12:06		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-6:2 FTS	IS	93.8	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C5-PFNA	IS	80.8	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C8-PFOSA	IS	36.3	50 - 150	H	B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C2-PFOA	IS	79.4	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C8-PFOS	IS	76.2	50 - 150		B110177	03-Oct-21	0.235 L	22-Oct-21 00:58	1
13C2-PFDA	IS	79.2	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C2-8:2 FTS	IS	103	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
d3-MeFOSAA	IS	79.7	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C2-PFUnA	IS	68.7	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
d5-EtFOSAA	IS	70.0	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C2-PFDoA	IS	70.4	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1
13C2-PFTeDA	IS	74.9	50 - 150		B110177	03-Oct-21	0.235 L	20-Oct-21 01:33	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL.
When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Vista
an Enthalpy Analytical Laboratory

Sample ID: MW-8 21921 **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-06	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 14:21	Date Received:	22-Sep-21 12:06		

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	14.4	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFPeA	2706-90-3	17.7	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFBS	375-73-5	12.6	1.04	2.07	4.15	Q	B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
4:2 FTS	757124-72-4	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFHxA	307-24-4	15.1	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFPeS	2706-91-4	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
HFPO-DA	13252-13-6	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFHpA	375-85-9	7.69	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
ADONA	919005-14-4	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFHxS	355-46-4	29.8	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
6:2 FTS	27619-97-2	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFOA	335-67-1	7.28	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFHpS	375-92-8	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	22-Oct-21 01:40	1
PFNA	375-95-1	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFOSA	754-91-6	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFOS	1763-23-1	16.5	1.04	2.07	4.15	Q	B110177	03-Oct-21	0.241 L	22-Oct-21 01:40	1
9Cl-PF3ONS	756426-58-1	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFDA	335-76-2	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
8:2 FTS	39108-34-4	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFNS	68259-12-1	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
MeFOSAA	2355-31-9	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
EtFOSAA	2991-50-6	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFUnA	2058-94-8	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFDS	335-77-3	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	22-Oct-21 01:40	1
11Cl-PF3OUdS	763051-92-9	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFDoA	307-55-1	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFTrDA	72629-94-8	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
PFTeDA	376-06-7	ND	1.04	2.07	4.15		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	59.9	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C3-PFPeA	IS	60.6	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C3-PFBS	IS	64.7	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C3-HFPO-DA	IS	57.6	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C2-4:2 FTS	IS	70.1	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C2-PFHxA	IS	58.3	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C4-PFHpA	IS	56.9	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C3-PFHxS	IS	82.9	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1

Sample ID: MW-8 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-06	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 14:21	Date Received:	22-Sep-21 12:06		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-6:2 FTS	IS	64.5	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C5-PFNA	IS	57.6	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C8-PFOSA	IS	31.4	50 - 150	H	B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C2-PFOA	IS	61.2	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C8-PFOS	IS	56.2	50 - 150		B110177	03-Oct-21	0.241 L	22-Oct-21 01:40	1
13C2-PFDA	IS	51.7	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C2-8:2 FTS	IS	70.0	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
d3-MeFOSAA	IS	61.7	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C2-PFUnA	IS	52.7	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
d5-EtFOSAA	IS	48.2	50 - 150	H	B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C2-PFDoA	IS	50.9	50 - 150		B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1
13C2-PFTeDA	IS	49.3	50 - 150	H	B110177	03-Oct-21	0.241 L	20-Oct-21 02:15	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL
When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: BD-02 WWTP 21921 **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-07	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 00:00	Date Received:	22-Sep-21 12:06		

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	3.82	1.04	2.09	4.18	J	B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFPeA	2706-90-3	1.08	1.04	2.09	4.18	J	B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFBS	375-73-5	6.30	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
4:2 FTS	757124-72-4	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFHxA	307-24-4	2.93	1.04	2.09	4.18	J	B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFPeS	2706-91-4	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
HFPO-DA	13252-13-6	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFHpA	375-85-9	2.90	1.04	2.09	4.18	J	B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
ADONA	919005-14-4	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFHxS	355-46-4	36.3	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
6:2 FTS	27619-97-2	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFOA	335-67-1	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFHpS	375-92-8	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	22-Oct-21 01:51	1
PFNA	375-95-1	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFOSA	754-91-6	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFOS	1763-23-1	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	22-Oct-21 01:51	1
9Cl-PF3ONS	756426-58-1	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFDA	335-76-2	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
8:2 FTS	39108-34-4	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFNS	68259-12-1	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
MeFOSAA	2355-31-9	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
EtFOSAA	2991-50-6	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFUnA	2058-94-8	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFDS	335-77-3	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	22-Oct-21 01:51	1
11Cl-PF3OUdS	763051-92-9	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFDoA	307-55-1	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFTrDA	72629-94-8	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
PFTeDA	376-06-7	ND	1.04	2.09	4.18		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	71.4	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C3-PFPeA	IS	73.1	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C3-PFBS	IS	74.9	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C3-HFPO-DA	IS	69.6	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C2-4:2 FTS	IS	73.6	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C2-PFHxA	IS	69.9	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C4-PFHpA	IS	70.1	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C3-PFHxS	IS	85.0	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1

Sample ID: BD-02 WWTP 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-07	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 00:00	Date Received:	22-Sep-21 12:06		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-6:2 FTS	IS	71.2	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C5-PFNA	IS	66.6	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C8-PFOSA	IS	45.0	50 - 150	H	B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C2-PFOA	IS	70.6	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C8-PFOS	IS	66.6	50 - 150		B110177	03-Oct-21	0.239 L	22-Oct-21 01:51	1
13C2-PFDA	IS	66.7	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C2-8:2 FTS	IS	93.7	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
d3-MeFOSAA	IS	66.8	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C2-PFUnA	IS	60.7	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
d5-EtFOSAA	IS	56.0	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C2-PFDoA	IS	61.7	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1
13C2-PFTeDA	IS	65.8	50 - 150		B110177	03-Oct-21	0.239 L	20-Oct-21 02:25	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL.
When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes

Sample ID: TB-02 WWTP 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-08	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 10:20	Date Received:	22-Sep-21 12:06		

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFPeA	2706-90-3	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFBS	375-73-5	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
4:2 FTS	757124-72-4	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFHxA	307-24-4	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFPeS	2706-91-4	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
HFPO-DA	13252-13-6	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFHpA	375-85-9	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
ADONA	919005-14-4	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFHxS	355-46-4	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
6:2 FTS	27619-97-2	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFOA	335-67-1	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFHpS	375-92-8	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	22-Oct-21 02:01	1
PFNA	375-95-1	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFOSA	754-91-6	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFOS	1763-23-1	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	22-Oct-21 02:01	1
9Cl-PF3ONS	756426-58-1	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFDA	335-76-2	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
8:2 FTS	39108-34-4	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFNS	68259-12-1	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
MeFOSAA	2355-31-9	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
EtFOSAA	2991-50-6	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFUnA	2058-94-8	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFDS	335-77-3	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	22-Oct-21 02:01	1
11Cl-PF3OUdS	763051-92-9	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFDoA	307-55-1	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFTrDA	72629-94-8	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
PFTeDA	376-06-7	ND	1.01	2.02	4.05		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	82.1	50 - 150		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C3-PFPeA	IS	84.1	50 - 150		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C3-PFBS	IS	97.0	50 - 150		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C3-HFPO-DA	IS	66.9	50 - 150		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C2-4:2 FTS	IS	113	50 - 150		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C2-PFHxA	IS	80.0	50 - 150		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C4-PFHpA	IS	84.7	50 - 150		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C3-PFHxS	IS	100	50 - 150		B110177	03-Oct-21	0.247 L	20-Oct-21 02:36	1

Sample ID: TB-02 WWTP 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-08	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 10:20	Date Received:	22-Sep-21 12:06		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-6:2 FTS	IS	89.3	50 - 150		BI10177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C5-PFNA	IS	89.3	50 - 150		BI10177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C8-PFOSA	IS	43.5	50 - 150	H	BI10177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C2-PFOA	IS	80.8	50 - 150		BI10177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C8-PFOS	IS	81.0	50 - 150		BI10177	03-Oct-21	0.247 L	22-Oct-21 02:01	1
13C2-PFDA	IS	88.7	50 - 150		BI10177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C2-8:2 FTS	IS	108	50 - 150		BI10177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
d3-MeFOSAA	IS	93.7	50 - 150		BI10177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C2-PFUnA	IS	85.6	50 - 150		BI10177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
d5-EtFOSAA	IS	87.4	50 - 150		BI10177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C2-PFDoA	IS	73.4	50 - 150		BI10177	03-Oct-21	0.247 L	20-Oct-21 02:36	1
13C2-PFTeDA	IS	87.0	50 - 150		BI10177	03-Oct-21	0.247 L	20-Oct-21 02:36	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes

Sample ID: FB-02 WWTP 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-09	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 12:00	Date Received:	22-Sep-21 12:06		

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	375-22-4	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFPeA	2706-90-3	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFBS	375-73-5	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
4:2 FTS	757124-72-4	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFHxA	307-24-4	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFPeS	2706-91-4	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
HFPO-DA	13252-13-6	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFHpA	375-85-9	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
ADONA	919005-14-4	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFHxS	355-46-4	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
6:2 FTS	27619-97-2	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFOA	335-67-1	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFHpS	375-92-8	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	22-Oct-21 02:12	1
PFNA	375-95-1	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFOSA	754-91-6	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFOS	1763-23-1	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	22-Oct-21 02:12	1
9Cl-PF3ONS	756426-58-1	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFDA	335-76-2	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
8:2 FTS	39108-34-4	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFNS	68259-12-1	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
MeFOSAA	2355-31-9	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
EtFOSAA	2991-50-6	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFUnA	2058-94-8	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFDS	335-77-3	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	22-Oct-21 02:12	1
11Cl-PF3OUdS	763051-92-9	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFDoA	307-55-1	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFTrDA	72629-94-8	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
PFTeDA	376-06-7	ND	1.01	2.02	4.03		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	59.5	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C3-PFPeA	IS	64.0	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C3-PFBS	IS	92.1	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C3-HFPO-DA	IS	64.7	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C2-4:2 FTS	IS	74.9	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C2-PFHxA	IS	64.3	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C4-PFHpA	IS	62.1	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C3-PFHxS	IS	90.8	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1

Sample ID: FB-02 WWTP 21921 — **PFAS Isotope Dilution Table B-15**

Client Data				Laboratory Data			
Name:	Wood Environment & Infrastructure	Matrix:	Groundwater	Lab Sample:	2109229-09	Column:	BEH C18
Project:	CG WWTP	Date Collected:	21-Sep-21 12:00	Date Received:	22-Sep-21 12:06		

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-6:2 FTS	IS	73.4	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C5-PFNA	IS	75.5	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C8-PFOSA	IS	31.3	50 - 150	H	B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C2-PFOA	IS	70.1	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C8-PFOS	IS	61.1	50 - 150		B110177	03-Oct-21	0.248 L	22-Oct-21 02:12	1
13C2-PFDA	IS	62.2	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C2-8:2 FTS	IS	100	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
d3-MeFOSAA	IS	76.8	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C2-PFUnA	IS	58.0	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
d5-EtFOSAA	IS	59.3	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C2-PFDoA	IS	54.2	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1
13C2-PFTeDA	IS	65.9	50 - 150		B110177	03-Oct-21	0.248 L	20-Oct-21 02:46	1

DL - Detection Limit
LOD - Limit of Detection
LOQ - Limit of quantitation
Results reported to the DL

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection Limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
MDL	Method Detection Limit
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
RL	For 537.1, the reported RLs are the MRLs.
TEQ	Toxic Equivalency, sum of the toxic equivalency factors (TEF) multiplied by the sample concentrations.
TEQMax	TEQ calculation that uses the detection limit as the concentration for non-detects
TEQMin	TEQ calculation that uses zero as the concentration for non-detects
TEQRisk	TEQ calculation that uses ½ the detection limit as the concentration for non-detects
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	21-023-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-26
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2020018
Massachusetts Department of Environmental Protection	M-CA413
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1980678
New Hampshire Environmental Accreditation Program	207720
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Ohio Environmental Protection Agency	87778
Oregon Laboratory Accreditation Program	4042-016
Pennsylvania Department of Environmental Protection	017
Texas Commission on Environmental Quality	T104704189-21-12
Vermont Department of Health	VT-4042
Virginia Department of General Services	10769
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	**Method**
Determination of Polychlorinated p- Dioxins & Polychlorinated Dibenzofurans	EPA 23
Polychlorinated Dibenzodioxins in Ambient Air by GC/HRMS	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613/1613B
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537.1
Determination of Per- and Polyfluoroalkyl Substances in Drinking Water by Isotope Dilution Anion Exchange Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry	EPA 533
Perfluorooctanesulonate (PFOS) and Perfluorooctanoate (PFOA) - Method for Unfiltered Samples Using Solid Phase Extraction and Liquid Chromatography/Mass Spectrometry	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	**Method**
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

Vista Analytical Laboratory

CHAIN OF CUSTODY

For Laboratory Use Only
Work Order #: 2109229 Temp: 0.5 °C
Storage ID: R-13, WR-2 Storage Secured: Yes ☑ No ☐

Project ID: CG WWTP PO#: 3310195021 Sampler: Ashlee Charters (name)

TAT (check one): Standard ☒ 21 days; Rush (surcharge may apply) ☐ 14 days ☐ 7 days Specify: _____

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
Ashlee Charters	9.21.21	1700	Fedex	9.21.21	1700
Fedex	09/22/21	12:06	Xavier Avalos	09/22/21	12:06

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 * Fax (916) 673-0106
ATTN: _____

Method of Shipment: Fedex
Tracking No.: _____

Add Analysis(es) Requested

Sample ID	Date	Time	Location / Sample Description	Container(s) Quantity	Type	Matrix	PFAS by Isotope Dilution: PFOA/PFOS	UCMR3 PFAS List 6	537.1 List 14 or 18 (Circle One)	EPA Draft List of 24	OTHER: Please attach analyte list M1 ISK 28 analytes	EPA Method 537 (DW only): PFOA/PFOS	UCMR3 PFAS List 6	537.1 List of 24	537.1 List of 18	Comments
Influent WWTP 21921		1030	9.21.21	2	P	GW					X					
Effluent WWTP 21921		1040	9	2	P	GW					X					
MW-14 21921		1214		2	P	GW					X					
MW-11 21921		1309		2	P	GW					X					
MW-10 21921		1341		2	P	GW					X					
MW-8 21921		1421		2	P	GW					X					
BD-02 WWTP 21921		—		2	P	GW					X					Blind Duplicate
TB-02 WWTP 21921		1020		2	P	GW					X					Trip Blank
FB-02 WWTP 21921		1200		1	P	GW					X					Field Blank

Special Instructions/Comment
Ashlee.Charters@woodplc.com
Helen.Rought@woodplc.com Scott.Rought@woodplc.com
Peter.Mitchell@woodplc.com
Robert.K.MacLeod2.nfg@mail.mil
Carla.J.Lange.nfg@mail.mil

SEND DOCUMENTATION AND RESULTS TO:
Name: _____
Company: _____
Address: _____
City: _____ State: ___ Zip: _____
Phone: _____
Email: _____

Container Types: P = HDPE, PJ = HDPE Jar, PY = Polypropylene, O = Other _____
Bottle Preservation Type: TZ = Trizma: _____
Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other _____

Vista Analytical Laboratory

Sample Log-In Checklist

Page # 1 of 1

Vista Work Order #: 2109229 TAT Std

Samples Arrival:	**Date/Time** 09/22/21 12:06		**Initials:** YN		**Location:** WR-2 **Shelf/Rack:** MB		
Delivered By:	(FedEx)	UPS	On Trac	GLS	DHL	Hand Delivered	Other
Preservation:	(Ice)		Blue Ice		Techni Ice	Dry Ice	None
Temp °C: 0.9 (uncorrected) **Temp °C:** 0.8 (corrected)			**Probe used:** Y / (N)			**Thermometer ID:** IR-3	

	YES	NO	NA
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Airbill ✓ Trk # 2839 8305 5536	✓		
Shipping Documentation Present?	✓		
Shipping Container: (Vista) Client (Retain) Return Dispose			
Chain of Custody / Sample Documentation Present?	✓		
Chain of Custody / Sample Documentation Complete?	✓		
Holding Time Acceptable?	✓		

Logged In:	**Date/Time** 09/23/21 14:52	**Initials:** YN	**Location:** R-13, WR-2 **Shelf/Rack:** A-2; E-4
COC Anomaly/Sample Acceptance Form completed?	X	✓	✓

Comments: Validation

CoC/Label Reconciliation Report WO# 2109229

LabNumber	CoC Sample ID		SampleAlias	Sample Date/Time		Container	BaseMatrix	Sample Comments
2109229-01	A Influent-WWTP 21921	☐	(A) (B)	21-Sep-21 10:30	☑	Polypropylene, 250mL	Aqueous	
2109229-01	B Influent-WWTP 21921	☐		21-Sep-21 10:30	☑	Polypropylene, 250mL	Aqueous	
2109229-02	A Effluent-WWTP 21921	☐		21-Sep-21 10:40	☑	Polypropylene, 250mL	Aqueous	
2109229-02	B Effluent-WWTP 21921	☐		21-Sep-21 10:40	☑	Polypropylene, 250mL	Aqueous	
2109229-03	A MW-14 21921	☐	MW-14 WWTP	21-Sep-21 12:14	☑	Polypropylene, 250mL	Aqueous	
2109229-03	B MW-14 21921	☐		21-Sep-21 12:14	☑	Polypropylene, 250mL	Aqueous	
2109229-04	A MW-11 21921	☐	MW-11 WWTP 21921	21-Sep-21 13:04	☑	Polypropylene, 250mL	Aqueous	
2109229-04	B MW-11 21921	☐		21-Sep-21 13:04	☑	Polypropylene, 250mL	Aqueous	
2109229-05	A MW-10 21921	☐	MW-10 WWTP	21-Sep-21 13:41	☑	Polypropylene, 250mL	Aqueous	
2109229-05	B MW-10 21921	☐		21-Sep-21 13:41	☑	Polypropylene, 250mL	Aqueous	
2109229-06	A MW-8 21921	☐	MW-8 WWTP	21-Sep-21 14:21	☑	Polypropylene, 250mL	Aqueous	
2109229-06	B MW-8 21921	☐		21-Sep-21 14:21	☑	Polypropylene, 250mL	Aqueous	
2109229-07	A BD-02 WWTP 21921	☐	B	21-Sep-21 00:00	☐	(D) Polypropylene, 250mL	Aqueous	
2109229-07	B BD-02 WWTP 21921	☐		21-Sep-21 00:00	☐	Polypropylene, 250mL	Aqueous	
2109229-08	A TB-02 WWTP 21921	☐		21-Sep-21 10:20	☑	Polypropylene, 250mL	Aqueous	
2109229-08	B TB-02 WWTP 21921	☐		21-Sep-21 10:20	☑	Polypropylene, 250mL	Aqueous	
2109229-09	A FB-02 WWTP 21921	☐	(C)	21-Sep-21 12:00	☑	Polypropylene, 250mL	Aqueous	

Checkmarks indicate that information on the COC reconciled with the sample label.
Any discrepancies are noted in the following columns.

	Yes	No	NA
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Adequate Sample Volume?	✓		
Container Type Appropriate for Analysis(es)	✓		

Preservation Documented: Na2S2O3 Trizma pH ≥ 9 NH4CH3CO2 None Other

Comments:
(A) Sample has green tint
(B) Sample ID missing underlined portion
(C) No backup volume
(D) No sample time listed on sample label

CHT 09/24/21

Verified by/Date: CHT 09/24/21