



October 14, 2024

Amy Ewing  
Hazen and Sawyer  
100 Sun Avenue NE, Suite 206  
Albuquerque, New Mexico 87109

Re: Summary of Field Activities and Analytical Results  
Soil Sampling Event  
City of Santa Fe Paseo Real Wastewater Reclamation Facility

Dear Ms. Ewing:

Daniel B. Stephens & Associates, Inc. (DBS&A) is pleased to provide this letter report to Hazen and Sawyer (Hazen) summarizing results of the soil sampling event conducted at the City of Santa Fe (the City) Paseo Real Wastewater Reclamation Facility (PRWRF) in Santa Fe, New Mexico (the site) (Figure 1).

## **Background**

The City historically used the site as a facility for sludge disposal land application. The PRWRF was constructed in the 1960s. The first discharge permit was issued for land application of sludge in June 1984, but it is unknown when the practice began. Land application activities were discontinued on March 9, 2022. Historical land application areas prior to and after 2010 are shown on Figure 1. Soil and hydromulch were applied to the ground surface after land application of sludge was discontinued at the site.

## **Sampling Analytes**

Soil sampling was performed to evaluate whether poly- and perfluoroalkyl substances (PFAS) are present in the near surface soils below the former sludge disposal facility and in the surface materials applied after sludge application was discontinued. PFAS analytes and their respective acronyms are listed in Table 1. PFAS analytes with detections in July 2024 and the applicable screening levels are presented in Table 2. The applicable screening levels are New Mexico Environment Department (NMED) soil screening levels (SSLs) for target soil leachate concentrations ( $C_w$ ) with a dilution attenuation factor (DAF) of 20 (NMED, 2022).

## **Scope of Work**

On July 3, 2024, soil samples were collected from 9 locations, as shown on Figure 1. Field notes recorded during the soil sampling event are provided in Attachment 1.

A total of 13 soil samples were collected, including 9 primary samples and 2 duplicate samples of native soil at depths of 1 to 2 feet below ground surface (bgs) and 1 primary sample and 1 duplicate sample of surface material collected at 0 to 0.5 foot bgs. The samples were collected using a decontaminated stainless-steel hand auger. The hand auger was decontaminated before each sample using a solution of deionized water and Liquinox (or equivalent) soap. One equipment blank sample was collected from the decontaminated hand auger for quality control purposes using laboratory provided PFAS-free deionized water.

The soil sample locations were selected so that data were collected across the entire former sludge disposal facility, avoiding the on-site stormwater ponds and solar panels that have been installed (and any material that may have been introduced during their installation). With the exception of the surface samples, soil samples were collected from below the soil and hydromulch material that was applied to the surface after sludge application activities were discontinued, and from below the depth of historical on-site sludge application (0 to 8 inches bgs for liquid sludge and less for the broadcast application of the dewatered cake).

Soil samples were described according to the Unified Soil Classification System (USCS). Soils encountered at the site consisted of silty sand with some clay and gravel within the former sludge disposal areas, and gravelly sand with cobbles at off-site location SB-9 (Attachment 1).

Each soil sampling location was recorded in the field using a handheld global positioning system (GPS) unit (Table 2). Each soil boring was backfilled with soil cuttings and plugged at the surface with bentonite.

The soil samples were labeled and preserved on ice in an insulated cooler for shipment to Enthalpy Analytical Laboratory (Enthalpy) in El Dorado Hills, California for analysis using Environmental Protection Agency (EPA) method 1633. All samples were accompanied by full chain of custody documentation at all times. The complete laboratory report, including chain of custody, is provided in Attachment 2. Field notes documenting sample collection activities are provided in Attachment 1.

All activities were conducted in accordance with the procedures specified in the approved scope of work, which include eliminating potential sources of PFAS in field clothing, field equipment, sample containers, and supplies for equipment decontamination. For example, items banned from the work area included clothing washed with fabric softener, plastic clipboards and binders, adhesives, all materials containing Teflon, and most brands of waterproof field logbooks. DBS&A personnel refrain from the use of cosmetics, hand creams, moisturizers, sunscreen, and insect repellent when sampling for PFAS. These protocols are discussed at daily tailgate safety meetings and are strictly enforced. DBS&A has based these protocols on guidance published by the California State Water Resources Control Board (SWRCB) Division of Drinking Water.

## Analytical Results

Soil analytical results are summarized in Table 3. Soil analytical results for the surface materials sample collected at SB-7 from 0 to 0.5 foot bgs are shown on Figure 2. Soil analytical results for native soil samples collected from 1 to 2 feet bgs are shown on Figure 3. Analytical results for individual PFAS analytes with concentrations above the NMED SSLs are shown on Figures 4 through 7.

PFAS were detected at concentrations above the NMED SSLs at 5 of the 9 primary soil sample locations collected from 1 to 2 feet bgs, as well as in the surface sample:

- SB-2 (2 feet bgs): PFOA (35.2 micrograms per kilogram [ $\mu\text{g}/\text{kg}$ ]), PFNA (5.07  $\mu\text{g}/\text{kg}$ ), PFHxS (5.55  $\mu\text{g}/\text{kg}$ ), and PFOS (119  $\mu\text{g}/\text{kg}$ )
- SB-3 (2 feet bgs): PFHxS (1.53  $\mu\text{g}/\text{kg}$ ) and PFOS (6.57  $\mu\text{g}/\text{kg}$ )
- SB-4 (2 feet bgs): PFOS (1.46  $\mu\text{g}/\text{kg}$ )
- SB-5 (2 feet bgs): PFOS (0.663  $\mu\text{g}/\text{kg}$ )
- SB-6 (2 feet bgs): PFOS (0.464  $\mu\text{g}/\text{kg}$ )
- SB-7 (0 to 0.5 foot bgs): PFOA (33.3  $\mu\text{g}/\text{kg}$ ), PFNA (15.8  $\mu\text{g}/\text{kg}$ ), PFHxS (3.75  $\mu\text{g}/\text{kg}$ ), and PFOS (30.7  $\mu\text{g}/\text{kg}$ )

PFAS were detected in the sample collected at 2 feet bgs from SB-7 at concentrations below the NMED SSLs. PFAS were not detected at concentrations above laboratory reporting limits in samples collected from SB-1, SB-8, and SB-9. The SB-9 sample was the control sample collected off-site and away from the former land application area. Concentrations of PFAS in the duplicate samples are consistent with concentrations in the corresponding primary samples (Table 3). Concentrations of all PFAS were below laboratory reporting limits in the equipment blank quality control sample (Attachment 2).

## Conclusions

A total of 13 soil samples were collected at the site. Based on the results of the soil sampling event, DBS&A provides the following conclusions regarding conditions at the site:

- PFAS were not detected in samples collected on the west side of the site (SB-1, SB-8, and SB-9). SB-1 was collected near monitor well MW-1, where PFAS have historically been detected in groundwater samples. SB-8 was collected near an arroyo to evaluate possible impacts from surface water runoff. SB-9 was collected off-site—outside of the historical sludge disposal area and away from site development.
- PFAS were detected in all other samples, which were collected within the former sludge disposal facility. Concentrations above the NMED SSLs were detected in the samples collected at 2 feet bgs from soil borings SB-2 through SB-6 and the surface materials sample collected from soil boring SB-7. The highest concentrations of PFAS were

detected in the samples collected from SB-2 and the surface materials collected from SB-7.

- SB-2 is located near the former sludge injection stand pipe and had a PFOS concentration (119 µg/kg) significantly above the NMED SSL of 0.209 µg/kg. Concentrations of PFOA, PFNA, and PFHxS also exceeded the NMED SSLs in this sample.
- The surface materials sampled at SB-7 from 0 to 0.5 foot were collected to represent the soil and hydromulch material applied to the surface after sludge application was discontinued at the site. Concentrations of PFOA, PFNA, PFHxS, and PFOS exceeded the NMED SSLs in this sample.

Based on the findings of this soil sampling event, PFAS are present in the shallow subsurface and in surface materials within the former sludge disposal areas at concentrations above the NMED SSLs. DBS&A recommends deeper sampling to evaluate the vertical extent of PFAS within the soils beneath the former sludge disposal areas at the locations where PFAS were detected above the NMED SSLs in samples of native soil.

### Closing

DBS&A is pleased to provide this letter report summarizing soil sampling at the City of Santa Fe PRWRF. Please contact me at (505) 822-9400 if you have any questions or require additional information.

Sincerely,

DANIEL B. STEPHENS & ASSOCIATES, INC.



Patrice N. Feltman, P.G.  
Project Manager

PNF/rpf  
Attachments

### Reference

New Mexico Environment Department (NMED). 2022. *Risk assessment for site investigations and remediation, Volume I: Soil screening guidance for human health risk assessments*. November 2022.

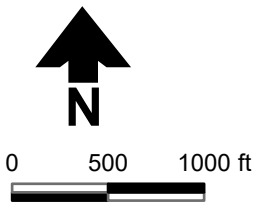
# Figures

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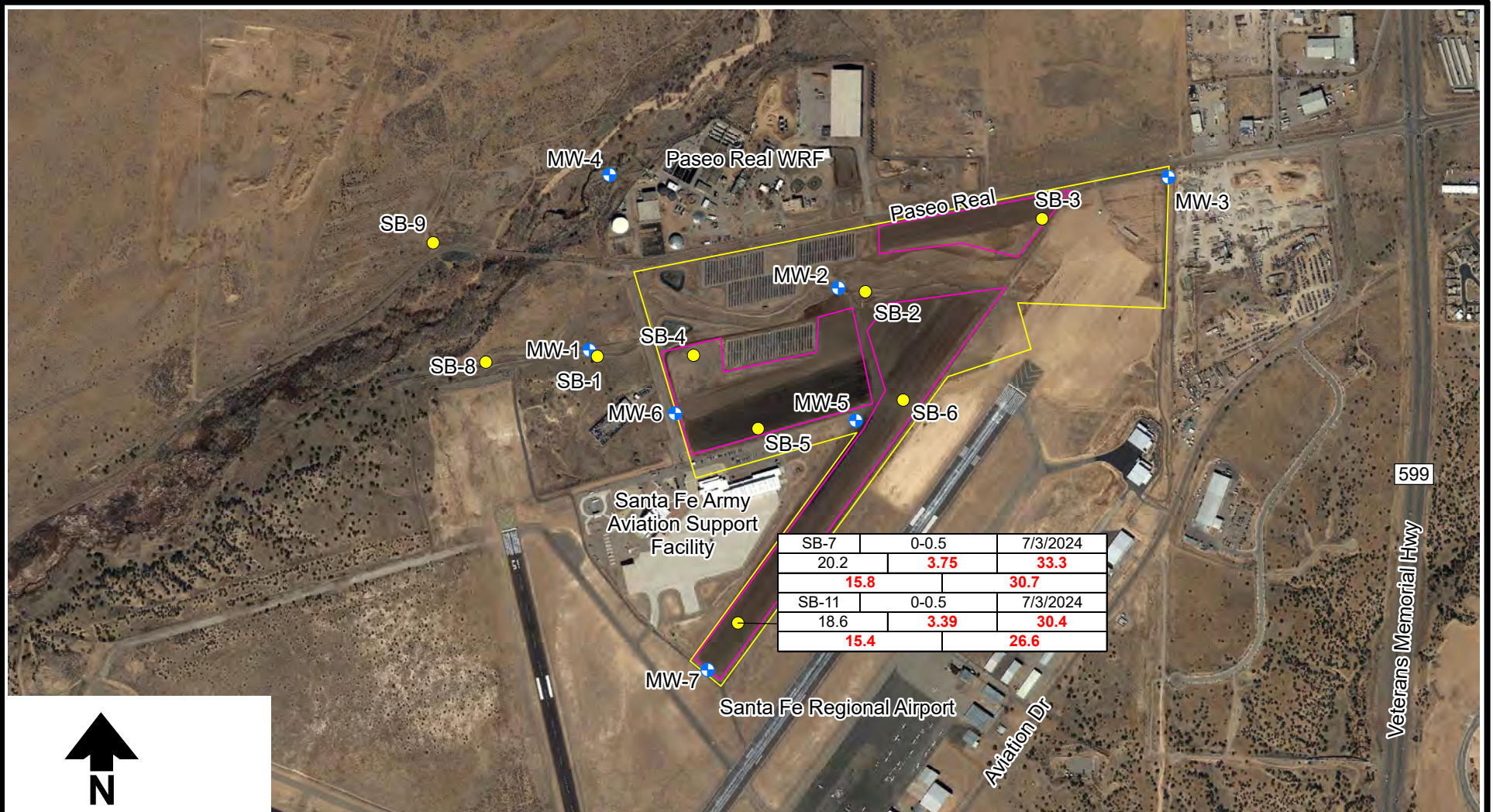
Base image source: Google Earth Pro, March 2021

CITY OF SANTA FE  
PASEO REAL WATER RECLAMATION FACILITY  
**Site Map**

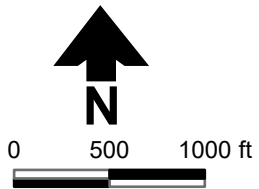


**Explanation**

- Soil sample
- ⊕ Monitor well
- Approximate area of land application prior to 2010
- Approximate area of land application after 2010



SB-7	0-0.5	7/3/2024
20.2	<b>3.75</b>	<b>33.3</b>
<b>15.8</b>		<b>30.7</b>
SB-11	0-0.5	7/3/2024
18.6	<b>3.39</b>	<b>30.4</b>
<b>15.4</b>		<b>26.6</b>



**Explanation**

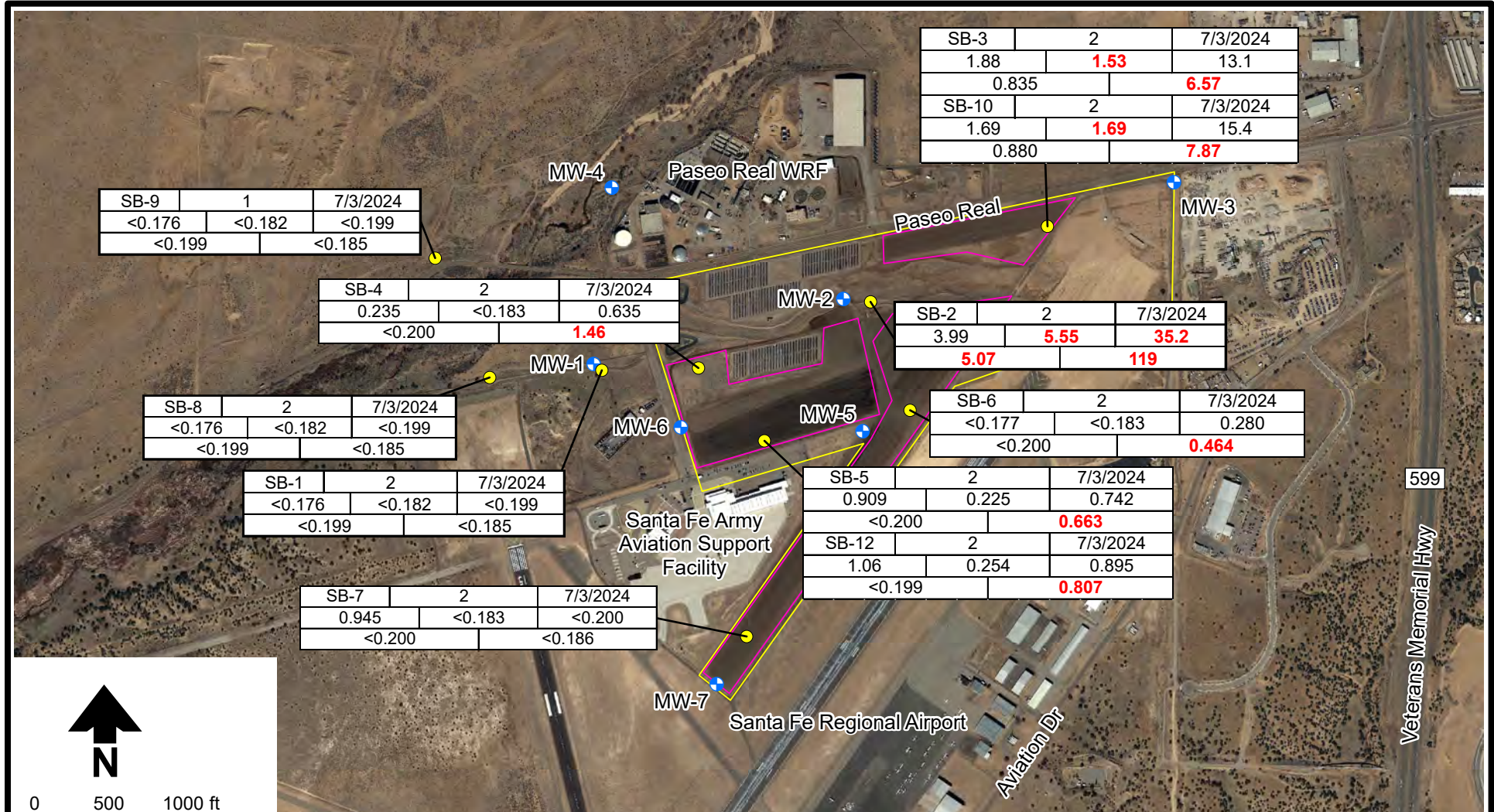
- Soil sample
- ⊕ Monitor well
- Approximate area of land application after 2010
- Approximate area of land application prior to 2010

Location designation	Sample Depth (ft bgs)		Date
PFBS	PFHxS	PFOA	
PFNA		PFOS	

Notes:  
 1. All concentrations reported in micrograms per kilogram (µg/kg)  
 2. **Bold** indicates concentrations that exceed the NMED Soil Screening Levels (Cw, DAF 20)

Base image source: Google Earth Pro, March 2021

CITY OF SANTA FE  
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**Contaminant Concentrations in Soil at 0 to 0.5 feet bgs**  
**July 3, 2024**



SB-9	1	7/3/2024
<0.176	<0.182	<0.199
<0.199	<0.185	

SB-3	2	7/3/2024
1.88	<b>1.53</b>	13.1
0.835		<b>6.57</b>
SB-10	2	7/3/2024
1.69	<b>1.69</b>	15.4
0.880		<b>7.87</b>

SB-4	2	7/3/2024
0.235	<0.183	0.635
<0.200		<b>1.46</b>

SB-2	2	7/3/2024
3.99	<b>5.55</b>	<b>35.2</b>
<b>5.07</b>		<b>119</b>

SB-8	2	7/3/2024
<0.176	<0.182	<0.199
<0.199	<0.185	

SB-6	2	7/3/2024
<0.177	<0.183	0.280
<0.200		<b>0.464</b>

SB-1	2	7/3/2024
<0.176	<0.182	<0.199
<0.199	<0.185	

SB-5	2	7/3/2024
0.909	0.225	0.742
<0.200		<b>0.663</b>

SB-7	2	7/3/2024
0.945	<0.183	<0.200
<0.200	<0.186	

SB-12	2	7/3/2024
1.06	0.254	0.895
<0.199		<b>0.807</b>



**Explanation**

- Soil sample
- ⊕ Monitor well
- Approximate area of land application after 2010
- Approximate area of land application prior to 2010

Location designation	Sample Depth (ft bgs)	Date
PFBS	PFHxS	PFOA
PFNA	PFOS	

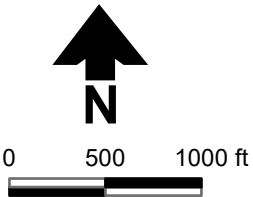
Notes:  
 1. All concentrations reported in micrograms per kilogram (µg/kg)  
 2. **Red** indicates concentrations that exceed the NMED Soil Screening Levels (Cw, DAF 20)

Base image source: Google Earth Pro, March 2021

CITY OF SANTA FE  
 PASEO REAL WATER RECLAMATION FACILITY  
**Contaminant Concentrations in Soil at 1 to 2 feet bgs**  
**July 3, 2024**

Figure 3





**Explanation**

- Soil sample
- ⊕ Monitor well
- Approximate area of land application prior to 2010
- Approximate area of land application after 2010
- SB-2 Soil sample designation
- 5.55** PFHxS Concentrations in Soil at 1 to 2 feet bgs

Base image source: Google Earth Pro, March 2021

**Notes:**

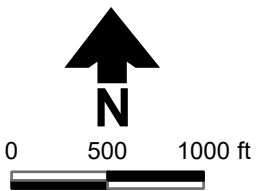
1. All concentrations reported in micrograms per kilogram (µg/kg)
2. **Bold** indicates concentrations that exceed the NMED Soil Screening Levels (Cw, DAF 20)

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**PFHxS Concentrations in Soil at 1 to 2 feet bgs**  
**July 3, 2024**

Figure 4



Base image source: Google Earth Pro, March 2021



**Explanation**

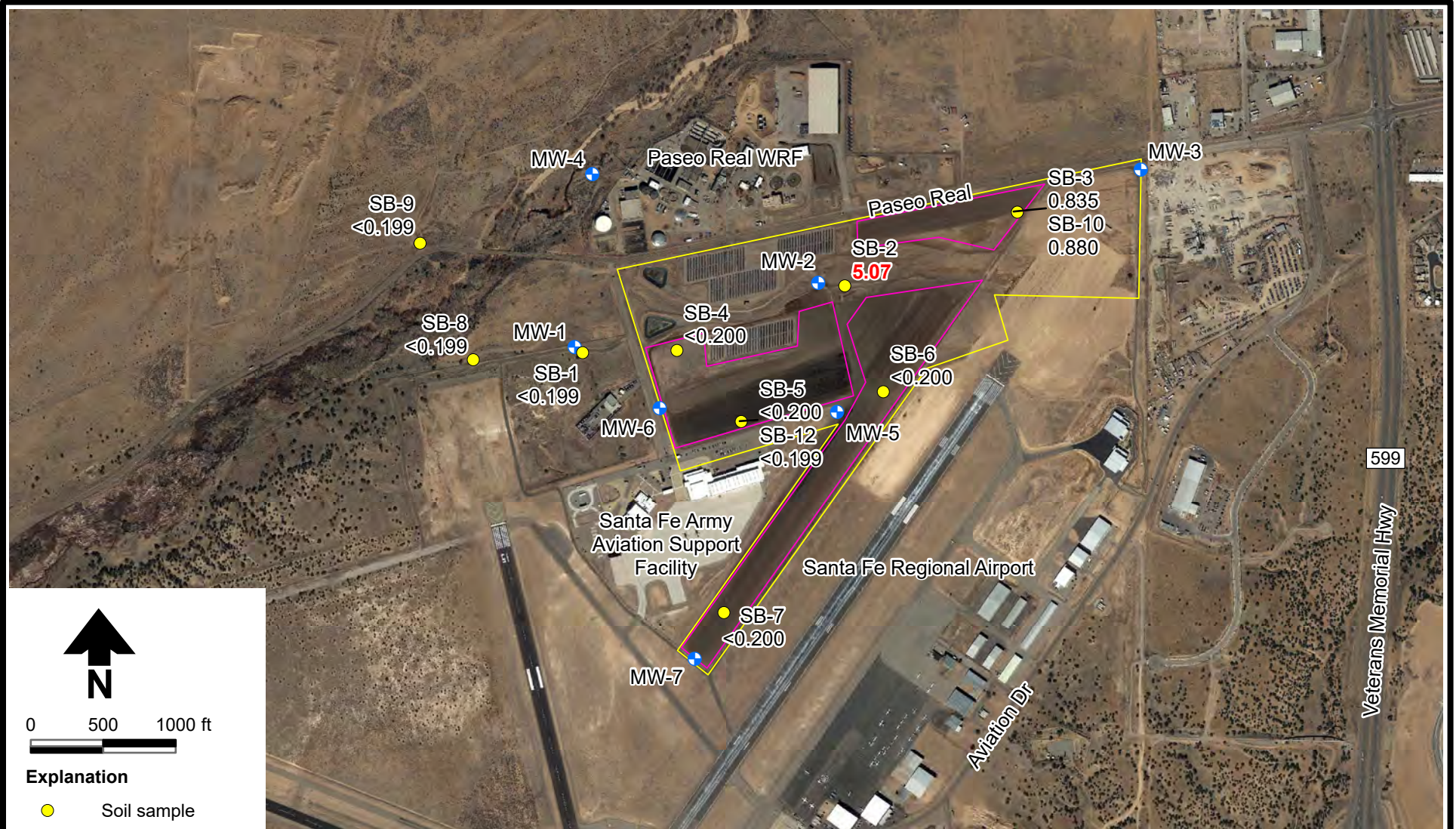
- Soil sample
  - ⊕ Monitor well
  - Approximate area of land application after 2010
  - Approximate area of land application prior to 2010
- SB-2 Soil sample designation  
**35.2** PFOA Concentrations in Soil at 1 to 2 feet bgs

**Notes:**

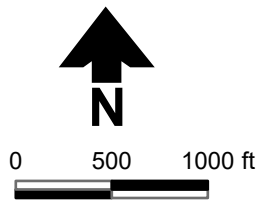
1. All concentrations reported in micrograms per kilogram (µg/kg)
2. **Bold** indicates concentrations that exceed the NMED Soil Screening Levels (Cw, DAF 20)

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**PFOA Concentrations in Soil at 1 to 2 feet bgs**  
**July 3, 2024**

Figure 5



Base image source: Google Earth Pro, March 2021



**Explanation**

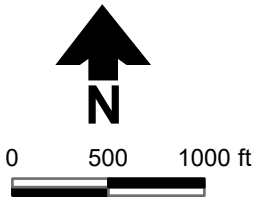
- Soil sample
- ⊕ Monitor well
- Approximate area of land application after 2010
- Approximate area of land application prior to 2010
- SB-2 Soil sample designation
- 5.07** PFNA Concentrations in Soil at 1 to 2 feet bgs

**Notes:**

1. All concentrations reported in micrograms per kilogram (µg/kg)
2. **Red** indicates concentrations that exceed the NMED Soil Screening Levels (Cw, DAF 20)

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**PASEO REAL WATER RECLAMATION FACILITY**  
**PFNA Concentrations in Soil at 1 to 2 feet bgs**  
**July 3, 2024**

Figure 6



**Explanation**

- Soil sample
- + Monitor well
- Approximate area of land application after 2010
- Approximate area of land application prior to 2010

SB-2 Soil sample designation  
**119** PFOS Concentrations in Soil at 1 to 2 feet bgs

**Notes:**

1. All concentrations reported in micrograms per kilogram (µg/kg)
2. **Bold** indicates concentrations that exceed the NMED Soil Screening Levels (Cw, DAF 20)

Base image source: Google Earth Pro, March 2021

CITY OF SANTA FE  
 PASEO REAL WATER RECLAMATION FACILITY  
**PFOS Concentrations in Soil at 1 to 2 feet bgs**  
**July 3, 2024**

Figure 7

# Tables

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**Table 1. PFAS Target Analytes**

Analyte Name	Acronym
Perfluorobutanoic acid	PFBA
Perfluoropentanoic acid	PFPeA
Perfluorobutane sulfonic acid	PFBS
Perfluorohexanoic acid	PFHxA
Perfluoropentanesulfonic acid	PFPeS
Perfluoroheptanoic acid	PFHpA
Perfluorohexane sulfonic acid	PFHxS
6:2 Fluorotelomer sulfonic acid	6:2 FTS
Perfluorooctanoic acid	PFOA
Perfluoroheptanesulfonic acid	PFHpS
Perfluorononanoic acid	PFNA
Perfluorooctabesylsulfonamide	PFOSA
Perfluorooctane sulfonic acid	PFOS
Perfluorodecanoic acid	PFDA
8:2 Fluorotelomer sulfonic acid	8:2 FTS
Perfluorononanesulfonic acid	PFNS
N-methyl perfluorooctanesulfonamido acetic acid	MeFOSAA
N-ethyl perfluorooctanesulfonamido acetic acid	EtFOSAA
Perfluoroundecanoic acid	PFUnA
Perfluorodecanesulfonic acid	PFDS
Perfluorododecanoic acid	PFDoA
N-Methylperfluorooctane sulfonamide	MeFOSA
Perfluorotridecanoic acid	PFTTrDA
Perfluorotetradecanoic acid	PFTeDA
N-Ethylperfluorooctane sulfonamide	EtFOSA
N-Methylperfluorooctane sulfonamide	MeFOSE
N-Ethylperfluorooctane sulfonamido ethanol	EtFOSE

**Table 2. Soil Sample Locations**

Sample ID	Latitude (DD)	Longitude (DD)	Location Description
SB-1	35.62768	-106.08961	Near MW-1, where PFAS were detected during August 2023 groundwater sampling
SB-2	35.62894	-106.08352	Near former sludge injection stand pipe location
SB-3 and SB-10	35.63033	-106.07951	Former land application area 1
SB-4	35.62772	-106.08742	Former land application area, undisturbed for over 10 years
SB-5 and SB-12	35.62637	-106.08593	Former land application area 4, adjacent to ARNG facility
SB-6	35.62693	-106.08263	Former land application area 3
SB-7 and SB-11	35.62275	-106.08634	Southwest extent of the PRWRF, south of the ARNG facility
SB-8	35.62755	-106.09215	Near arroyo west of and adjacent to the former land application area
SB-9	35.62976	-106.09338	Off-site, outside of the historical sludge disposal area, away from development

All coordinates collected with a hand-held global positioning system (GPS) unit using World Geodetic System (WGS84) global reference system.

DD = Decimal degrees

ARNG = Army National Guard

**Table 3. Soil Analytical Results**

Analyte <sup>a</sup>	Concentration (µg/kg)													
	NMED SSL <sup>b</sup>	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SB-7	SB-8	SB-9	SB-10 (SB-3 Dup)	SB-11 (SB-7 Dup)	SB-12 (SB-5 Dup)
Sample Depth (feet)		2	2	2	2	2	2	0-0.5	2	2	1	2	0-0.5	2
Sample Date		7/3/2024	7/3/2024	7/3/2024	7/3/2024	7/3/2024	7/3/2024	7/3/2024	7/3/2024	7/3/2024	7/3/2024	7/3/2024	7/3/2024	7/3/2024
PFBA	None	<0.798	0.994	1.13	<0.800	<0.800	<0.800	6.01	<0.801	<0.798	<0.797	0.970	5.76	<0.798
PFPeA	None	<0.397	2.48	2.07	1.07	2.12	0.734	17.1	1.39	<0.398	<0.397	1.72	15.8	2.46
PFBS	20.9	<0.176	3.99	1.88	0.235	0.909	<0.177	20.2	0.945	<0.176	<0.176	1.69	18.6	1.06
PFHxA	None	<0.199	4.36	2.80	2.06	4.39	0.477	23.8	1.45	<0.199	<0.199	2.40	22.7	4.64
PFPeS	None	<0.187	0.465	<0.188	<0.188	0.399	<0.188	0.207	<0.188	<0.187	<0.187	<0.187	0.195	0.417
PFHpA	None	<0.199	6.53	2.28	0.695	2.97	<0.200	7.67	<0.200	<0.199	<0.199	2.42	7.21	3.30
PFHxS	1.39	<0.182	<b>5.55</b>	<b>1.53</b>	<0.183	0.225	<0.183	<b>3.75</b>	<0.183	<0.182	<0.182	<b>1.69</b>	<b>3.39</b>	0.254
6:2 FTS	None	<0.756	<0.758	<0.758	<0.758	<0.758	<0.758	3.28	<0.759	<0.756	<0.755	<0.756	2.88	<0.756
PFOA	18.3	<0.199	<b>35.2</b>	13.1	0.635	0.742	0.280	<b>33.3</b>	<0.200	<0.199	<0.199	15.4	<b>30.4</b>	0.895
PFHpS	None	<0.189	1.51	<0.190	<0.190	<0.190	<0.190	0.343	<0.190	<0.189	<0.189	0.193	0.355	<0.189
PFNA	5.02	<0.199	<b>5.07</b>	0.835	<0.200	<0.200	<0.200	<b>15.8</b>	<0.200	<0.199	<0.199	0.880	<b>15.4</b>	<0.199
PFOSA	None	<0.199	6.93	0.521	<0.200	<0.200	<0.200	2.81	<0.200	<0.199	<0.199	0.548	<b>2.59</b>	<0.199
PFOS	0.209	<0.185	<b>119</b>	<b>6.57</b>	<b>1.46</b>	<b>0.663</b>	<b>0.464</b>	<b>30.7</b>	<0.186	<0.185	<0.185	<b>7.87</b>	<b>26.6</b>	<b>0.807</b>
PFDA	None	<0.199	11.6	0.742	<0.200	0.237	<0.200	28.2	<0.200	<0.199	<0.199	0.834	26.6	0.252
8:2 FTS	None	<0.765	<0.767	<0.767	<0.767	<0.767	<0.767	3.74	<0.768	<0.765	<0.764	<0.765	3.74	<0.765
PFNS	None	<0.191	0.362	<0.192	<0.192	<0.192	<0.192	<0.191	<0.192	<0.191	<0.191	<0.191	<0.192	<0.191
MeFOSAA	None	<0.199	14.2	0.320	<0.200	<0.200	<0.200	24.8	<0.200	<0.199	<0.199	0.415	24.0	<0.199
EtFOSAA	None	<0.199	31.7	0.766	0.587	<0.200	<0.200	10.4	<0.200	<0.199	<0.199	0.938	9.39	0.235
PFUnA	None	<0.199	1.56	<0.200	<0.200	<0.200	<0.200	6.51	<0.200	<0.199	<0.199	<0.199	5.83	<0.199
PFDS	None	<0.192	27.7	0.486	0.362	<0.193	<0.193	4.35	<0.193	<0.192	<0.192	0.546	4.01	<0.192
PFDoA	None	<0.199	4.34	<0.200	<0.200	<0.200	<0.200	9.28	<0.200	<0.199	<0.199	<0.199	8.57	<0.199
MeFOSA	None	<0.199	0.413	<0.200	<0.200	<0.200	<0.200	<0.199	<0.200	<0.199	<0.199	<0.199	<0.200	<0.199
PFTTrDA	None	<0.199	0.432	<0.200	<0.200	<0.200	<0.200	1.25	<0.200	<0.199	<0.199	<0.199	1.21	<0.199
PFTeDA	None	<0.199	1.26	<0.200	<0.200	<0.200	<0.200	2.26	<0.200	<0.199	<0.199	<0.199	2.08	<0.199
EtFOSA	None	<0.199	0.289	<0.200	<0.200	<0.200	<0.200	<0.199	<0.200	<0.199	<0.199	<0.199	<0.200	<0.199
MeFOSE	None	<1.99	3.25	<2.00	<2.00	<2.00	<2.00	3.88	<2.00	<1.99	<1.99	<1.99	3.61	<1.99
EtFOSE	None	<1.99	<2.00	<2.00	<2.00	<2.00	<2.00	2.04	<2.00	<1.99	<1.99	<1.99	2.12	<1.99

**Bold** indicates that value exceeds the New Mexico Environment Department (NMED) soil screening level (SSL).

<sup>a</sup> Table only lists analytes with detections during the July 3, 2024 soil sampling event.

<sup>b</sup> NMED SSL of C<sub>w</sub>, dilution attenuation factor (DAF) 20 (NMED, 2022).

µg/kg = Micrograms per kilogram

Dup = Duplicate



# Attachment 1

## Field Notes

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7/3/24

J. FISHER

1100 Onsite @ PMSO Plant WRF to  
Sign in & Pick up keys.

1115 @ SB-3.

35.63033° N

106.07951° W

1200 SB-3 Advanced to 2.0'. Decon  
Hand Auger.1210 Collect SB-3 @ 2.0' + Duplicate  
Sample (SB-10 @ 2.0').

Decon Hand Auger. Move to SB-2.

SB-3 Material?

Dark Brown, 10YR 3/3, Silty Sand  
w/ clay, Fine Grained Sand,

Plastic when wet, little to no

gravels, moist to very moist,  
no odor.1235 @ SB-2. <sup>35.62894° N</sup>  
<sup>106.08352° W</sup>1240 Advanced to 2.0'. Decon  
Hand Auger.

1245 Collect SB-2 @ 2.0'.

Material is silty sand w/ gravel,

Light yellowish brown, 10-20% subround to subangular

gravels up to 3/4", mod. well graded, loose,

non plastic when wet, damp, no odor.

1255 Move to SB-6. (Borings Borewell @ W)

7/3/24

J

CUTTINGS + Bentonite @ Surface)

1339 SB-6 COORDS:

35.62893° N

106.08263° W

Advanced Borings to 2.0'. Auger  
Decon.

1340 Collect SB-6 @ 2.0'.

Light yellowish brown (10YR 6/4), silty  
sand, fine grained sand, poorly graded,

sh. plastic when wet, st. subround

gravels up to 1/2" loose, damp, no odor.

1349 Decon Hand Auger.

1355 Collect Equipment Rinsate Sample.

1403 @ SB-7. 35.62275° N

106.08634° W

1410 Collect Surface Material Sample

SB-7 @ 0'-0.5' + Duplicate

Sample (SB-11 @ 0-0.5')

1423 Advanced SB-7 to 2.0'. Decon

Hand Auger. Material is same as SB-6 @ 2.0'.

1430 Collect SB-7 @ 2.0'

1435 Decon Hand Auger. Move to SB-5.

1437 @ SB-5. 35.62637° N

106.08593° W

1450 SB-5 Advanced to 2.0'. Decon Auger

1500 Collect SB-5 @ 2.0' + Dup

(SB-12 @ 2.0')

7/3/24

J

1500 (cont) MATERIAL IS THE SAME AS SB-6 & SB-7. DECON AUGER - MOVE TO SB-4.

1510 @ SB-4. 35.62772°N

106.08742°W

ADVANCE HAND AUGER TO 2.0'

1515 DECON HAND AUGER

1520 COLLECT SB-4 @ 2.0'

BROWN (7.5YR4/4), SILTY SAND W/CLAY, FINE GRAINED SAND, POORLY GRAINED, LOOSE, PLASTIC WHEN WET, DAMP, NO ODOR

1535 @ SB-1, 35.62768°N

106.08961°W

ADVANCE BORING TO 2.0'

1540 DECON HAND AUGER -

1550 COLLECT SB-1 @ 2.0'

SILTY SAND, LIGHT BROWN (7.5YR6/4), FINE GRAINED, POORLY GRAINED, NON-PLASTIC WHEN WET, 10%.

ROUND GRAVELS UP TO 3/4", DRY, NO ODOR

1610 @ SB-8. 35.62755°N

106.09215°W

ADVANCE BORING TO 2.0'

7/3/24

J

1620 DECON AUGER

1630 COLLECT SAMPLE SB-8 @ 2.0'

RETURN KEYS TO LAB & SIGN OUT @ PRISON NEAR WLF.

~~1650 @ SB-9, SB-8 @ 2.0' DESCRIPTION:~~

~~SILTY SAND SAME AS SB-1, BUT 25% SUBROUND GRAVELS UP TO 1 1/2"~~

1650 @ SB-9. 35.62976°N

106.09338°W

1715 REFUSEL 3<sup>rd</sup> TIMES @ ~ 1.5'

WILL HAVE TO COLLECT SAMPLE FROM 1.0' - 1.5'

ADVANCE NEW BORING TO 1.0'

1730 DECON AUGER

1740 COLLECT SB-9 @ 1.0'

MATERIAL IS GRAVELLY SAND & COBBLES, LITTLE FINES, WELL GRAINED, 50% SUBROUND GRAVELS & COBBLES UP TO 4", DRY, NO ODOR

1755 OFFSITE

*[Signature]*

7/3/24

Attachment 2

Laboratory  
Analytical Report

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July 24, 2024

**Enthalpy Analytical - El Dorado Hills  
Work Order No. 2407083**

Ms. Amy Ewing  
Hazen & Sawyer  
100 Sun Ave NE, Ste 206  
Albuquerque, NM 87109

Dear Ms. Ewing,

Enclosed are the results for the sample set received at Enthalpy Analytical - EDH on July 10, 2024 under your Project Name 'DB24.1212.00 P1T1'.

Enthalpy Analytical - EDH is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [emilyuebelhoer@enthalpy.com](mailto:emilyuebelhoer@enthalpy.com).

Thank you for choosing Enthalpy Analytical - EDH as part of your analytical support team.

Sincerely,

A handwritten signature in cursive script that reads 'Emily Uebelhoer'.

Emily Uebelhoer  
Project Manager

*Enthalpy Analytical - EDH certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Enthalpy Analytical - EDH.*

## **Enthalpy Analytical - EDH Work Order No. 2407083**

### **Case Narrative**

#### **Sample Condition on Receipt:**

Thirteen soil samples and one aqueous sample were received and stored securely in accordance with Enthalpy Analytical - EDH standard operating procedures and EPA methodology. The samples were received in good condition and within the method temperature requirements. A sample time discrepancy was noted for sample "SB-12@2.0" between the container label and the Chain-of-Custody (CoC). The sample time has been reported as listed on the CoC. The sample matrices were not documented on the Chain-of-Custody (CoC). Sample "Equipment Blank" was reported as aqueous while all others were reported as soil. Due to limitations of the lab's LIMS system, apostrophe symbols could not be included in the sample IDs.

#### **Analytical Notes:**

##### **EPA Method 1633 (Solid)**

The samples were extracted and analyzed for a selected list of PFAS using EPA Method 1633. The results for PFHxS, PFOA, PFOSA, PFOS, PFNA, MeFOSAA, EtFOSAA, MeFOSA, MeFOSE, EtFOSA, EtFOSE 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, Ongoing Precision and Recovery (OPR) sample, and Low-Level OPR sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above the Reporting Limit. The OPR recoveries were within the method acceptance criteria.

An MS/MSD was performed on sample "SB-9@1.0". The MS/MSD recoveries and RPDs outside the acceptance criteria are flagged with an "Q" qualifier.

The ion transition ratios outside the acceptance criteria are flagged with an "I" qualifier.

The labeled standard recoveries outside the acceptance criteria are flagged with an "Q" 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.

##### **EPA Method 1633 (Aqueous)**

The sample was extracted and analyzed for a selected list of PFAS using EPA Method 1633. The results for PFHxS, PFOA, PFOSA, PFOS, PFNA, MeFOSAA, EtFOSAA, MeFOSA, MeFOSE, EtFOSA, EtFOSE include both linear and branched isomers. Results for all other analytes include the linear isomers only.

### Holding Times

The sample was extracted and analyzed within the hold times.

### Quality Control

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

A Method Blank, Ongoing Precision and Recovery (OPR) sample, and Low-Level OPR sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above the Reporting Limit. The OPR recoveries were within the method acceptance criteria.

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

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# Sample Inventory Report

Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2407083-01	SB-3@2.0	03-Jul-24 12:10	10-Jul-24 09:20	HDPE Jar, 6 oz
2407083-02	SB-10@2.0	03-Jul-24 12:20	10-Jul-24 09:20	HDPE Jar, 6 oz
2407083-03	SB-2@2.0	03-Jul-24 12:45	10-Jul-24 09:20	HDPE Jar, 6 oz
2407083-04	SB-6@2.0	03-Jul-24 13:40	10-Jul-24 09:20	HDPE Jar, 6 oz
2407083-05	Equipment Blank	03-Jul-24 13:55	10-Jul-24 09:20	HDPE Bottle, 500 mL HDPE Bottle, 500 mL
2407083-06	SB-7@0-0.5	03-Jul-24 14:10	10-Jul-24 09:20	HDPE Jar, 6 oz
2407083-07	SB-11@0-0.5	03-Jul-24 14:20	10-Jul-24 09:20	HDPE Jar, 6 oz
2407083-08	SB-7@2.0	03-Jul-24 14:30	10-Jul-24 09:20	HDPE Jar, 6 oz
2407083-09	SB-5@2.0	03-Jul-24 15:00	10-Jul-24 09:20	HDPE Jar, 6 oz
2407083-10	SB-12@2.0	03-Jul-24 15:10	10-Jul-24 09:20	HDPE Jar, 6 oz
2407083-11	SB-4@2.0	03-Jul-24 15:20	10-Jul-24 09:20	HDPE Jar, 6 oz
2407083-12	SB-1@2.0	03-Jul-24 15:50	10-Jul-24 09:20	HDPE Jar, 6 oz
2407083-13	SB-8@2.0	03-Jul-24 16:30	10-Jul-24 09:20	HDPE Jar, 6 oz
2407083-14	SB-9@1.0	03-Jul-24 17:40	10-Jul-24 09:20	HDPE Jar, 6 oz

## **ANALYTICAL RESULTS**

**Sample ID: Method Blank**

**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Solid	Lab Sample:	B24G098-BLK1	Column:	BEH C18
Project:	DB24.1212.00 P1T1						

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	ND	0.801		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFMPA	ND	0.400		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
3:3 FTCA	ND	1.00		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFPeA	ND	0.399		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFMBA	ND	0.400		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFBS	ND	0.177		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
4:2 FTS	ND	0.750		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFHxA	ND	0.200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFEESA	ND	0.356		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFPeS	ND	0.188		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
HFPO-DA	ND	0.835		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
NFDHA	ND	0.400		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
5:3 FTCA	ND	5.00		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFHpA	ND	0.200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
ADONA	ND	0.790		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFHxS	ND	0.183		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
6:2 FTS	ND	0.759		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFOA	ND	0.200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFHpS	ND	0.190		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
7:3 FTCA	ND	5.00		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFNA	ND	0.200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFOSA	ND	0.200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFOS	ND	0.186		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
9Cl-PF3ONS	ND	0.780		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFDA	ND	0.200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
8:2 FTS	ND	0.768		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFNS	ND	0.192		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
MeFOSAA	ND	0.200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
EtFOSAA	ND	0.200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFUnA	ND	0.200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFDS	ND	0.193		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
11Cl-PF3OUdS	ND	0.790		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFDoA	ND	0.200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
MeFOSA	ND	0.200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFTTrDA	ND	0.200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFDoS	ND	0.194		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
PFTeDA	ND	0.200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
EtFOSA	ND	0.200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1

Sample ID: Method Blank					EPA Method 1633				
Client Data				Laboratory Data					
Name:	Hazen & Sawyer	Matrix:	Solid	Lab Sample:	B24G098-BLK1	Column:	BEH C18		
Project:	DB24.1212.00 P1T1								
Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
MeFOSE	ND	2.00		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1	
EtFOSE	ND	2.00		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	99.9	10 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C5-PFPeA	IS	102	35 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C2-4:2 FTS	IS	122	40 - 135		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C3-PFBS	IS	115	40 - 135		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C5-PFHxA	IS	95.3	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C4-PFHpA	IS	97.9	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C3-HFPO-DA	IS	99.5	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C2-6:2 FTS	IS	106	40 - 215		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C8-PFOA	IS	90.6	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C3-PFHxS	IS	110	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C9-PFNA	IS	104	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C2-8:2 FTS	IS	123	40 - 275		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C6-PFDA	IS	93.5	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
d3-MeFOSAA	IS	101	40 - 135		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C8-PFOS	IS	100	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
d5-EtFOSAA	IS	104	40 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C7-PFUnA	IS	109	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C8-PFOSA	IS	83.5	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C2-PFDoA	IS	77.7	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
13C2-PFTeDA	IS	90.6	20 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
d7-MeFOSE	IS	37.5	20 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
d3-MeFOSA	IS	55.9	10 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
d9-EtFOSE	IS	32.3	15 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1
d5-EtFOSA	IS	38.6	10 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:00	1

RL - Reporting limit

The results are reported in dry weight.  
 The sample size is reported in wet weight.  
 Results reported to RL.

**Sample ID: OPR**
**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Solid	Lab Sample:	B24G098-BS1	Column:	BEH C18
Project:	DB24.1212.00 P1T1						

Analyte	Amt Found (ng/g)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	2.24	2.00	112	70 - 140		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFMPA	1.16	1.00	116	30 - 140		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
3:3 FTCA	2.68	2.50	107	45 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFPeA	1.14	1.00	114	60 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFMBA	1.12	1.00	112	60 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFBS	0.499	0.444	112	65 - 145		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
4:2 FTS	2.19	1.88	117	60 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFHxA	0.626	0.500	125	65 - 145		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFEESA	1.14	0.888	128	70 - 140		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFPeS	0.490	0.472	104	55 - 160		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
HFPO-DA	2.25	2.12	107	70 - 145		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
NFDHA	1.27	1.00	127	60 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
5:3 FTCA	12.7	12.5	102	60 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFHpA	0.557	0.500	111	65 - 145		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
ADONA	2.14	2.00	107	70 - 160		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFHxS	0.507	0.456	111	60 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
6:2 FTS	2.19	1.90	115	55 - 200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFOA	0.675	0.500	135	70 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFHpS	0.490	0.476	103	65 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
7:3 FTCA	12.2	12.5	98.0	60 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFNA	0.709	0.500	142	70 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFOSA	0.552	0.500	110	70 - 140		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFOS	0.526	0.464	113	65 - 160		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
9Cl-PF3ONS	2.24	1.98	113	70 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFDA	0.543	0.500	109	70 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
8:2 FTS	2.13	1.92	111	70 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFNS	0.534	0.480	111	55 - 140		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
MeFOSAA	0.525	0.500	105	65 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
EtFOSAA	0.614	0.500	123	65 - 165		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFUnA	0.489	0.500	97.8	70 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFDS	0.501	0.484	104	40 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
11Cl-PF3OUdS	2.12	2.00	106	45 - 160		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFDoA	0.524	0.500	105	70 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
MeFOSA	0.510	0.500	102	70 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1

**Sample ID: OPR**
**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Solid	Lab Sample:	B24G098-BS1	Column:	BEH C18
Project:	DB24.1212.00 P1T1						

Analyte	Amt Found (ng/g)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFTrDA	0.598	0.500	120	65 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFDoS	0.473	0.484	97.7	25 - 160		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
PFTeDA	0.615	0.500	123	65 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
EtFOSA	0.612	0.500	122	70 - 140		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
MeFOSE	5.10	5.00	102	70 - 140		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
EtFOSE	5.69	5.00	114	70 - 135		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	97.6	10 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C5-PFPeA	IS	102	35 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C2-4:2 FTS	IS	103	40 - 165		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C3-PFBS	IS	97.5	40 - 135		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C5-PFHxA	IS	88.8	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C4-PFHpA	IS	96.8	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C3-HFPO-DA	IS	93.5	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C2-6:2 FTS	IS	97.5	40 - 215		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C8-PFOA	IS	91.8	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C3-PFHxS	IS	96.7	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C9-PFNA	IS	93.5	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C2-8:2 FTS	IS	95.1	40 - 275		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C6-PFDA	IS	90.2	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
d3-MeFOSAA	IS	109	40 - 135		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C8-PFOS	IS	95.2	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
d5-EtFOSAA	IS	102	40 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C7-PFUnA	IS	109	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C8-PFOA	IS	80.8	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C2-PFDoA	IS	92.2	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
13C2-PFTeDA	IS	84.8	20 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
d7-MeFOSE	IS	40.9	20 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
d3-MeFOSA	IS	57.7	10 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
d9-EtFOSE	IS	34.2	15 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1
d5-EtFOSA	IS	39.2	10 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:13	1

**Sample ID: OPR**
**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Solid	Lab Sample:	B24G098-BS2	Column:	BEH C18
Project:	DB24.1212.00 P1T1						

Analyte	Amt Found (ng/g)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	1.57	1.60	98.4	70 - 140		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFMPA	0.798	0.800	99.8	30 - 140		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
3:3 FTCA	1.92	2.00	96.0	45 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFPeA	0.799	0.800	99.9	60 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFMBA	0.757	0.800	94.6	60 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFBS	0.345	0.355	97.2	65 - 145		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
4:2 FTS	1.44	1.50	96.1	60 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFHxA	0.370	0.400	92.5	65 - 145		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFEESA	0.715	0.712	100	70 - 140		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFPeS	0.334	0.376	88.7	55 - 160		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
HFPO-DA	1.59	1.60	99.5	70 - 145		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
NFDHA	0.742	0.800	92.8	60 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
5:3 FTCA	8.74	10.0	87.4	60 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFHpA	0.407	0.400	102	65 - 145		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
ADONA	1.48	1.51	98.1	70 - 160		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFHxS	0.371	0.366	101	60 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
6:2 FTS	1.51	1.52	99.6	55 - 200		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFOA	0.474	0.400	119	70 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFHpS	0.357	0.381	93.7	65 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
7:3 FTCA	7.72	10.0	77.2	60 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFNA	0.461	0.400	115	70 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFOSA	0.374	0.400	93.5	70 - 140		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFOS	0.413	0.371	111	65 - 160		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
9Cl-PF3ONS	1.63	1.50	109	70 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFDA	0.388	0.400	97.0	70 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
8:2 FTS	1.38	1.54	89.5	70 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFNS	0.405	0.385	105	55 - 140		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
MeFOSAA	0.417	0.400	104	65 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
EtFOSAA	0.352	0.400	88.0	65 - 165		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFUnA	0.379	0.400	94.8	70 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFDS	0.369	0.386	95.6	40 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
11Cl-PF3OUdS	1.46	1.51	96.8	45 - 160		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFDoA	0.393	0.400	98.3	70 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
MeFOSA	0.397	0.400	99.3	70 - 155		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1

**Sample ID: OPR**
**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Solid	Lab Sample:	B24G098-BS2	Column:	BEH C18
Project:	DB24.1212.00 P1T1						

Analyte	Amt Found (ng/g)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFTrDA	0.405	0.400	101	65 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFDoS	0.318	0.388	82.0	25 - 160		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
PFTeDA	0.418	0.400	105	65 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
EtFOSA	0.486	0.400	122	70 - 140		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
MeFOSE	3.82	4.00	95.5	70 - 140		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
EtFOSE	4.13	4.00	103	70 - 135		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	104	10 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C5-PFPeA	IS	101	35 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C2-4:2 FTS	IS	116	40 - 165		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C3-PFBS	IS	106	40 - 135		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C5-PFHxA	IS	97.9	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C4-PFHpA	IS	95.9	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C3-HFPO-DA	IS	93.3	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C2-6:2 FTS	IS	105	40 - 215		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C8-PFOA	IS	102	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C3-PFHxS	IS	106	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C9-PFNA	IS	102	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C2-8:2 FTS	IS	114	40 - 275		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C6-PFDA	IS	99.9	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
d3-MeFOSAA	IS	112	40 - 135		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C8-PFOS	IS	101	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
d5-EtFOSAA	IS	116	40 - 150		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C7-PFUnA	IS	110	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C8-PFOA	IS	89.1	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C2-PFDoA	IS	94.2	40 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
13C2-PFTeDA	IS	84.6	20 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
d7-MeFOSE	IS	27.8	20 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
d3-MeFOSA	IS	38.4	10 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
d9-EtFOSE	IS	21.2	15 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1
d5-EtFOSA	IS	20.8	10 - 130		B24G098	15-Jul-24	5.00 g	17-Jul-24 11:27	1



**Sample ID: SB-3@2.0**

**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-01	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 12:10	Date Received:	10-Jul-24 09:20		
				% Solids:	80.2		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	1.13	0.799		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFMPA	ND	0.399		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
3:3 FTCA	ND	0.998		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFPeA	2.07	0.398		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFMBA	ND	0.399		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFBS	1.88	0.177		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
4:2 FTS	ND	0.749		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFHxA	2.80	0.200		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFEESA	ND	0.355		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFPeS	ND	0.188		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
HFPO-DA	ND	0.833		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
NFDHA	ND	0.399		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
5:3 FTCA	ND	4.99		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFHpA	2.28	0.200		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
ADONA	ND	0.789		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFHxS	1.53	0.183		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
6:2 FTS	ND	0.758		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFOA	13.1	0.200		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFHpS	ND	0.190		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
7:3 FTCA	ND	4.99		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFNA	0.835	0.200		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFOSA	0.521	0.200	I	B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFOS	6.57	0.186		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
9Cl-PF3ONS	ND	0.779		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFDA	0.742	0.200		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
8:2 FTS	ND	0.767		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFNS	ND	0.192		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
MeFOSAA	0.320	0.200		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
EtFOSAA	0.766	0.200		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFUnA	ND	0.200		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFDS	0.486	0.193		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
11Cl-PF3OUdS	ND	0.789		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFDoA	ND	0.200		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
MeFOSA	ND	0.200		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFTTrDA	ND	0.200		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFDoS	ND	0.194		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
PFTTeDA	ND	0.200		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1

**Sample ID: SB-3@2.0** **EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-01	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 12:10	Date Received:	10-Jul-24 09:20		
				% Solids:	80.2		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
EtFOSA	ND	0.200		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
MeFOSE	ND	2.00		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
EtFOSE	ND	2.00		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	102	10 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C5-PFPeA	IS	109	35 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C2-4:2 FTS	IS	112	40 - 135		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C3-PFBS	IS	110	40 - 135		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C5-PFHxA	IS	105	40 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C4-PFHpA	IS	108	40 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C3-HFPO-DA	IS	101	40 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C2-6:2 FTS	IS	106	40 - 215		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C8-PFOA	IS	104	40 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C3-PFHxS	IS	113	40 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C9-PFNA	IS	101	40 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C2-8:2 FTS	IS	97.5	40 - 275		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C6-PFDA	IS	94.7	40 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
d3-MeFOSAA	IS	98.7	40 - 135		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C8-PFOS	IS	108	40 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
d5-EtFOSAA	IS	105	40 - 150		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C7-PFUnA	IS	112	40 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C8-PFOA	IS	83.6	40 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C2-PFDoA	IS	95.0	40 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
13C2-PFTeDA	IS	88.6	20 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
d7-MeFOSE	IS	43.1	20 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
d3-MeFOSA	IS	14.8	10 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
d9-EtFOSE	IS	37.0	15 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1
d5-EtFOSA	IS	10.6	10 - 130		B24G098	15-Jul-24	6.25 g	17-Jul-24 12:08	1

RL - Reporting limit

The results are reported in dry weight.  
 The sample size is reported in wet weight.  
 Results reported to RL.

Sample ID: SB-10@2.0

EPA Method 1633

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-02	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 12:20	Date Received:	10-Jul-24 09:20		
				% Solids:	79.3		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	0.970	0.798		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFMPA	ND	0.399		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
3:3 FTCA	ND	0.996		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFPeA	1.72	0.398		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFMBA	ND	0.399		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFBS	1.69	0.176		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
4:2 FTS	ND	0.747		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFHxA	2.40	0.199		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFEESA	ND	0.355		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFPeS	ND	0.187		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
HFPO-DA	ND	0.832		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
NFDHA	ND	0.399		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
5:3 FTCA	ND	4.98		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFHpA	2.42	0.199		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
ADONA	ND	0.787		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFHxS	1.69	0.182		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
6:2 FTS	ND	0.756		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFOA	15.4	0.199		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFHpS	0.193	0.189		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
7:3 FTCA	ND	4.98		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFNA	0.880	0.199		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFOSA	0.548	0.199		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFOS	7.87	0.185		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
9Cl-PF3ONS	ND	0.777		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFDA	0.834	0.199		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
8:2 FTS	ND	0.765		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFNS	ND	0.191		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
MeFOSAA	0.415	0.199		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
EtFOSAA	0.938	0.199		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFUnA	ND	0.199		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFDS	0.546	0.192		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
11Cl-PF3OUdS	ND	0.787		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFDoA	ND	0.199		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
MeFOSA	ND	0.199		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFTTrDA	ND	0.199		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFDoS	ND	0.193		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
PFTTeDA	ND	0.199		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1

**Sample ID: SB-10@2.0** **EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-02	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 12:20	Date Received:	10-Jul-24 09:20		
				% Solids:	79.3		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
EtFOSA	ND	0.199		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
MeFOSE	ND	1.99		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
EtFOSE	ND	1.99		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	104	10 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C5-PFPeA	IS	106	35 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C2-4:2 FTS	IS	111	40 - 135		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C3-PFBS	IS	110	40 - 135		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C5-PFHxA	IS	96.8	40 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C4-PFHpA	IS	100	40 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C3-HFPO-DA	IS	100	40 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C2-6:2 FTS	IS	110	40 - 215		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C8-PFOA	IS	102	40 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C3-PFHxS	IS	108	40 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C9-PFNA	IS	112	40 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C2-8:2 FTS	IS	128	40 - 275		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C6-PFDA	IS	101	40 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
d3-MeFOSAA	IS	105	40 - 135		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C8-PFOS	IS	112	40 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
d5-EtFOSAA	IS	107	40 - 150		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C7-PFUnA	IS	114	40 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C8-PFOA	IS	87.7	40 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C2-PFDoA	IS	95.0	40 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
13C2-PFTeDA	IS	94.8	20 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
d7-MeFOSE	IS	41.9	20 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
d3-MeFOSA	IS	14.1	10 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
d9-EtFOSE	IS	36.0	15 - 130		B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1
d5-EtFOSA	IS	8.99	10 - 130	Q	B24G098	15-Jul-24	6.33 g	17-Jul-24 12:21	1

RL - Reporting limit

The results are reported in dry weight.  
 The sample size is reported in wet weight.  
 Results reported to RL.

**Sample ID: SB-2@2.0**

**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-03	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 12:45	Date Received:	10-Jul-24 09:20		
				% Solids:	78.6		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	0.994	0.800		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFMPA	ND	0.400		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
3:3 FTCA	ND	0.999		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFPeA	2.48	0.399		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFMBA	ND	0.400		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFBS	3.99	0.177		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
4:2 FTS	ND	0.749		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFHxA	4.36	0.200		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFEESA	ND	0.356		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFPeS	0.465	0.188		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
HFPO-DA	ND	0.834		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
NFDHA	ND	0.400		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
5:3 FTCA	ND	5.00		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFHpA	6.53	0.200		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
ADONA	ND	0.789		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFHxS	5.55	0.183		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
6:2 FTS	ND	0.758		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFOA	35.2	0.200		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFHpS	1.51	0.190		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
7:3 FTCA	ND	5.00		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFNA	5.07	0.200		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFOSA	6.93	0.200		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFOS	119	0.186		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
9Cl-PF3ONS	ND	0.779		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFDA	11.6	0.200		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
8:2 FTS	ND	0.767		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFNS	0.362	0.192		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
MeFOSAA	14.2	0.200		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
EtFOSAA	31.7	0.200		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFUnA	1.56	0.200		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFDS	27.7	0.193		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
11Cl-PF3OUdS	ND	0.789		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFDoA	4.34	0.200		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
MeFOSA	0.413	0.200		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFTTrDA	0.432	0.200		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFDoS	ND	0.194		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
PFTTeDA	1.26	0.200		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1

Sample ID: SB-2@2.0					EPA Method 1633					
Client Data				Laboratory Data						
Name:	Hazen & Sawyer		Matrix:	Soil		Lab Sample:	2407083-03		Column:	BEH C18
Project:	DB24.1212.00 P1T1		Date Collected:	03-Jul-24 12:45		Date Received:	10-Jul-24 09:20			
				% Solids:	78.6					
Analyte	Conc. (ng/g)			RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
EtFOSA	0.289			0.200		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
MeFOSE	3.25			2.00		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
EtFOSE	ND			2.00		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
Labeled Standards	Type	% Recovery		Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	101		10 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C5-PFPeA	IS	96.0		35 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C2-4:2 FTS	IS	122		40 - 135		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C3-PFBS	IS	112		40 - 135		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C5-PFHxA	IS	96.0		40 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C4-PFHpA	IS	93.1		40 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C3-HFPO-DA	IS	93.6		40 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C2-6:2 FTS	IS	113		40 - 215		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C8-PFOA	IS	107		40 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C3-PFHxS	IS	109		40 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C9-PFNA	IS	96.6		40 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C2-8:2 FTS	IS	144		40 - 275		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C6-PFDA	IS	106		40 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
d3-MeFOSAA	IS	86.3		40 - 135		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C8-PFOS	IS	97.6		40 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
d5-EtFOSAA	IS	104		40 - 150		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C7-PFUnA	IS	104		40 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C8-PFOSA	IS	76.0		40 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C2-PFDoA	IS	89.1		40 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
13C2-PFTeDA	IS	88.9		20 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
d7-MeFOSE	IS	55.9		20 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
d3-MeFOSA	IS	28.3		10 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
d9-EtFOSE	IS	60.6		15 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1
d5-EtFOSA	IS	21.5		10 - 130		B24G098	15-Jul-24	6.37 g	17-Jul-24 12:35	1

RL - Reporting limit

The results are reported in dry weight.  
 The sample size is reported in wet weight.  
 Results reported to RL.

Sample ID: SB-6@2.0

EPA Method 1633

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-04	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 13:40	Date Received:	10-Jul-24 09:20		
				% Solids:	81.9		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	ND	0.800		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFMPA	ND	0.400		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
3:3 FTCA	ND	0.999		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFPeA	0.734	0.399		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFMBA	ND	0.400		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFBS	ND	0.177		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
4:2 FTS	ND	0.749		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFHxA	0.477	0.200		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFEESA	ND	0.356		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFPeS	ND	0.188		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
HFPO-DA	ND	0.834		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
NFDHA	ND	0.400		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
5:3 FTCA	ND	5.00		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFHpA	ND	0.200		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
ADONA	ND	0.789		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFHxS	ND	0.183		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
6:2 FTS	ND	0.758		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFOA	0.280	0.200		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFHpS	ND	0.190		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
7:3 FTCA	ND	5.00		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFNA	ND	0.200		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFOSA	ND	0.200		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFOS	0.464	0.186		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
9Cl-PF3ONS	ND	0.779		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFDA	ND	0.200		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
8:2 FTS	ND	0.767		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFNS	ND	0.192		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
MeFOSAA	ND	0.200		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
EtFOSAA	ND	0.200		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFUnA	ND	0.200		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFDS	ND	0.193		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
11Cl-PF3OUdS	ND	0.789		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFDoA	ND	0.200		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
MeFOSA	ND	0.200		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFTTrDA	ND	0.200		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFDoS	ND	0.194		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
PFTTeDA	ND	0.200		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1

**Sample ID: SB-6@2.0** **EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-04	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 13:40	Date Received:	10-Jul-24 09:20		
				% Solids:	81.9		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
EtFOSA	ND	0.200		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
MeFOSE	ND	2.00		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
EtFOSE	ND	2.00		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	99.5	10 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C5-PFPeA	IS	114	35 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C2-4:2 FTS	IS	101	40 - 135		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C3-PFBS	IS	104	40 - 135		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C5-PFHxA	IS	109	40 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C4-PFHpA	IS	109	40 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C3-HFPO-DA	IS	101	40 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C2-6:2 FTS	IS	94.3	40 - 215		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C8-PFOA	IS	99.3	40 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C3-PFHxS	IS	104	40 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C9-PFNA	IS	95.1	40 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C2-8:2 FTS	IS	100	40 - 275		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C6-PFDA	IS	97.0	40 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
d3-MeFOSAA	IS	70.7	40 - 135		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C8-PFOS	IS	105	40 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
d5-EtFOSAA	IS	84.6	40 - 150		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C7-PFUnA	IS	106	40 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C8-PFOSA	IS	70.5	40 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C2-PFDoA	IS	79.7	40 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
13C2-PFTeDA	IS	89.3	20 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
d7-MeFOSE	IS	18.2	20 - 130	Q	B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
d3-MeFOSA	IS	7.30	10 - 130	Q	B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
d9-EtFOSE	IS	15.5	15 - 130		B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1
d5-EtFOSA	IS	4.91	10 - 130	Q	B24G098	15-Jul-24	6.11 g	17-Jul-24 12:48	1

RL - Reporting limit

The results are reported in dry weight.  
 The sample size is reported in wet weight.  
 Results reported to RL.



Sample ID: SB-7@0-0.5

EPA Method 1633

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-06	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 14:10	Date Received:	10-Jul-24 09:20		
				% Solids:	52.3		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	6.01	0.798		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFMPA	ND	0.398		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
3:3 FTCA	ND	0.996		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFPeA	17.1	0.397		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFMBA	ND	0.398		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFBS	20.2	0.176		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
4:2 FTS	ND	0.747		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFHxA	23.8	0.199		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFEESA	ND	0.355		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFPeS	0.207	0.187		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
HFPO-DA	ND	0.832		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
NFDHA	ND	0.398		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
5:3 FTCA	ND	4.98		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFHpA	7.67	0.199		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
ADONA	ND	0.787		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFHxS	3.75	0.182		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
6:2 FTS	3.28	0.756		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFOA	33.3	0.199		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFHpS	0.343	0.189		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
7:3 FTCA	ND	4.98		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFNA	15.8	0.199		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFOSA	2.81	0.199	I	B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFOS	30.7	0.185		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
9Cl-PF3ONS	ND	0.777		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFDA	28.2	0.199		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
8:2 FTS	3.74	0.765		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFNS	ND	0.191		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
MeFOSAA	24.8	0.199		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
EtFOSAA	10.4	0.199		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFUnA	6.51	0.199		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFDS	4.35	0.192		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
11Cl-PF3OUdS	ND	0.787		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFDoA	9.28	0.199		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
MeFOSA	ND	0.199		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFTTrDA	1.25	0.199		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFDoS	ND	0.193		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
PFTTeDA	2.26	0.199		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1

**Sample ID: SB-7@0-0.5** **EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-06	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 14:10	Date Received:	10-Jul-24 09:20		
				% Solids:	52.3		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
EtFOSA	ND	0.199		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
MeFOSE	3.88	1.99		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
EtFOSE	2.04	1.99		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	92.2	10 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C5-PFPeA	IS	79.4	35 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C2-4:2 FTS	IS	184	40 - 135	Q	B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C3-PFBS	IS	91.4	40 - 135		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C5-PFHxA	IS	98.1	40 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C4-PFHpA	IS	98.2	40 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C3-HFPO-DA	IS	84.0	40 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C2-6:2 FTS	IS	145	40 - 215		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C8-PFOA	IS	96.1	40 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C3-PFHxS	IS	98.4	40 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C9-PFNA	IS	99.7	40 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C2-8:2 FTS	IS	180	40 - 275		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C6-PFDA	IS	110	40 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
d3-MeFOSAA	IS	71.4	40 - 135		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C8-PFOS	IS	91.6	40 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
d5-EtFOSAA	IS	72.2	40 - 150		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C7-PFUnA	IS	66.8	40 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C8-PFOSA	IS	51.5	40 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C2-PFDoA	IS	70.4	40 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
13C2-PFTeDA	IS	72.6	20 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
d7-MeFOSE	IS	39.7	20 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
d3-MeFOSA	IS	11.2	10 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
d9-EtFOSE	IS	41.6	15 - 130		B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1
d5-EtFOSA	IS	8.67	10 - 130	Q	B24G098	15-Jul-24	9.60 g	17-Jul-24 13:02	1

RL - Reporting limit

The results are reported in dry weight.  
 The sample size is reported in wet weight.  
 Results reported to RL.

Sample ID: SB-11@0-0.5

EPA Method 1633

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-07	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 14:20	Date Received:	10-Jul-24 09:20		
				% Solids:	53.8		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	5.76	0.801		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFMPA	ND	0.400		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
3:3 FTCA	ND	1.00		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFPeA	15.8	0.399		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFMBA	ND	0.400		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFBS	18.6	0.177		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
4:2 FTS	ND	0.750		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFHxA	22.7	0.200		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFEESA	ND	0.356		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFPeS	0.195	0.188		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
HFPO-DA	ND	0.835		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
NFDHA	ND	0.400		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
5:3 FTCA	ND	5.00		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFHpA	7.21	0.200		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
ADONA	ND	0.790		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFHxS	3.39	0.183		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
6:2 FTS	2.88	0.759		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFOA	30.4	0.200		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFHpS	0.355	0.190		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
7:3 FTCA	ND	5.00		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFNA	15.4	0.200		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFOSA	2.59	0.200	I	B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFOS	26.6	0.186		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
9Cl-PF3ONS	ND	0.780		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFDA	26.6	0.200		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
8:2 FTS	3.74	0.768		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFNS	ND	0.192		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
MeFOSAA	24.0	0.200		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
EtFOSAA	9.39	0.200		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFUnA	5.83	0.200		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFDS	4.01	0.193		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
11Cl-PF3OUdS	ND	0.790		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFDoA	8.57	0.200		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
MeFOSA	ND	0.200		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFTTrDA	1.21	0.200		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFDoS	ND	0.194		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
PFTTeDA	2.08	0.200		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1

Sample ID: SB-11@0-0.5

EPA Method 1633

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-07	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 14:20	Date Received:	10-Jul-24 09:20		
				% Solids:	53.8		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
EtFOSA	ND	0.200		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
MeFOSE	3.61	2.00		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
EtFOSE	2.12	2.00		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	95.8	10 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C5-PFPeA	IS	83.6	35 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C2-4:2 FTS	IS	175	40 - 135	Q	B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C3-PFBS	IS	92.1	40 - 135		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C5-PFHxA	IS	101	40 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C4-PFHpA	IS	100	40 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C3-HFPO-DA	IS	89.3	40 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C2-6:2 FTS	IS	149	40 - 215		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C8-PFOA	IS	103	40 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C3-PFHxS	IS	97.6	40 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C9-PFNA	IS	97.3	40 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C2-8:2 FTS	IS	178	40 - 275		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C6-PFDA	IS	117	40 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
d3-MeFOSAA	IS	71.3	40 - 135		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C8-PFOS	IS	94.9	40 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
d5-EtFOSAA	IS	77.7	40 - 150		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C7-PFUnA	IS	72.3	40 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C8-PFOSA	IS	50.0	40 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C2-PFDoA	IS	79.1	40 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
13C2-PFTeDA	IS	80.3	20 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
d7-MeFOSE	IS	35.7	20 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
d3-MeFOSA	IS	9.40	10 - 130	Q	B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
d9-EtFOSE	IS	37.6	15 - 130		B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1
d5-EtFOSA	IS	7.65	10 - 130	Q	B24G098	15-Jul-24	9.29 g	17-Jul-24 13:15	1

RL - Reporting limit

The results are reported in dry weight.  
 The sample size is reported in wet weight.  
 Results reported to RL.

Sample ID: SB-7@2.0

EPA Method 1633

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-08	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 14:30	Date Received:	10-Jul-24 09:20		
				% Solids:	86.4		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	ND	0.801		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFMPA	ND	0.400		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
3:3 FTCA	ND	1.00		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFPeA	1.39	0.399		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFMBA	ND	0.400		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFBS	0.945	0.177		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
4:2 FTS	ND	0.750		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFHxA	1.45	0.200		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFEESA	ND	0.356		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFPeS	ND	0.188		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
HFPO-DA	ND	0.835		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
NFDHA	ND	0.400		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
5:3 FTCA	ND	5.00		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFHpA	ND	0.200		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
ADONA	ND	0.790		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFHxS	ND	0.183		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
6:2 FTS	ND	0.759		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFOA	ND	0.200		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFHpS	ND	0.190		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
7:3 FTCA	ND	5.00		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFNA	ND	0.200		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFOSA	ND	0.200		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFOS	ND	0.186		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
9Cl-PF3ONS	ND	0.780		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFDA	ND	0.200		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
8:2 FTS	ND	0.768		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFNS	ND	0.192		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
MeFOSAA	ND	0.200		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
EtFOSAA	ND	0.200		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFUnA	ND	0.200		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFDS	ND	0.193		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
11Cl-PF3OUdS	ND	0.790		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFDoA	ND	0.200		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
MeFOSA	ND	0.200		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFTTrDA	ND	0.200		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFDoS	ND	0.194		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
PFTeDA	ND	0.200		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1

**Sample ID: SB-7@2.0** **EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-08	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 14:30	Date Received:	10-Jul-24 09:20		
				% Solids:	86.4		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
EtFOSA	ND	0.200		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1	
MeFOSE	ND	2.00		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1	
EtFOSE	ND	2.00		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	91.2	10 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C5-PFPeA	IS	98.1	35 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C2-4:2 FTS	IS	108	40 - 135		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C3-PFBS	IS	106	40 - 135		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C5-PFHxA	IS	92.9	40 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C4-PFHpA	IS	94.6	40 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C3-HFPO-DA	IS	94.7	40 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C2-6:2 FTS	IS	101	40 - 215		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C8-PFOA	IS	90.0	40 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C3-PFHxS	IS	102	40 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C9-PFNA	IS	96.1	40 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C2-8:2 FTS	IS	107	40 - 275		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C6-PFDA	IS	96.8	40 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
d3-MeFOSAA	IS	67.8	40 - 135		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C8-PFOS	IS	98.0	40 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
d5-EtFOSAA	IS	93.8	40 - 150		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C7-PFUnA	IS	110	40 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C8-PFOA	IS	75.4	40 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C2-PFDoA	IS	102	40 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
13C2-PFTeDA	IS	97.4	20 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
d7-MeFOSE	IS	46.1	20 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
d3-MeFOSA	IS	19.7	10 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
d9-EtFOSE	IS	48.2	15 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1
d5-EtFOSA	IS	14.6	10 - 130		B24G098	15-Jul-24	5.79 g	17-Jul-24 13:29	1

RL - Reporting limit

The results are reported in dry weight.  
 The sample size is reported in wet weight.  
 Results reported to RL.

Sample ID: SB-5@2.0

EPA Method 1633

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-09	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 15:00	Date Received:	10-Jul-24 09:20		
				% Solids:	78.0		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	ND	0.800		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFMPA	ND	0.399		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
3:3 FTCA	ND	0.999		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFPeA	2.12	0.398		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFMBA	ND	0.399		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFBS	0.909	0.177		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
4:2 FTS	ND	0.749		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFHxA	4.39	0.200		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFEESA	ND	0.355		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFPeS	0.399	0.188		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
HFPO-DA	ND	0.834		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
NFDHA	ND	0.399		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
5:3 FTCA	ND	4.99		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFHpA	2.97	0.200		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
ADONA	ND	0.789		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFHxS	0.225	0.183		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
6:2 FTS	ND	0.758		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFOA	0.742	0.200		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFHpS	ND	0.190		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
7:3 FTCA	ND	4.99		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFNA	ND	0.200		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFOSA	ND	0.200		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFOS	0.663	0.186		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
9Cl-PF3ONS	ND	0.779		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFDA	0.237	0.200		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
8:2 FTS	ND	0.767		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFNS	ND	0.192		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
MeFOSAA	ND	0.200		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
EtFOSAA	ND	0.200		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFUnA	ND	0.200		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFDS	ND	0.193		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
11Cl-PF3OUdS	ND	0.789		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFDoA	ND	0.200		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
MeFOSA	ND	0.200		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFTTrDA	ND	0.200		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFDoS	ND	0.194		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
PFTTeDA	ND	0.200		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1

**Sample ID: SB-5@2.0** **EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-09	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 15:00	Date Received:	10-Jul-24 09:20		
				% Solids:	78.0		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
EtFOSA	ND	0.200		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
MeFOSE	ND	2.00		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
EtFOSE	ND	2.00		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	98.0	10 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C5-PFPeA	IS	97.1	35 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C2-4:2 FTS	IS	101	40 - 135		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C3-PFBS	IS	112	40 - 135		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C5-PFHxA	IS	90.2	40 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C4-PFHpA	IS	97.9	40 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C3-HFPO-DA	IS	93.4	40 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C2-6:2 FTS	IS	96.0	40 - 215		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C8-PFOA	IS	99.1	40 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C3-PFHxS	IS	101	40 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C9-PFNA	IS	93.3	40 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C2-8:2 FTS	IS	114	40 - 275		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C6-PFDA	IS	97.5	40 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
d3-MeFOSAA	IS	77.9	40 - 135		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C8-PFOS	IS	100	40 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
d5-EtFOSAA	IS	87.4	40 - 150		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C7-PFUnA	IS	105	40 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C8-PFOSA	IS	71.3	40 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C2-PFDoA	IS	91.4	40 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
13C2-PFTeDA	IS	93.9	20 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
d7-MeFOSE	IS	25.5	20 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
d3-MeFOSA	IS	7.05	10 - 130	Q	B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
d9-EtFOSE	IS	24.8	15 - 130		B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1
d5-EtFOSA	IS	5.07	10 - 130	Q	B24G098	15-Jul-24	6.42 g	17-Jul-24 13:42	1

RL - Reporting limit

The results are reported in dry weight.  
 The sample size is reported in wet weight.  
 Results reported to RL.



Sample ID: SB-12@2.0

EPA Method 1633

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-10	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 15:10	Date Received:	10-Jul-24 09:20		
				% Solids:	78.4		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	ND	0.798		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFMPA	ND	0.398		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
3:3 FTCA	ND	0.996		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFPeA	2.46	0.397		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFMBA	ND	0.398		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFBS	1.06	0.176		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
4:2 FTS	ND	0.747		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFHxA	4.64	0.199		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFEESA	ND	0.355		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFPeS	0.417	0.187		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
HFPO-DA	ND	0.832		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
NFDHA	ND	0.398		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
5:3 FTCA	ND	4.98		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFHpA	3.30	0.199		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
ADONA	ND	0.787		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFHxS	0.254	0.182		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
6:2 FTS	ND	0.756		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFOA	0.895	0.199		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFHpS	ND	0.189		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
7:3 FTCA	ND	4.98		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFNA	ND	0.199		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFOSA	ND	0.199		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFOS	0.807	0.185		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
9Cl-PF3ONS	ND	0.777		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFDA	0.252	0.199		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
8:2 FTS	ND	0.765		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFNS	ND	0.191		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
MeFOSAA	ND	0.199		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
EtFOSAA	0.235	0.199		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFUnA	ND	0.199		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFDS	ND	0.192		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
11Cl-PF3OUdS	ND	0.787		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFDoA	ND	0.199		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
MeFOSA	ND	0.199		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFTTrDA	ND	0.199		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFDoS	ND	0.193		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
PFTTeDA	ND	0.199		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1

**Sample ID: SB-12@2.0** **EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-10	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 15:10	Date Received:	10-Jul-24 09:20		
				% Solids:	78.4		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
EtFOSA	ND	0.199		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1	
MeFOSE	ND	1.99		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1	
EtFOSE	ND	1.99		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	96.9	10 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C5-PFPeA	IS	90.4	35 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C2-4:2 FTS	IS	104	40 - 135		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C3-PFBS	IS	111	40 - 135		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C5-PFHxA	IS	87.9	40 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C4-PFHpA	IS	87.5	40 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C3-HFPO-DA	IS	85.9	40 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C2-6:2 FTS	IS	98.9	40 - 215		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C8-PFOA	IS	95.7	40 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C3-PFHxS	IS	100	40 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C9-PFNA	IS	92.3	40 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C2-8:2 FTS	IS	116	40 - 275		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C6-PFDA	IS	90.3	40 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
d3-MeFOSAA	IS	82.5	40 - 135		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C8-PFOS	IS	98.7	40 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
d5-EtFOSAA	IS	88.1	40 - 150		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C7-PFUnA	IS	101	40 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C8-PFOA	IS	78.4	40 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C2-PFDoA	IS	85.8	40 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
13C2-PFTeDA	IS	85.3	20 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
d7-MeFOSE	IS	38.1	20 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
d3-MeFOA	IS	16.1	10 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
d9-EtFOSE	IS	37.1	15 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1
d5-EtFOA	IS	10.9	10 - 130		B24G098	15-Jul-24	6.40 g	17-Jul-24 13:56	1

RL - Reporting limit

The results are reported in dry weight.  
 The sample size is reported in wet weight.  
 Results reported to RL.

**Sample ID: SB-4@2.0**

**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-11	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 15:20	Date Received:	10-Jul-24 09:20		
				% Solids:	80.2		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	ND	0.800		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFMPA	ND	0.400		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
3:3 FTCA	ND	0.999		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFPeA	1.07	0.399		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFMBA	ND	0.400		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFBS	0.235	0.177		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
4:2 FTS	ND	0.749		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFHxA	2.06	0.200		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFEESA	ND	0.356		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFPeS	ND	0.188		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
HFPO-DA	ND	0.834		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
NFDHA	ND	0.400		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
5:3 FTCA	ND	4.99		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFHpA	0.695	0.200		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
ADONA	ND	0.789		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFHxS	ND	0.183		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
6:2 FTS	ND	0.758		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFOA	0.635	0.200		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFHpS	ND	0.190		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
7:3 FTCA	ND	4.99		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFNA	ND	0.200		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFOSA	ND	0.200		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFOS	1.46	0.186		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
9Cl-PF3ONS	ND	0.779		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFDA	ND	0.200		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
8:2 FTS	ND	0.767		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFNS	ND	0.192		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
MeFOSAA	ND	0.200		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
EtFOSAA	0.587	0.200		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFUnA	ND	0.200		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFDS	0.362	0.193		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
11Cl-PF3OUdS	ND	0.789		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFDoA	ND	0.200		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
MeFOSA	ND	0.200		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFTTrDA	ND	0.200		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFDoS	ND	0.194		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
PFTTeDA	ND	0.200		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1

**Sample ID: SB-4@2.0** **EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-11	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 15:20	Date Received:	10-Jul-24 09:20		
				% Solids:	80.2		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
EtFOSA	ND	0.200		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
MeFOSE	ND	2.00		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
EtFOSE	ND	2.00		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	96.5	10 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C5-PFPeA	IS	93.4	35 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C2-4:2 FTS	IS	102	40 - 135		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C3-PFBS	IS	103	40 - 135		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C5-PFHxA	IS	84.3	40 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C4-PFHpA	IS	91.1	40 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C3-HFPO-DA	IS	86.2	40 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C2-6:2 FTS	IS	101	40 - 215		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C8-PFOA	IS	96.6	40 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C3-PFHxS	IS	102	40 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C9-PFNA	IS	89.5	40 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C2-8:2 FTS	IS	108	40 - 275		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C6-PFDA	IS	87.1	40 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
d3-MeFOSAA	IS	83.3	40 - 135		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C8-PFOS	IS	101	40 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
d5-EtFOSAA	IS	93.4	40 - 150		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C7-PFUnA	IS	101	40 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C8-PFOSA	IS	75.7	40 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C2-PFDoA	IS	79.2	40 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
13C2-PFTeDA	IS	87.0	20 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
d7-MeFOSE	IS	36.4	20 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
d3-MeFOSA	IS	15.2	10 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
d9-EtFOSE	IS	37.5	15 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1
d5-EtFOSA	IS	10.3	10 - 130		B24G098	15-Jul-24	6.24 g	17-Jul-24 19:07	1

RL - Reporting limit

The results are reported in dry weight.  
 The sample size is reported in wet weight.  
 Results reported to RL.

Sample ID: SB-1@2.0

EPA Method 1633

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-12	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 15:50	Date Received:	10-Jul-24 09:20		
				% Solids:	87.3		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	ND	0.798		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFMPA	ND	0.398		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
3:3 FTCA	ND	0.996		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFPeA	ND	0.397		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFMBA	ND	0.398		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFBS	ND	0.176		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
4:2 FTS	ND	0.747		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFHxA	ND	0.199		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFEESA	ND	0.355		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFPeS	ND	0.187		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
HFPO-DA	ND	0.832		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
NFDHA	ND	0.398		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
5:3 FTCA	ND	4.98		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFHpA	ND	0.199		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
ADONA	ND	0.787		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFHxS	ND	0.182		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
6:2 FTS	ND	0.756		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFOA	ND	0.199		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFHpS	ND	0.189		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
7:3 FTCA	ND	4.98		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFNA	ND	0.199		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFOSA	ND	0.199		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFOS	ND	0.185		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
9Cl-PF3ONS	ND	0.777		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFDA	ND	0.199		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
8:2 FTS	ND	0.765		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFNS	ND	0.191		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
MeFOSAA	ND	0.199		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
EtFOSAA	ND	0.199		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFUnA	ND	0.199		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFDS	ND	0.192		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
11Cl-PF3OUdS	ND	0.787		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFDoA	ND	0.199		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
MeFOSA	ND	0.199		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFTTrDA	ND	0.199		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFDoS	ND	0.193		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
PFTTeDA	ND	0.199		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1

**Sample ID: SB-1@2.0** **EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-12	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 15:50	Date Received:	10-Jul-24 09:20		
				% Solids:	87.3		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
EtFOSE	ND	0.199		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
MeFOSE	ND	1.99		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
EtFOSE	ND	1.99		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	99.6	10 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C5-PFPeA	IS	95.2	35 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C2-4:2 FTS	IS	113	40 - 135		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C3-PFBS	IS	118	40 - 135		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C5-PFHxA	IS	98.7	40 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C4-PFHpA	IS	95.5	40 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C3-HFPO-DA	IS	90.1	40 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C2-6:2 FTS	IS	108	40 - 215		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C8-PFOA	IS	101	40 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C3-PFHxS	IS	109	40 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C9-PFNA	IS	98.8	40 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C2-8:2 FTS	IS	96.7	40 - 275		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C6-PFDA	IS	89.5	40 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
d3-MeFOSAA	IS	105	40 - 135		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C8-PFOS	IS	105	40 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
d5-EtFOSAA	IS	117	40 - 150		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C7-PFUnA	IS	110	40 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C8-PFOSA	IS	87.8	40 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C2-PFDoA	IS	99.7	40 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
13C2-PFTeDA	IS	95.2	20 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
d7-MeFOSE	IS	46.5	20 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
d3-MeFOSE	IS	33.2	10 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
d9-EtFOSE	IS	41.5	15 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1
d5-EtFOSE	IS	23.2	10 - 130		B24G098	15-Jul-24	5.75 g	17-Jul-24 15:17	1

RL - Reporting limit

The results are reported in dry weight.  
 The sample size is reported in wet weight.  
 Results reported to RL.

**Sample ID: SB-8@2.0**

**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-13	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 16:30	Date Received:	10-Jul-24 09:20		
				% Solids:	92.1		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	ND	0.798		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFMPA	ND	0.399		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
3:3 FTCA	ND	0.996		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFPeA	ND	0.398		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFMBA	ND	0.399		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFBS	ND	0.176		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
4:2 FTS	ND	0.747		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFHxA	ND	0.199		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFEESA	ND	0.355		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFPeS	ND	0.187		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
HFPO-DA	ND	0.832		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
NFDHA	ND	0.399		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
5:3 FTCA	ND	4.98		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFHpA	ND	0.199		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
ADONA	ND	0.787		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFHxS	ND	0.182		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
6:2 FTS	ND	0.756		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFOA	ND	0.199		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFHpS	ND	0.189		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
7:3 FTCA	ND	4.98		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFNA	ND	0.199		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFOSA	ND	0.199		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFOS	ND	0.185		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
9Cl-PF3ONS	ND	0.777		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFDA	ND	0.199		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
8:2 FTS	ND	0.765		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFNS	ND	0.191		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
MeFOSAA	ND	0.199		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
EtFOSAA	ND	0.199		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFUnA	ND	0.199		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFDS	ND	0.192		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
11Cl-PF3OUdS	ND	0.787		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFDoA	ND	0.199		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
MeFOSA	ND	0.199		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFTTrDA	ND	0.199		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFDoS	ND	0.193		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
PFTTeDA	ND	0.199		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1

**Sample ID: SB-8@2.0** **EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-13	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 16:30	Date Received:	10-Jul-24 09:20		
				% Solids:	92.1		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
EtFOSE	ND	0.199		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
MeFOSE	ND	1.99		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
EtFOSE	ND	1.99		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	100	10 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C5-PFPeA	IS	100	35 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C2-4:2 FTS	IS	111	40 - 135		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C3-PFBS	IS	112	40 - 135		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C5-PFHxA	IS	90.3	40 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C4-PFHpA	IS	98.3	40 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C3-HFPO-DA	IS	95.1	40 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C2-6:2 FTS	IS	109	40 - 215		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C8-PFOA	IS	103	40 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C3-PFHxS	IS	114	40 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C9-PFNA	IS	104	40 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C2-8:2 FTS	IS	117	40 - 275		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C6-PFDA	IS	91.8	40 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
d3-MeFOSAA	IS	102	40 - 135		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C8-PFOS	IS	103	40 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
d5-EtFOSAA	IS	116	40 - 150		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C7-PFUnA	IS	111	40 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C8-PFOA	IS	88.8	40 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C2-PFDoA	IS	90.2	40 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
13C2-PFTeDA	IS	88.7	20 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
d7-MeFOSE	IS	51.2	20 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
d3-MeFOSE	IS	36.4	10 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
d9-EtFOSE	IS	47.9	15 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1
d5-EtFOSE	IS	26.3	10 - 130		B24G098	15-Jul-24	5.45 g	17-Jul-24 15:31	1

RL - Reporting limit

The results are reported in dry weight.  
 The sample size is reported in wet weight.  
 Results reported to RL.



**Sample ID: SB-9@1.0**

**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-14	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 17:40	Date Received:	10-Jul-24 09:20		
				% Solids:	93.6		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	ND	0.797		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFMPA	ND	0.398		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
3:3 FTCA	ND	0.995		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFPeA	ND	0.397		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFMBA	ND	0.398		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFBS	ND	0.176		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
4:2 FTS	ND	0.746		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFHxA	ND	0.199		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFEESA	ND	0.354		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFPeS	ND	0.187		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
HFPO-DA	ND	0.831		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
NFDHA	ND	0.398		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
5:3 FTCA	ND	4.98		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFHpA	ND	0.199		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
ADONA	ND	0.786		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFHxS	ND	0.182		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
6:2 FTS	ND	0.755		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFOA	ND	0.199		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFHpS	ND	0.189		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
7:3 FTCA	ND	4.98		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFNA	ND	0.199		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFOSA	ND	0.199		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFOS	ND	0.185		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
9Cl-PF3ONS	ND	0.776		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFDA	ND	0.199		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
8:2 FTS	ND	0.764		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFNS	ND	0.191		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
MeFOSAA	ND	0.199		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
EtFOSAA	ND	0.199		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFUnA	ND	0.199		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFDS	ND	0.192		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
11Cl-PF3OUdS	ND	0.786		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFDoA	ND	0.199		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
MeFOSA	ND	0.199		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFTTrDA	ND	0.199		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFDoS	ND	0.193		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
PFTTeDA	ND	0.199		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1

Sample ID: SB-9@1.0

EPA Method 1633

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Soil	Lab Sample:	2407083-14	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 17:40	Date Received:	10-Jul-24 09:20		
				% Solids:	93.6		

Analyte	Conc. (ng/g)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
EtFOSA	ND	0.199		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
MeFOSE	ND	1.99		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
EtFOSE	ND	1.99		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	102	10 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C5-PFPeA	IS	101	35 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C2-4:2 FTS	IS	107	40 - 135		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C3-PFBS	IS	104	40 - 135		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C5-PFHxA	IS	95.0	40 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C4-PFHpA	IS	98.2	40 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C3-HFPO-DA	IS	89.6	40 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C2-6:2 FTS	IS	102	40 - 215		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C8-PFOA	IS	95.0	40 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C3-PFHxS	IS	101	40 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C9-PFNA	IS	102	40 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C2-8:2 FTS	IS	117	40 - 275		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C6-PFDA	IS	96.6	40 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
d3-MeFOSAA	IS	114	40 - 135		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C8-PFOS	IS	110	40 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
d5-EtFOSAA	IS	125	40 - 150		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C7-PFUnA	IS	107	40 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C8-PFOSA	IS	95.7	40 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C2-PFDoA	IS	84.1	40 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
13C2-PFTeDA	IS	86.9	20 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
d7-MeFOSE	IS	63.8	20 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
d3-MeFOSA	IS	57.4	10 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
d9-EtFOSE	IS	61.9	15 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1
d5-EtFOSA	IS	40.7	10 - 130		B24G098	15-Jul-24	5.37 g	17-Jul-24 15:44	1

RL - Reporting limit

The results are reported in dry weight.  
 The sample size is reported in wet weight.  
 Results reported to RL.

**Sample ID: SB-9@1.0**
**EPA Method 1633**

Name:	Hazen & Sawyer	Lab Sample:	B24G098-MS1/B24G098-MSD1	Source Lab Sample:	2407083-14
Project:	DB24.1212.00 P1T1	QC Batch:	B24G098	Date Extracted:	15-Jul-24
Matrix:	Solid	Samp Size:	5.37/5.37 g	Column:	BEH C18

Analyte	Sample (ng/g)	MS (ng/g)	MS Spike	MS % Rec	MS Quals	MSD (ng/g)	MSD Spike	MSD % Rec	MSD RPD	MSD Quals	%Rec Limits	RPD Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
PFBA	ND	2.06	1.86	109		2.08	1.86	110	0.913		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFMPA	ND	1.08	0.931	116		1.10	0.931	118	1.71		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
3:3 FTCA	ND	2.34	2.33	100		2.29	2.33	98.3	1.71		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFPeA	ND	1.05	0.931	111		1.02	0.931	108	2.74		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFMBA	ND	1.06	0.931	114		1.06	0.931	114	0		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFBS	ND	0.456	0.413	109		0.471	0.413	113	3.6		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
4:2 FTS	ND	1.98	1.75	113		2.07	1.75	119	5.17		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFHxA	ND	0.534	0.466	110		0.550	0.466	113	2.69		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFEESA	ND	0.942	0.827	114		1.02	0.827	123	7.59		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFPeS	ND	0.443	0.439	101		0.429	0.439	97.7	3.32		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
HFPO-DA	ND	2.04	1.97	104		2.12	1.97	108	3.77		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
NFDHA	ND	0.933	0.931	100		1.06	0.931	114	13.1		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
5:3 FTCA	ND	10.2	11.6	88.3		11.5	11.6	99.5	11.9		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFHpA	ND	0.519	0.466	106		1.05	0.466	220	69.9	I, Q	40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
ADONA	ND	1.91	1.86	102		2.10	1.86	113	10.2		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFHxS	ND	0.438	0.425	101		0.454	0.425	105	3.88		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
6:2 FTS	ND	2.01	1.77	113		2.12	1.77	120	6.01		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFOA	ND	0.597	0.466	124		0.617	0.466	128	3.17		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFHpS	ND	0.464	0.443	105		0.456	0.443	103	1.92		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
7:3 FTCA	ND	9.86	11.6	85.0		11.0	11.6	94.9	11		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFNA	ND	0.587	0.466	126		0.613	0.466	132	4.65		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFOSA	ND	0.489	0.466	105		0.512	0.466	110	4.65		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFOS	ND	0.530	0.432	113		0.523	0.432	112	0.889		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
9Cl-PF3ONS	ND	1.97	1.84	107		2.14	1.84	116	8.07		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFDA	ND	0.532	0.466	114		0.544	0.466	117	2.6		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
8:2 FTS	ND	1.81	1.79	101		1.95	1.79	109	7.62		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFNS	ND	0.485	0.447	109		0.475	0.447	106	2.79		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
MeFOSAA	ND	0.534	0.466	115		0.540	0.466	116	0.866		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
EtFOSAA	ND	0.530	0.466	114		0.501	0.466	108	5.41		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFUnA	ND	0.474	0.466	102		0.502	0.466	108	5.71		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFDS	ND	0.456	0.451	101		0.472	0.451	105	3.88		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
11Cl-PF3OUdS	ND	1.89	1.86	102		2.04	1.86	110	7.55		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFDoA	ND	0.537	0.466	115		0.547	0.466	117	1.72		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1

**Sample ID: SB-9@1.0**
**EPA Method 1633**

Name:	Hazen & Sawyer	Lab Sample:	B24G098-MS1/B24G098-MSD1	Source Lab Sample:	2407083-14
Project:	DB24.1212.00 P1T1	QC Batch:	B24G098	Date Extracted:	15-Jul-24
Matrix:	Solid	Samp Size:	5.37/5.37 g	Column:	BEH C18

Analyte	Sample (ng/g)	MS (ng/g)	MS Spike	MS % Rec	MS Quals	MSD (ng/g)	MSD Spike	MSD % Rec	RPD	MSD Quals	%Rec Limits	RPD Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
MeFOSA	ND	0.492	0.466	106		0.490	0.466	105	0.948		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFTTrDA	ND	0.540	0.466	116		0.566	0.466	121	4.22		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFDoS	ND	0.434	0.451	96.2		0.443	0.451	98.2	2.06		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
PFTeDA	ND	0.512	0.466	110		0.517	0.466	111	0.905		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
EtFOSA	ND	0.578	0.466	124		0.549	0.466	118	4.96		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
MeFOSE	ND	4.89	4.66	105		5.02	4.66	108	2.82		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1
EtFOSE	ND	5.00	4.66	107		5.09	4.66	109	1.85		40-150	30	17-Jul-24 11:41	1	17-Jul-24 11:54	1

Labeled Standards	Type	MS % Rec	MS Quals	MSD % Rec	MSD Quals	Limits	MS Analyzed	MS Dil	MSD Analyzed	MSD Dil
13C4-PFBA	IS	105		102		10 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C5-PFPeA	IS	103		96.5		35 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C2-4:2 FTS	IS	112		108		40 - 135	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C3-PFBS	IS	107		105		40 - 135	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C5-PFHxA	IS	103		87.9		40 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C4-PFHpA	IS	101		94.4		40 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C3-HFPO-DA	IS	99.6		87.3		40 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C2-6:2 FTS	IS	105		100		40 - 215	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C8-PFOA	IS	110		93.8		40 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C3-PFHxS	IS	107		108		40 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C9-PFNA	IS	102		97.8		40 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C2-8:2 FTS	IS	113		104		40 - 275	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C6-PFDA	IS	105		98.0		40 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
d3-MeFOSAA	IS	109		107		40 - 135	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C8-PFOS	IS	108		104		40 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
d5-EtFOSAA	IS	109		116		40 - 150	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C7-PFUnA	IS	120		109		40 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C8-PFOSA	IS	93.8		88.5		40 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C2-PFDoA	IS	98.7		90.5		40 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
13C2-PFTeDA	IS	100		91.4		20 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
d7-MeFOSE	IS	57.7		60.3		20 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
d3-MeFOSA	IS	57.3		55.8		10 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
d9-EtFOSE	IS	54.8		55.3		15 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1
d5-EtFOSA	IS	42.2		42.7		10 - 130	17-Jul-24 11:41	1	17-Jul-24 11:54	1

**Sample ID: Method Blank**

**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Aqueous	Lab Sample:	B24G119-BLK1	Column:	BEH C18
Project:	DB24.1212.00 P1T1						

Analyte	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	ND	6.40		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFMPA	ND	3.20		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
3:3 FTCA	ND	8.00		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFPeA	ND	3.20		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFMBA	ND	3.20		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFBS	ND	1.42		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
4:2 FTS	ND	6.00		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFHxA	ND	1.60		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFEESA	ND	2.85		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFPeS	ND	1.50		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
HFPO-DA	ND	6.68		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
NFDHA	ND	3.20		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
5:3 FTCA	ND	40.0		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFHpA	ND	1.60		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
ADONA	ND	6.32		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFHxS	ND	1.46		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
6:2 FTS	ND	6.07		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFOA	ND	2.00		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFHpS	ND	1.52		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
7:3 FTCA	ND	40.0		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFNA	ND	1.60		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFOSA	ND	1.60		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFOS	ND	1.49		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
9CI-PF3ONS	ND	6.24		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFDA	ND	1.60		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
8:2 FTS	ND	6.14		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFNS	ND	1.54		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
MeFOSAA	ND	1.60		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
EtFOSAA	ND	1.60		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFUnA	ND	1.60		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFDS	ND	1.54		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
11CI-PF3OUdS	ND	6.00		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFDoA	ND	1.60		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
MeFOSA	ND	1.60		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFTTrDA	ND	1.60		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFDoS	ND	1.55		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
PFTeDA	ND	1.60		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
EtFOSA	ND	1.60		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1

**Sample ID: Method Blank** **EPA Method 1633**

<b>Client Data</b>				<b>Laboratory Data</b>			
Name:	Hazen & Sawyer	Matrix:	Aqueous	Lab Sample:	B24G119-BLK1	Column:	BEH C18
Project:	DB24.1212.00 P1T1						

Analyte	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
MeFOSE	ND	16.0		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
EtFOSE	ND	16.0		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	98.2	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C5-PFPeA	IS	107	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C2-4:2 FTS	IS	95.9	40 - 200		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C3-PFBS	IS	103	40 - 135		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C5-PFHxA	IS	103	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C4-PFHpA	IS	102	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C3-HFPO-DA	IS	99.7	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C2-6:2 FTS	IS	97.8	40 - 200		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C8-PFOA	IS	103	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C3-PFHxS	IS	104	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C9-PFNA	IS	99.6	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C2-8:2 FTS	IS	93.7	40 - 300		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C6-PFDA	IS	101	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
d3-MeFOSAA	IS	92.0	40 - 170		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C8-PFOS	IS	101	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
d5-EtFOSAA	IS	85.1	25 - 135		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C7-PFUnA	IS	103	30 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C8-PFOSA	IS	59.3	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C2-PFDoA	IS	81.8	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
13C2-PFTeDA	IS	83.2	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
d7-MeFOSE	IS	45.8	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
d3-MeFOSA	IS	33.7	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
d9-EtFOSE	IS	42.8	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1
d5-EtFOSA	IS	29.9	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:24	1

RL - Reporting limit

Results reported to RL.

**Sample ID: OPR**
**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Aqueous	Lab Sample:	B24G119-BS1	Column:	BEH C18
Project:	DB24.1212.00 P1T1						

Analyte	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	19.5	20.0	97.5	70 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFMPA	9.48	10.0	94.8	55 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
3:3 FTCA	21.0	25.0	83.9	65 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFPeA	9.38	10.0	93.8	65 - 135		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFMBA	9.00	10.0	90.0	60 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFBS	4.21	4.44	94.8	60 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
4:2 FTS	19.1	18.8	102	70 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFHxA	5.43	5.00	109	70 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFEESA	9.36	8.88	105	70 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFPeS	4.41	4.72	93.3	65 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
HFPO-DA	19.3	21.2	91.1	70 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
NFDHA	10.4	10.0	104	50 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
5:3 FTCA	107	125	85.4	70 - 135		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFHpA	5.07	5.00	101	70 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
ADONA	18.1	20.0	90.5	65 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFHxS	4.69	4.56	103	65 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
6:2 FTS	20.6	19.0	108	65 - 155		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFOA	5.47	5.00	109	70 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFHpS	4.41	4.76	92.5	70 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
7:3 FTCA	94.1	125	75.4	50 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFNA	5.72	5.00	114	70 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFOSA	4.79	5.00	95.8	70 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFOS	4.48	4.64	96.5	55 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
9Cl-PF3ONS	17.8	19.8	90.1	70 - 155		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFDA	4.63	5.00	92.5	70 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
8:2 FTS	21.6	19.2	112	60 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFNS	4.30	4.80	89.5	65 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
MeFOSAA	4.33	5.00	86.5	50 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
EtFOSAA	4.93	5.00	98.6	70 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFUnA	5.04	5.00	101	70 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFDS	4.49	4.84	92.7	60 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
11Cl-PF3OUdS	16.5	20.0	82.4	55 - 160		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFDoA	5.30	5.00	106	70 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
MeFOSA	3.98	5.00	79.5	60 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1

**Sample ID: OPR**
**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Aqueous	Lab Sample:	B24G119-BS1	Column:	BEH C18
Project:	DB24.1212.00 P1T1						

Analyte	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFTTrDA	5.36	5.00	107	65 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFDoS	4.17	4.84	86.1	50 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
PFTeDA	5.27	5.00	105	60 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
EtFOSA	5.27	5.00	105	65 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
MeFOSE	48.2	50.0	96.4	70 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
EtFOSE	47.8	50.0	95.6	70 - 135		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	100	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C5-PFPeA	IS	106	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C2-4:2 FTS	IS	98.5	40 - 200		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C3-PFBS	IS	102	40 - 135		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C5-PFHxA	IS	101	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C4-PFHpA	IS	103	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C3-HFPO-DA	IS	99.9	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C2-6:2 FTS	IS	91.3	40 - 200		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C8-PFOA	IS	96.5	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C3-PFHxS	IS	100	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C9-PFNA	IS	101	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C2-8:2 FTS	IS	87.1	40 - 300		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C6-PFDA	IS	91.2	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
d3-MeFOSAA	IS	98.8	40 - 170		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C8-PFOS	IS	105	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
d5-EtFOSAA	IS	88.1	25 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C7-PFU <sub>n</sub> A	IS	87.0	30 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C8-PFOSA	IS	66.3	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C2-PFD <sub>o</sub> A	IS	74.5	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
13C2-PFTeDA	IS	76.3	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
d7-MeFOSE	IS	53.9	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
d3-MeFOSA	IS	42.3	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
d9-EtFOSE	IS	52.7	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1
d5-EtFOSA	IS	35.1	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:37	1



**Sample ID: OPR**
**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Aqueous	Lab Sample:	B24G119-BS2	Column:	BEH C18
Project:	DB24.1212.00 P1T1						

Analyte	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	13.9	12.8	109	70 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFMPA	6.86	6.40	107	55 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
3:3 FTCA	14.4	16.0	90.3	65 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFPeA	6.82	6.40	107	65 - 135		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFMBA	6.99	6.40	109	60 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFBS	3.01	2.84	106	60 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
4:2 FTS	13.7	12.0	114	70 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFHxA	3.59	3.20	112	70 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFEESA	6.27	5.68	110	70 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFPeS	3.01	3.01	99.9	65 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
HFPO-DA	13.1	12.8	102	70 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
NFDHA	7.16	6.40	112	50 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
5:3 FTCA	76.7	80.0	95.9	70 - 135		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFHpA	3.40	3.20	106	70 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
ADONA	11.9	12.1	98.8	65 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFHxS	3.15	2.92	108	65 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
6:2 FTS	13.4	12.2	110	65 - 155		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFOA	4.06	3.20	127	70 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFHpS	3.13	3.05	103	70 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
7:3 FTCA	61.5	80.0	76.9	50 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFNA	4.02	3.20	126	70 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFOSA	3.44	3.20	107	70 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFOS	2.97	2.97	100	55 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
9Cl-PF3ONS	12.3	12.0	103	70 - 155		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFDA	3.61	3.20	113	70 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
8:2 FTS	14.1	12.3	115	60 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFNS	3.13	3.08	102	65 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
MeFOSAA	3.56	3.20	111	50 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
EtFOSAA	3.37	3.20	105	70 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFUnA	3.55	3.20	111	70 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFDS	2.85	3.09	92.4	60 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
11Cl-PF3OUdS	10.5	12.1	86.7	55 - 160		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFDoA	3.68	3.20	115	70 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
MeFOSA	3.24	3.20	101	60 - 150		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1

**Sample ID: OPR**
**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Aqueous	Lab Sample:	B24G119-BS2	Column:	BEH C18
Project:	DB24.1212.00 P1T1						

Analyte	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFTrDA	3.69	3.20	115	65 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFDoS	2.72	3.10	87.5	50 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
PFTeDA	3.67	3.20	115	60 - 140		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
EtFOSA	3.54	3.20	111	65 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
MeFOSE	32.6	32.0	102	70 - 145		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
EtFOSE	34.5	32.0	108	70 - 135		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1

Labeled Standards	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFBA	IS	91.7	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C5-PFPeA	IS	98.0	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C2-4:2 FTS	IS	94.4	40 - 200		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C3-PFBS	IS	96.9	40 - 135		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C5-PFHxA	IS	94.0	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C4-PFHpA	IS	93.6	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C3-HFPO-DA	IS	89.4	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C2-6:2 FTS	IS	86.6	40 - 200		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C8-PFOA	IS	89.3	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C3-PFHxS	IS	94.3	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C9-PFNA	IS	89.3	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C2-8:2 FTS	IS	85.4	40 - 300		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C6-PFDA	IS	78.3	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
d3-MeFOSAA	IS	75.9	40 - 170		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C8-PFOS	IS	96.1	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
d5-EtFOSAA	IS	74.8	25 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C7-PFUnA	IS	76.8	30 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C8-PFOSA	IS	53.0	40 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C2-PFDoA	IS	66.9	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
13C2-PFTeDA	IS	67.3	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
d7-MeFOSE	IS	42.6	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
d3-MeFOSA	IS	34.3	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
d9-EtFOSE	IS	39.4	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1
d5-EtFOSA	IS	30.8	10 - 130		B24G119	18-Jul-24	0.500 L	19-Jul-24 18:51	1

**Sample ID: Equipment Blank**
**EPA Method 1633**

Client Data				Laboratory Data			
Name:	Hazen & Sawyer	Matrix:	Aqueous	Lab Sample:	2407083-05	Column:	BEH C18
Project:	DB24.1212.00 P1T1	Date Collected:	03-Jul-24 13:55	Date Received:	10-Jul-24 09:20		

Analyte	Conc. (ng/L)	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBA	ND	6.79		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFMPA	ND	3.39		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
3:3 FTCA	ND	8.48		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFPeA	ND	3.39		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFMBA	ND	3.39		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFBS	ND	1.51		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
4:2 FTS	ND	6.36		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFHxA	ND	1.70		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFEESA	ND	3.02		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFPeS	ND	1.59		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
HFPO-DA	ND	7.08		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
NFDHA	ND	3.39		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
5:3 FTCA	ND	42.4		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFHpA	ND	1.70		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
ADONA	ND	6.70		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFHxS	ND	1.55		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
6:2 FTS	ND	6.44		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFOA	ND	2.12		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFHpS	ND	1.61		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
7:3 FTCA	ND	42.4		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFNA	ND	1.70		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFOSA	ND	1.70		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFOS	ND	1.58		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
9Cl-PF3ONS	ND	6.62		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFDA	ND	1.70		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
8:2 FTS	ND	6.51		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFNS	ND	1.63		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
MeFOSAA	ND	1.70		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
EtFOSAA	ND	1.70		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFUnA	ND	1.70		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFDS	ND	1.63		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
11Cl-PF3OUdS	ND	6.36		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFDoA	ND	1.70		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
MeFOSA	ND	1.70		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFTTrDA	ND	1.70		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFDoS	ND	1.64		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1
PFTeDA	ND	1.70		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1

Sample ID: Equipment Blank						EPA Method 1633					
Client Data				Laboratory Data							
Name:	Hazen & Sawyer		Matrix:	Aqueous		Lab Sample:	2407083-05		Column:	BEH C18	
Project:	DB24.1212.00 P1T1		Date Collected:	03-Jul-24 13:55		Date Received:	10-Jul-24 09:20				
Analyte	Conc. (ng/L)			RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
EtFOSA	ND			1.70		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
MeFOSE	ND			17.0		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
EtFOSE	ND			17.0		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
Labeled Standards	Type	% Recovery		Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C4-PFBA	IS	98.0		10 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C5-PFPeA	IS	96.6		40 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C2-4:2 FTS	IS	98.2		40 - 200		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C3-PFBS	IS	102		40 - 135		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C5-PFHxA	IS	92.3		40 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C4-PFHpA	IS	93.4		40 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C3-HFPO-DA	IS	89.5		40 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C2-6:2 FTS	IS	97.8		40 - 200		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C8-PFOA	IS	109		40 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C3-PFHxS	IS	101		40 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C9-PFNA	IS	94.1		40 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C2-8:2 FTS	IS	92.4		40 - 300		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C6-PFDA	IS	91.9		40 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
d3-MeFOSAA	IS	94.1		40 - 170		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C8-PFOS	IS	95.6		40 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
d5-EtFOSAA	IS	88.4		25 - 135		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C7-PFUnA	IS	97.7		30 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C8-PFOSA	IS	60.1		40 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C2-PFDoA	IS	77.9		10 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
13C2-PFTeDA	IS	72.1		10 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
d7-MeFOSE	IS	47.0		10 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
d3-MeFOSA	IS	32.3		10 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
d9-EtFOSE	IS	44.9		10 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	
d5-EtFOSA	IS	28.7		10 - 130		B24G119	18-Jul-24	0.472 L	19-Jul-24 20:53	1	

RL - Reporting limit

Results reported to RL.

## DATA QUALIFIERS & ABBREVIATIONS

For EPA 1633

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
I	Ion transition ratio is outside of the acceptance criteria.
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	Recovery and/or RPD was outside laboratory acceptance limits
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.

### Enthalpy Analytical - EDH 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	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2020018
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	2211390
Nevada Division of Environmental Protection	CA00413
New Hampshire Environmental Accreditation Program	207721
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Ohio Environmental Protection Agency	87778
Oregon Laboratory Accreditation Program	4042-021
Texas Commission on Environmental Quality	T104704189-22-13
Vermont Department of Health	VT-4042
Virginia Department of General Services	11276
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

*Current certificates and lists of licensed parameters can be found at [Enthalpy.com/Resources/Accreditations](http://Enthalpy.com/Resources/Accreditations).*



# CHAIN OF CUSTODY

PFAS Methods

**For Laboratory Use Only**  
 Work Order #: 2407083 Temp: 1.3 °C  
 Storage ID: R-13, W-2, W-2 Storage Secured:  Yes  No

Project ID: DB24.1212.00 PIT1 PO#: \_\_\_\_\_ Sampler: J. Fisher  
 (name)

TAT Standard:  21 days  
 (check one): Rush (surcharge may apply)  
 14 days  7 days Other: \_\_\_\_\_

Invoice to: Name Amy Ewing Company Hazen & Sawyer Address 1005 SUN AVENUE City ALBUQUERQUE, NM State 87109 Phone # 505227-7152  
 Relinquished by (printed name and signature) Jennifer Torres Date 7/8/2024 Time 1500 Received by (printed name and signature) Jennifer Torres Date 07/10/24 Time 0920

SHIP TO: Enthalpy Analytical - EDH 1104 Windfield Way El Dorado Hills, CA 95762 (916) 673-1520			Method of Shipment:		Add Analysis(es) Requested									
ATTN: _____			Tracking No.: _____		Container(s)									
Sample ID	Date	Time	Location/ Sample Description	Quantity	Type	Matrix	PFAS by Isotope Dilution	EPA 1631-Draft	EPA 1631-FINAL	DoD QSM Table B-15	Other:	EPA 533	EPA 537.1	List of 28 (537.1 + 533)
SB-3@2.0'	7/3/24	1210												
SB-10@2.0'		1330												
SB-2@2.0'		1245												
SB-6@2.0'		1340												
EQUIPMENT RINGS		1355												
SB-7@0-0.5'		1410												
SB-11@0-0.5'		1420												
SB-7@2.0'		1430												
SB-5@2.0'		1500												
SB-12@2.0'	✓	1510												

**Requirements:**  
 State-specific (list state): \_\_\_\_\_  
 DoD QSM Compliant  
 PFAS List Below (or attach compound list): \_\_\_\_\_

Other Instructions/ Comments:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**SEND DOCUMENTATION AND RESULTS TO:**  
 Name: Patrice Felman  
 Company: DBSA  
 Address: 6020 Academy NE Suite 100  
 City: ALBUQUERQUE State: NM Zip: 87109  
 Phone: (817) 914-1045  
 Email: pfelman@geo-logic.com

Container Types: P= HDPE, PJ= HDPE Jar      Bottle Preservation Type:      Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, SD = Sediment, T=Tissue  
 PY= Polypropylene, O = Other: \_\_\_\_\_      TZ = Trizma: \_\_\_\_\_      AA = Amm. Acetate: \_\_\_\_\_      SL = Sludge, SO = Soil, WW = Wastewater, O = Other: \_\_\_\_\_

10F2



# CHAIN OF CUSTODY

PFAS Methods

**For Laboratory Use Only**  
 Work Order #: 2407083 Temp: 13 °C  
 Storage ID: R13, W22, W82 Storage Secured:  Yes  No

Project ID: DB24-212.00 P1T1 PO#: \_\_\_\_\_ Sampler: J. FISHER  
 (name)

TAT Standard:  21 days  
 (check one): Rush (surcharge may apply)  
 14 days  7 days Other: \_\_\_\_\_

Invoice to: Name Amy Gwing Company HAZEN & SAWYER Address 100 SUN AVENUE ALBUQUERQUE, NM 87109 City ALBUQUERQUE State NM Phone # (505) 217-7152  
 Relinquished by (printed name and signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received by (printed name and signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
Jennifer Torres 7/18/24 1500 Jennifer Torres 07/10/24 0920

SHIP TO: Enthalpy Analytical - EDH  
 1104 Windfield Way  
 El Dorado Hills, CA 95762  
 (916) 673-1520  
 ATTN: \_\_\_\_\_  
 Method of Shipment: \_\_\_\_\_  
 Tracking No.: \_\_\_\_\_

Container(s)		Add Analysis(es) Requested	
Quantity	Type	Matrix	PFAS by Isotope Dilution
			PFAS by Isotope Dilution
			EPA 1631-Draft
			EPA 1631-FINAL
			DoD QSM Table B-15
			Other: EPA 833
			EPA 837.1
			Lab 0229 (937.1 + 529)

Requirements:  
 State-specific (list state): \_\_\_\_\_  
 DoD QSM Compliant  
 PFAS List Below (or attach compound list): \_\_\_\_\_

Sample ID	Date	Time	Location/ Sample Description
<u>SB-4@2.0'</u>	<u>7/13/24</u>	<u>1520</u>	
<u>SB-1@2.0'</u>		<u>1550</u>	
<u>SB-8@2.0'</u>		<u>1630</u>	
<u>SB-9@1.0'</u>		<u>1740</u>	

Amy Gwing  
7/13/24

Other Instructions/ Comments:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SEND DOCUMENTATION AND RESULTS TO:

Name: Patricia Feldman  
 Company: DBSEA  
 Address: 6020 ACADEMY NE SUITE 100  
 City: ALBUQUERQUE State: NM Zip: 87109  
 Phone: (817) 914-1645  
 Email: pfeldman@geo-logic.com

Container Types: P= HDPE, PJ= HDPE Jar      Bottle Preservation Type: TZ = Trizma: \_\_\_\_\_ AA = Amm. Acetate: \_\_\_\_\_  
 PY= Polypropylene, O = Other: \_\_\_\_\_      Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, SD = Sediment, T=Tissue  
 SL = Sludge, SO = Soil, WW = Wastewater, O = Other: \_\_\_\_\_

20F2



# Sample Log-In Checklist

Page # 1 of 1

Work Order #: 2407083 TAT STJ

Samples Arrival:	Date/Time: <u>07/10/24 0920</u>	Initials: <u>ST</u>	Location: <u>WR-2</u>
			Shelf/Rack: <u>NA</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
	<input type="checkbox"/> GLS	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Techni Ice
	<input type="checkbox"/> Dry Ice	<input type="checkbox"/> None	
Temp °C: <u>1.3</u> (uncorrected)	Probe used: Y / <input checked="" type="checkbox"/> N		Thermometer ID: <u>IR-4</u>
Temp °C: <u>1.3</u> (corrected)			

	YES	NO	NA
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill <u>/</u> Trk # <u>2768 1504 5798</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container	<input checked="" type="checkbox"/> Enthalpy	<input type="checkbox"/> Client	<input type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chain of Custody / Sample Documentation Complete?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Logged In:	Date/Time: <u>07/10/24 07:03</u>	Initials: <u>ST</u>	Location: <u>R-13, WR-2, WF-2</u>
			Shelf/Rack: <u>A-3, A-4, A-2</u>
COC Anomaly/Sample Acceptance Form completed?			<input checked="" type="checkbox"/>

Comments:

# CoC/Label Reconciliation Report WO# 2407083

LabNumber	CoC Sample ID	SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
2407083-01	A SB-3@2.0	<input checked="" type="checkbox"/>	03-Jul-24 12:10	<input checked="" type="checkbox"/>	HDPE Jar, 6 oz	Solid
2407083-02	A SB-10@2.0	<input checked="" type="checkbox"/>	03-Jul-24 12:20	<input checked="" type="checkbox"/>	HDPE Jar, 6 oz	Solid
2407083-03	A SB-2@2.0	<input type="checkbox"/> A	03-Jul-24 12:45	<input checked="" type="checkbox"/>	HDPE Jar, 6 oz	Solid
2407083-04	A SB-6@2.0	<input checked="" type="checkbox"/>	03-Jul-24 13:40	<input checked="" type="checkbox"/>	HDPE Jar, 6 oz	Solid
2407083-05	A Equipment <u>Blank</u>	<input type="checkbox"/> OI	03-Jul-24 13:55	<input checked="" type="checkbox"/>	HDPE Bottle, 500 mL	Aqueous
2407083-05	B Equipment <u>Blank</u>	<input type="checkbox"/>	03-Jul-24 13:55	<input checked="" type="checkbox"/>	HDPE Bottle, 500 mL	Aqueous
2407083-06	A SB-7@0-0.5	<input checked="" type="checkbox"/>	03-Jul-24 14:10	<input checked="" type="checkbox"/>	HDPE Jar, 6 oz	Solid
2407083-07	A SB-11@0-0.5	<input checked="" type="checkbox"/>	03-Jul-24 14:20	<input checked="" type="checkbox"/>	HDPE Jar, 6 oz	Solid
2407083-08	A SB-7@2.0	<input checked="" type="checkbox"/>	03-Jul-24 14:30	<input checked="" type="checkbox"/>	HDPE Jar, 6 oz	Solid
2407083-09	A SB-5@2.0	<input checked="" type="checkbox"/>	03-Jul-24 15:00	<input checked="" type="checkbox"/>	HDPE Jar, 6 oz	Solid
2407083-10	A SB-12@2.0	<input checked="" type="checkbox"/>	03-Jul-24 15:10	<input type="checkbox"/> B	HDPE Jar, 6 oz	Solid
2407083-11	A SB-4@2.0	<input checked="" type="checkbox"/>	03-Jul-24 15:20	<input checked="" type="checkbox"/>	HDPE Jar, 6 oz	Solid
2407083-12	A SB-1@2.0	<input checked="" type="checkbox"/>	03-Jul-24 15:50	<input checked="" type="checkbox"/>	HDPE Jar, 6 oz	Solid
2407083-13	A SB-8@2.0	<input checked="" type="checkbox"/>	03-Jul-24 16:30	<input checked="" type="checkbox"/>	HDPE Jar, 6 oz	Solid
2407083-14	A SB-9@1.0	<input checked="" type="checkbox"/>	03-Jul-24 17:40	<input checked="" type="checkbox"/>	HDPE Jar, 6 oz	Solid

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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Adequate Sample Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Container Type Appropriate for Analysis(es)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

- A Underlined part missing on sample label
- B Sample label time 15:00
- C Underlined part listed on sample label "R:rate"
- D Due to limitation of the lims, the apostrophe of the sample ID is deleted.

Preservation Documented: Na2S2O3 Trizma NH4CH3CO2 None Other

Verified by/Date: KA 07/18/24 Originally labeled and reconciled by KA on 07/11/24 and verified by KBD on 07/11/24

# ANOMALY FORM

Work Order # 2407083

Initial/Date The following checked issues were noted during sample receipt and login:

- 1. **The samples were received out of temperature at (WI-PHT):** \_\_\_\_\_  
Was Ice present: Yes No Melted Blue Ice
- 2. The Chain-of-Custody (CoC) was not relinquished properly.
- 3. The CoC did not include collection time(s). 00:00 will be used unless notified otherwise.
- 4. The sample(s) did not include a sample collection time. All or Sample Name: \_\_\_\_\_
- 5. A sample ID discrepancy was found. See the Reconciliation report.  
The CoC Sample ID will be used unless notified otherwise.
- 1/11/24  6. A sample date and/or time discrepancy was found. See the Reconciliation report.  
The CoC Sample date/time will be used unless notified otherwise.
- 1/11/24  7. **The CoC did not include a sample matrix. The following sample matrix will be used:** \_\_\_\_\_
- 8. **Insufficient volume received for analysis. All or Sample Name:** \_\_\_\_\_
- 9. The backup bottle was received broken. Sample Name: \_\_\_\_\_
- 10. **CoC not received, illegible or destroyed.**
- 11. **The sample(s) were received out of holding time. All or Sample Name:** \_\_\_\_\_
- 12. **The CoC did not include an analysis. All or Sample Name:** \_\_\_\_\_
- 13. **Sample(s) received without collection date. All or Sample Name:** \_\_\_\_\_
- 14. **Sample(s) not received. All or Sample Name:** \_\_\_\_\_
- 15. **Sample(s) received broken. All or Sample Name:** \_\_\_\_\_
- 16. **An incorrect container-type was used. All or Sample Name:** \_\_\_\_\_
- 17. The Field Reagent Blank (FRB) preservative was from a different lot than the field samples.  
Will proceed with analysis and narrate unless notified otherwise.
- 18. Other:

Bolded items require sign-off

Client Contacted: \_\_\_\_\_

Date of Contact: \_\_\_\_\_

Lab Project Manager: \_\_\_\_\_

Resolution: