

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Jeremy Prosser  
Olympic View Water & Sewer District  
8218 228th ST  
Edmonds, Washington 98026

Generated 7/21/2023 11:44:50 AM

**JOB DESCRIPTION**

63600

**JOB NUMBER**

410-132235-1

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

## Compliance Statement

1. Laboratory is accredited in accordance with TNI 2016 Standards and ISO/IEC 17025:2017.
2. Laboratory certifies that the test results meet all TNI 2016 and ISO/IEC 17025:2017 requirements unless noted under the individual analysis
3. Test results relate only to the sample(s) tested.
4. This report shall not be reproduced except in full, without the written approval of the laboratory.
5. Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below. (DW, Water matrices)

## Authorization



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Authorized for release by  
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# Definitions/Glossary

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

## Qualifiers

### LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

**Per- and Polyfluoroalkyl Substances (PFAS) By EPA Method 533**
**Report of Analysis**

Date Collected: (MM/DD/YY) 06/26/23	System Group Type: (circle one) <input checked="" type="radio"/> A <input type="radio"/> B Other:
Water System ID Number: 63600	System Name: OLYMPIC VIEW WATER & SEWER DISTRICT
Lab Number / Sample Number: 207 / 22351	County: SNOHOMISH
Sample Location: Sample Tap @Woodway Tank Entry Point to Distribution	Source Number(s): (list all sources if blended or composited) S04
<b>Sample Purpose: (check appropriate box)</b> <input checked="" type="checkbox"/> RC - Routine Compliance (satisfies monitoring requirements) <input type="checkbox"/> C - Confirmation (confirmation of chemical result)* <input type="checkbox"/> I - Investigative (does not satisfy monitoring requirements) <input type="checkbox"/> O - Other (specify - does not satisfy monitoring requirements)	Date Received: (MM/DD/YY) 06/27/23 Date Analyzed: (MM/DD/YY) 07/07/23 Date Reported: (MM/DD/YY) 07/21/23 COMMENTS: ELLET 410-132235
<b>Sample Composition: (check appropriate box)</b> <input checked="" type="checkbox"/> S - Single Source <input type="checkbox"/> B - Blended (list source numbers in "Source Numbers" field) <input type="checkbox"/> C - Composite (list source numbers in "Source Numbers" field) <input type="checkbox"/> D - Distribution Sample	<b>Sample Type: (check one)</b> <input type="checkbox"/> Pre-treatment/Untreated (Raw) <input checked="" type="checkbox"/> Post-treatment (Finished) <input type="checkbox"/> Unknown or Other  Sample Collected by: (name) Scott Dunn Phone Number: 425-774-7769
Send Report to: Washington State DOH Office of Drinking Water/Data Entry, PO Box 47822 Olympia, WA 98504-7822	Bill to: (client name) Washington Department of Health 16201 E Indiana Ave, St. 1500 Spokane Valley, WA 99216

**REQUIRED ANALYTICAL RESULTS**

DOH #	CONTAMINANT	DATA QUALIFIER	RESULTS	SDRL	SAL	UNITS	EXCEEDS SAL? (X if Yes)	METHOD/ INITIALS
0434	(PFOA) Perfluorooctanoic acid		ND	2	10	ng/L		533 / DCS9
0433	(PFOS) Perfluorooctanesulfonic acid		ND	2	15	ng/L		533 / DCS9
0431	(PFHxS) Perfluorhexanesulfonic acid		2.2	2	65	ng/L		533 / DCS9
0432	(PFNA) Perfluorononanoic acid		ND	2	9	ng/L		533 / DCS9
0429	(PFBS) Perfluorobutanesulfonic acid		ND	2	345	ng/L		533 / DCS9
0430	(PFHpA) Perfluorheptanoic acid		ND	2	n/a	ng/L		533 / DCS9
0435	(PFHxA) Perfluorhexanoic acid		ND	2	n/a	ng/L		533 / DCS9
0436	(PFDA) Perfluordecanoic acid		ND	2	n/a	ng/L		533 / DCS9
0437	(PFUnA) Perfluoroundecanoic acid		ND	2	n/a	ng/L		533 / DCS9
0438	(PFDoA) Perfluorododecanoic acid		ND	2	n/a	ng/L		533 / DCS9
0445	(ADONA) 4,8-Dioxa-3H-perfluorononanoic acid		ND	2	n/a	ng/L		533 / DCS9
0446	(9Cl-PF3ONS) 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid		ND	2	n/a	ng/L		533 / DCS9
0447	(HFPO-DA) Hexafluoropropylene oxide dimer acid		ND	2	n/a	ng/L		533 / DCS9
0448	(11Cl-PF3OUdS) 11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid		ND	2	n/a	ng/L		533 / DCS9
0450	(4:2FTS)1H,1H, 2H, 2H-Perfluorohexane sulfonic acid		ND	2	n/a	ng/L		533 / DCS9
0451	(6:2FTS)1H,1H, 2H, 2H-Perfluorooctane sulfonic acid		ND	2	n/a	ng/L		533 / DCS9
0452	(8:2FTS)1H,1H, 2H, 2H-Perfluorodecane sulfonic acid		ND	2	n/a	ng/L		533 / DCS9
0453	(NFDHA)Nonfluoro-3,6-dioxaheptanoic acid		ND	2	n/a	ng/L		533 / DCS9
0454	(PFBA)Perfluorobutanoic acid		ND	2	n/a	ng/L		533 / DCS9
0455	(PFHpS)Perfluoroheptanesulfonic acid		ND	2	n/a	ng/L		533 / DCS9
0456	(PFMBA)Perfluoro-4-methoxybutanoic acid		ND	2	n/a	ng/L		533 / DCS9
0457	(PFMPA)Perfluoro-3-methoxypropanoic acid		ND	2	n/a	ng/L		533 / DCS9
0458	(PFPeA)Perfluoropentanoic acid		ND	2	n/a	ng/L		533 / DCS9
0459	(PFPeS)Perfluoropentanesulfonic acid		ND	2	n/a	ng/L		533 / DCS9
0460	(PFEEESA)Perfluoro(2-ethoxyethane)sulfonic acid		ND	2	n/a	ng/L		533 / DCS9

**NOTES:**

\*Confirmation: Include the original lab number, sample number, and collection date of original sample in either comment section.

\*\*To qualify for a monitoring waiver the additional contaminants must be reported to DOH.

DATA QUALIFIER: A symbol or letter to denote additional information about the result.

DOH#: Department assigned contaminant number.

METHOD/INITIALS: Analytical method used. / Initials of the analyst that performed the analysis.

ng/L: nanograms per liter or parts per trillion.

SAL (State Action Level): Means the concentration of a contaminant or group of contaminants, without an MCL, established to protect public health in accordance with WAC 246-290-315 and which, if exceeded, triggers actions a purveyor takes in accordance with WAC 246-290-320.

SDRL (State Detection Reporting Limit): The minimum reportable detection of a contaminant as established by the department.

**LAB COMMENTS:**

# Case Narrative

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

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## Job ID: 410-132235-1

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Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

### Narrative

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#### Job Narrative 410-132235-1

#### Receipt

The samples were received on 6/27/2023 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.7°C

#### Receipt Exceptions

Samples were marked for MS/MSD however, no volume for MS/MSD submitted.

#### PFAS

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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# Detection Summary

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

## Client Sample ID: DEER CREEK SURFACE (S04)

Lab Sample ID: 410-132235-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	1.7		1.7	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.2		1.7	ng/L	1		533	Total/NA

## Client Sample ID: FRB-DEER CREEK SURFACE

Lab Sample ID: 410-132235-2

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC



# Client Sample Results

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

**Client Sample ID: DEER CREEK SURFACE (S04)**

**Lab Sample ID: 410-132235-1**

Date Collected: 06/26/23 10:30

Matrix: Drinking Water

Date Received: 06/27/23 09:45

**Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>1.7</b>		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluorobutanoic acid (PFBA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluorodecanoic acid (PFDA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>2.2</b>		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluorononanoic acid (PFNA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluorooctanoic acid (PFOA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 13:51	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	95		50 - 200	06/30/23 10:07	07/07/23 13:51	1
13C3 HFPO-DA	93		50 - 200	06/30/23 10:07	07/07/23 13:51	1
13C3 PFBS	106		50 - 200	06/30/23 10:07	07/07/23 13:51	1
13C3 PFHxS	98		50 - 200	06/30/23 10:07	07/07/23 13:51	1
13C4 PFBA	91		50 - 200	06/30/23 10:07	07/07/23 13:51	1
13C4 PFHpA	95		50 - 200	06/30/23 10:07	07/07/23 13:51	1
13C5 PFHxA	103		50 - 200	06/30/23 10:07	07/07/23 13:51	1
13C5 PFPeA	101		50 - 200	06/30/23 10:07	07/07/23 13:51	1
13C6 PFDA	83		50 - 200	06/30/23 10:07	07/07/23 13:51	1
13C7 PFUnA	87		50 - 200	06/30/23 10:07	07/07/23 13:51	1
13C8 PFOA	90		50 - 200	06/30/23 10:07	07/07/23 13:51	1
13C8 PFOS	97		50 - 200	06/30/23 10:07	07/07/23 13:51	1



# Client Sample Results

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

## Client Sample ID: DEER CREEK SURFACE (S04)

Lab Sample ID: 410-132235-1

Date Collected: 06/26/23 10:30

Matrix: Drinking Water

Date Received: 06/27/23 09:45

### Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C9 PFNA	88		50 - 200	06/30/23 10:07	07/07/23 13:51	1
M2-4:2 FTS	150		50 - 200	06/30/23 10:07	07/07/23 13:51	1
M2-6:2 FTS	119		50 - 200	06/30/23 10:07	07/07/23 13:51	1
M2-8:2 FTS	119		50 - 200	06/30/23 10:07	07/07/23 13:51	1

## Client Sample ID: FRB-DEER CREEK SURFACE

Lab Sample ID: 410-132235-2

Date Collected: 06/26/23 10:30

Matrix: Drinking Water

Date Received: 06/27/23 09:45

### Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluorobutanoic acid (PFBA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluorodecanoic acid (PFDA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluorononanoic acid (PFNA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluorooctanoic acid (PFOA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	ng/L		06/30/23 10:07	07/07/23 14:02	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
13C2 PFDoA	95		50 - 200	06/30/23 10:07	07/07/23 14:02	1		
13C3 HFPO-DA	96		50 - 200	06/30/23 10:07	07/07/23 14:02	1		
13C3 PFBS	109		50 - 200	06/30/23 10:07	07/07/23 14:02	1		

# Client Sample Results

Client: Olympic View Water & Sewer District  
 Project/Site: 63600

Job ID: 410-132235-1

**Client Sample ID: FRB-DEER CREEK SURFACE**

**Lab Sample ID: 410-132235-2**

Date Collected: 06/26/23 10:30

Matrix: Drinking Water

Date Received: 06/27/23 09:45

**Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 PFHxS	101		50 - 200	06/30/23 10:07	07/07/23 14:02	1
13C4 PFBA	94		50 - 200	06/30/23 10:07	07/07/23 14:02	1
13C4 PFHpA	90		50 - 200	06/30/23 10:07	07/07/23 14:02	1
13C5 PFHxA	99		50 - 200	06/30/23 10:07	07/07/23 14:02	1
13C5 PFPeA	96		50 - 200	06/30/23 10:07	07/07/23 14:02	1
13C6 PFDA	88		50 - 200	06/30/23 10:07	07/07/23 14:02	1
13C7 PFUnA	91		50 - 200	06/30/23 10:07	07/07/23 14:02	1
13C8 PFOA	91		50 - 200	06/30/23 10:07	07/07/23 14:02	1
13C8 PFOS	102		50 - 200	06/30/23 10:07	07/07/23 14:02	1
13C9 PFNA	95		50 - 200	06/30/23 10:07	07/07/23 14:02	1
M2-4:2 FTS	138		50 - 200	06/30/23 10:07	07/07/23 14:02	1
M2-6:2 FTS	114		50 - 200	06/30/23 10:07	07/07/23 14:02	1
M2-8:2 FTS	124		50 - 200	06/30/23 10:07	07/07/23 14:02	1

# Action Limit Summary

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

**Client Sample ID: DEER CREEK SURFACE (S04)**

**Lab Sample ID: 410-132235-1**

## Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	WA SDWA	RL	Method	Prep Type
				Limit			
Perfluorobutanesulfonic acid (PFBS)	1.7		ng/L	345	1.7	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.2		ng/L	65	1.7	533	Total/NA
Perfluorononanoic acid (PFNA)	ND		ng/L	9	1.7	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	ND		ng/L	15	1.7	533	Total/NA
Perfluorooctanoic acid (PFOA)	ND		ng/L	10	1.7	533	Total/NA

**Client Sample ID: FRB-DEER CREEK SURFACE**

**Lab Sample ID: 410-132235-2**

## Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	WA SDWA	RL	Method	Prep Type
				Limit			
Perfluorobutanesulfonic acid (PFBS)	ND		ng/L	345	1.7	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	ND		ng/L	65	1.7	533	Total/NA
Perfluorononanoic acid (PFNA)	ND		ng/L	9	1.7	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	ND		ng/L	15	1.7	533	Total/NA
Perfluorooctanoic acid (PFOA)	ND		ng/L	10	1.7	533	Total/NA

# Isotope Dilution Summary

Client: Olympic View Water & Sewer District  
 Project/Site: 63600

Job ID: 410-132235-1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Matrix: Drinking Water

Prep Type: Total/NA

### Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFD <sub>o</sub> A (50-200)	HFPODA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	PFBA (50-200)	C4PFHA (50-200)	13C5PHA (50-200)	PFP <sub>e</sub> A (50-200)
410-132235-1	DEER CREEK SURFACE (S04)	95	93	106	98	91	95	103	101
410-132235-2	FRB-DEER CREEK SURFACE	95	96	109	101	94	90	99	96
410-132634-A-1-B MS	Matrix Spike	91	93	109	102	90	90	97	91
410-132634-A-1-C MSD	Matrix Spike Duplicate	92	98	109	101	91	93	103	99
LCS 410-392658/2-A	Lab Control Sample	98	100	106	103	93	99	102	94
LLCS 410-392658/3-A	Lab Control Sample	91	96	105	97	93	93	97	98
MB 410-392658/1-A	Method Blank	99	102	106	102	97	102	105	104

### Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	C6PFDA (50-200)	13C7PUA (50-200)	C8PFOA (50-200)	C8PFOS (50-200)	C9PFNA (50-200)	M242FTS (50-200)	M262FTS (50-200)	M282FTS (50-200)
410-132235-1	DEER CREEK SURFACE (S04)	83	87	90	97	88	150	119	119
410-132235-2	FRB-DEER CREEK SURFACE	88	91	91	102	95	138	114	124
410-132634-A-1-B MS	Matrix Spike	83	85	92	98	88	138	122	115
410-132634-A-1-C MSD	Matrix Spike Duplicate	91	95	91	98	92	136	114	118
LCS 410-392658/2-A	Lab Control Sample	91	96	93	102	94	131	118	126
LLCS 410-392658/3-A	Lab Control Sample	84	87	90	96	87	134	116	113
MB 410-392658/1-A	Method Blank	93	98	96	103	100	131	119	114

#### Surrogate Legend

- PFD<sub>o</sub>A = 13C2 PFD<sub>o</sub>A
- HFPODA = 13C3 HFPO-DA
- C3PFBS = 13C3 PFBS
- C3PFHS = 13C3 PFHxS
- PFBA = 13C4 PFBA
- C4PFHA = 13C4 PFHpA
- 13C5PHA = 13C5 PFHxA
- PFP<sub>e</sub>A = 13C5 PFP<sub>e</sub>A
- C6PFDA = 13C6 PFDA
- 13C7PUA = 13C7 PFUnA
- C8PFOA = 13C8 PFOA
- C8PFOS = 13C8 PFOS
- C9PFNA = 13C9 PFNA
- M242FTS = M2-4:2 FTS
- M262FTS = M2-6:2 FTS
- M282FTS = M2-8:2 FTS

# QC Sample Results

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

**Lab Sample ID: MB 410-392658/1-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 394278**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 392658**

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
11-Chloroeicosafuoro-3-oxaundecane e-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
9-Chlorohexadecafluoro-3-oxanonane e-1-sulfonic acid(9Cl-PF3ONS)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluorobutanoic acid (PFBA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluorodecanoic acid (PFDA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluorononanoic acid (PFNA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluorooctanoic acid (PFOA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	ng/L		06/30/23 10:07	07/07/23 12:18	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C2 PFDoA	99		50 - 200	06/30/23 10:07	07/07/23 12:18	1
13C3 HFPO-DA	102		50 - 200	06/30/23 10:07	07/07/23 12:18	1
13C3 PFBS	106		50 - 200	06/30/23 10:07	07/07/23 12:18	1
13C3 PFHxS	102		50 - 200	06/30/23 10:07	07/07/23 12:18	1
13C4 PFBA	97		50 - 200	06/30/23 10:07	07/07/23 12:18	1
13C4 PFHpA	102		50 - 200	06/30/23 10:07	07/07/23 12:18	1
13C5 PFHxA	105		50 - 200	06/30/23 10:07	07/07/23 12:18	1
13C5 PFPeA	104		50 - 200	06/30/23 10:07	07/07/23 12:18	1
13C6 PFDA	93		50 - 200	06/30/23 10:07	07/07/23 12:18	1
13C7 PFUnA	98		50 - 200	06/30/23 10:07	07/07/23 12:18	1
13C8 PFOA	96		50 - 200	06/30/23 10:07	07/07/23 12:18	1
13C8 PFOS	103		50 - 200	06/30/23 10:07	07/07/23 12:18	1

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# QC Sample Results

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

**Lab Sample ID: MB 410-392658/1-A**

**Matrix: Drinking Water**

**Analysis Batch: 394278**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 392658**

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C9 PFNA	100		50 - 200	06/30/23 10:07	07/07/23 12:18	1
M2-4:2 FTS	131		50 - 200	06/30/23 10:07	07/07/23 12:18	1
M2-6:2 FTS	119		50 - 200	06/30/23 10:07	07/07/23 12:18	1
M2-8:2 FTS	114		50 - 200	06/30/23 10:07	07/07/23 12:18	1

**Lab Sample ID: LCS 410-392658/2-A**

**Matrix: Drinking Water**

**Analysis Batch: 394278**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 392658**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	9.58	7.78		ng/L		81	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	9.34	7.71		ng/L		82	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	9.48	8.45		ng/L		89	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.45	8.71		ng/L		92	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	9.30	7.48		ng/L		80	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	10.0	8.60		ng/L		86	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	10.0	8.74		ng/L		87	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	8.90	7.58		ng/L		85	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	10.0	8.72		ng/L		87	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	10.0	7.64		ng/L		76	70 - 130
Perfluorobutanesulfonic acid (PFBS)	8.85	7.21		ng/L		81	70 - 130
Perfluorobutanoic acid (PFBA)	10.0	8.41		ng/L		84	70 - 130
Perfluorodecanoic acid (PFDA)	10.0	8.34		ng/L		83	70 - 130
Perfluorododecanoic acid (PFDoA)	10.0	8.88		ng/L		89	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	9.52	7.80		ng/L		82	70 - 130
Perfluoroheptanoic acid (PFHpA)	10.0	8.35		ng/L		84	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	9.12	7.10		ng/L		78	70 - 130
Perfluorohexanoic acid (PFHxA)	10.0	8.80		ng/L		88	70 - 130
Perfluorononanoic acid (PFNA)	10.0	8.65		ng/L		87	70 - 130
Perfluorooctanesulfonic acid (PFOS)	9.26	7.44		ng/L		80	70 - 130
Perfluorooctanoic acid (PFOA)	10.0	8.61		ng/L		86	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	9.38	7.76		ng/L		83	70 - 130
Perfluoropentanoic acid (PFPeA)	10.0	8.49		ng/L		85	70 - 130

# QC Sample Results

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

**Lab Sample ID: LCS 410-392658/2-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 394278**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 392658**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	10.0	8.12		ng/L		81	70 - 130
<b>LCS LCS</b>							
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
13C2 PFDaA	98		50 - 200				
13C3 HFPO-DA	100		50 - 200				
13C3 PFBS	106		50 - 200				
13C3 PFHxS	103		50 - 200				
13C4 PFBA	93		50 - 200				
13C4 PFHpA	99		50 - 200				
13C5 PFHxA	102		50 - 200				
13C5 PFPeA	94		50 - 200				
13C6 PFDA	91		50 - 200				
13C7 PFUnA	96		50 - 200				
13C8 PFOA	93		50 - 200				
13C8 PFOS	102		50 - 200				
13C9 PFNA	94		50 - 200				
M2-4:2 FTS	131		50 - 200				
M2-6:2 FTS	118		50 - 200				
M2-8:2 FTS	126		50 - 200				

**Lab Sample ID: LLCS 410-392658/3-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 394278**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 392658**

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.86	1.75	J	ng/L		94	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.92	1.67	J	ng/L		87	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.87	1.53	J	ng/L		82	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.90	1.70	J	ng/L		90	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	1.87	J	ng/L		99	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.86	1.68	J	ng/L		90	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	2.00	1.81	J	ng/L		91	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	1.85	J	ng/L		93	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	1.78	1.60	J	ng/L		90	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.87	J	ng/L		93	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.59	J	ng/L		80	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.77	1.50	J	ng/L		85	50 - 150

# QC Sample Results

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

**Lab Sample ID: LLCS 410-392658/3-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 394278**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 392658**

Analyte	Spike Added	LLCS	LLCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Perfluorobutanoic acid (PFBA)	2.00	1.81	J	ng/L		90	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.80	J	ng/L		90	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.08		ng/L		104	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.90	1.60	J	ng/L		84	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.85	J	ng/L		93	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.62	J	ng/L		89	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.95	J	ng/L		97	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.76	J	ng/L		88	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.85	1.67	J	ng/L		90	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.91	J	ng/L		96	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.75	J	ng/L		93	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	1.87	J	ng/L		93	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	1.95	J	ng/L		97	50 - 150

Isotope Dilution	LLCS	LLCS	Limits
	%Recovery	Qualifier	
13C2 PFDoA	91		50 - 200
13C3 HFPO-DA	96		50 - 200
13C3 PFBS	105		50 - 200
13C3 PFHxS	97		50 - 200
13C4 PFBA	93		50 - 200
13C4 PFHpA	93		50 - 200
13C5 PFHxA	97		50 - 200
13C5 PFPeA	98		50 - 200
13C6 PFDA	84		50 - 200
13C7 PFUnA	87		50 - 200
13C8 PFOA	90		50 - 200
13C8 PFOS	96		50 - 200
13C9 PFNA	87		50 - 200
M2-4:2 FTS	134		50 - 200
M2-6:2 FTS	116		50 - 200
M2-8:2 FTS	113		50 - 200

**Lab Sample ID: 410-132634-A-1-B MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 394278**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 392658**

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		7.46	6.37		ng/L		85	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		7.69	7.20		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		7.49	6.47		ng/L		86	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		7.61	6.49		ng/L		85	70 - 130

Eurofins Lancaster Laboratories Environment Testing, LLC



# QC Sample Results

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: 410-132634-A-1-B MS

Client Sample ID: Matrix Spike

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 394278

Prep Batch: 392658

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		7.58	7.18		ng/L		95	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	ND		7.46	6.63		ng/L		89	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		8.02	6.97		ng/L		87	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		8.02	7.02		ng/L		87	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		7.14	6.39		ng/L		89	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		8.02	7.25		ng/L		90	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		8.02	6.86		ng/L		86	70 - 130
Perfluorobutanesulfonic acid (PFBS)	ND		7.10	5.97		ng/L		84	70 - 130
Perfluorobutanoic acid (PFBA)	ND		8.02	7.28		ng/L		91	70 - 130
Perfluorodecanoic acid (PFDA)	ND		8.02	6.83		ng/L		85	70 - 130
Perfluorododecanoic acid (PFDoA)	ND		8.02	6.95		ng/L		87	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	ND		7.64	6.94		ng/L		91	70 - 130
Perfluoroheptanoic acid (PFHpA)	ND		8.02	7.20		ng/L		90	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	ND		7.32	6.45		ng/L		88	70 - 130
Perfluorohexanoic acid (PFHxA)	ND		8.02	7.42		ng/L		92	70 - 130
Perfluorononanoic acid (PFNA)	ND		8.02	6.84		ng/L		85	70 - 130
Perfluorooctanesulfonic acid (PFOS)	ND		7.43	6.34		ng/L		85	70 - 130
Perfluorooctanoic acid (PFOA)	ND		8.02	6.86		ng/L		86	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	ND		7.53	6.89		ng/L		92	70 - 130
Perfluoropentanoic acid (PFPeA)	ND		8.02	7.27		ng/L		91	70 - 130
Perfluoroundecanoic acid (PFUnA)	ND		8.02	7.02		ng/L		88	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C2 PFDoA	91		50 - 200
13C3 HFPO-DA	93		50 - 200
13C3 PFBS	109		50 - 200
13C3 PFHxS	102		50 - 200
13C4 PFBA	90		50 - 200
13C4 PFHpA	90		50 - 200
13C5 PFHxA	97		50 - 200
13C5 PFPeA	91		50 - 200
13C6 PFDA	83		50 - 200
13C7 PFUnA	85		50 - 200
13C8 PFOA	92		50 - 200
13C8 PFOS	98		50 - 200
13C9 PFNA	88		50 - 200
M2-4:2 FTS	138		50 - 200

# QC Sample Results

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

**Lab Sample ID: 410-132634-A-1-B MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 394278**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 392658**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
M2-6:2 FTS	122		50 - 200
M2-8:2 FTS	115		50 - 200

**Lab Sample ID: 410-132634-A-1-C MSD**  
**Matrix: Drinking Water**  
**Analysis Batch: 394278**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 392658**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
				Result	Qualifier						
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		7.55	6.67		ng/L		88	70 - 130	5	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		7.78	7.06		ng/L		91	70 - 130	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		7.58	5.92		ng/L		78	70 - 130	9	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		7.69	7.40		ng/L		96	70 - 130	13	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		7.67	7.65		ng/L		100	70 - 130	6	30
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	ND		7.55	6.69		ng/L		89	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		8.12	7.13		ng/L		88	70 - 130	2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		8.12	7.09		ng/L		87	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		7.22	6.38		ng/L		88	70 - 130	0	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		8.12	7.52		ng/L		93	70 - 130	4	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		8.12	6.72		ng/L		83	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	ND		7.18	6.13		ng/L		85	70 - 130	3	30
Perfluorobutanoic acid (PFBA)	ND		8.12	7.35		ng/L		91	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	ND		8.12	6.89		ng/L		85	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	ND		8.12	7.35		ng/L		91	70 - 130	6	30
Perfluoroheptanesulfonic acid (PFHpS)	ND		7.73	6.73		ng/L		87	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	ND		8.12	7.17		ng/L		88	70 - 130	0	30
Perfluorohexanesulfonic acid (PFHxS)	ND		7.40	6.01		ng/L		81	70 - 130	7	30
Perfluorohexanoic acid (PFHxA)	ND		8.12	7.62		ng/L		94	70 - 130	3	30
Perfluorononanoic acid (PFNA)	ND		8.12	6.90		ng/L		85	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	ND		7.51	6.54		ng/L		87	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	ND		8.12	7.57		ng/L		93	70 - 130	10	30
Perfluoropentanesulfonic acid (PFPeS)	ND		7.61	6.76		ng/L		89	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	ND		8.12	6.99		ng/L		86	70 - 130	4	30
Perfluoroundecanoic acid (PFUnA)	ND		8.12	6.84		ng/L		84	70 - 130	3	30

# QC Sample Results

Client: Olympic View Water & Sewer District  
 Project/Site: 63600

Job ID: 410-132235-1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

<i>Isotope Dilution</i>	<i>MSD MSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C2 PFDoA	92		50 - 200
13C3 HFPO-DA	98		50 - 200
13C3 PFBS	109		50 - 200
13C3 PFHxS	101		50 - 200
13C4 PFBA	91		50 - 200
13C4 PFHpA	93		50 - 200
13C5 PFHxA	103		50 - 200
13C5 PFPeA	99		50 - 200
13C6 PFDA	91		50 - 200
13C7 PFUnA	95		50 - 200
13C8 PFOA	91		50 - 200
13C8 PFOS	98		50 - 200
13C9 PFNA	92		50 - 200
M2-4:2 FTS	136		50 - 200
M2-6:2 FTS	114		50 - 200
M2-8:2 FTS	118		50 - 200

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# QC Association Summary

Client: Olympic View Water & Sewer District  
 Project/Site: 63600

Job ID: 410-132235-1

## LCMS

### Prep Batch: 392658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-132235-1	DEER CREEK SURFACE (S04)	Total/NA	Drinking Water	533 Prep	
410-132235-2	FRB-DEER CREEK SURFACE	Total/NA	Drinking Water	533 Prep	
MB 410-392658/1-A	Method Blank	Total/NA	Drinking Water	533 Prep	
LCS 410-392658/2-A	Lab Control Sample	Total/NA	Drinking Water	533 Prep	
LLCS 410-392658/3-A	Lab Control Sample	Total/NA	Drinking Water	533 Prep	
410-132634-A-1-B MS	Matrix Spike	Total/NA	Drinking Water	533 Prep	
410-132634-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Drinking Water	533 Prep	

### Analysis Batch: 394278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-132235-1	DEER CREEK SURFACE (S04)	Total/NA	Drinking Water	533	392658
410-132235-2	FRB-DEER CREEK SURFACE	Total/NA	Drinking Water	533	392658
MB 410-392658/1-A	Method Blank	Total/NA	Drinking Water	533	392658
LCS 410-392658/2-A	Lab Control Sample	Total/NA	Drinking Water	533	392658
LLCS 410-392658/3-A	Lab Control Sample	Total/NA	Drinking Water	533	392658
410-132634-A-1-B MS	Matrix Spike	Total/NA	Drinking Water	533	392658
410-132634-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Drinking Water	533	392658



# Lab Chronicle

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

**Client Sample ID: DEER CREEK SURFACE (S04)**

**Lab Sample ID: 410-132235-1**

Date Collected: 06/26/23 10:30

Matrix: Drinking Water

Date Received: 06/27/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533 Prep			392658	HQ8B	ELLE	06/30/23 10:07
Total/NA	Analysis	533		1	394278	DCS9	ELLE	07/07/23 13:51

**Client Sample ID: FRB-DEER CREEK SURFACE**

**Lab Sample ID: 410-132235-2**

Date Collected: 06/26/23 10:30

Matrix: Drinking Water

Date Received: 06/27/23 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533 Prep			392658	HQ8B	ELLE	06/30/23 10:07
Total/NA	Analysis	533		1	394278	DCS9	ELLE	07/07/23 14:02

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



# Accreditation/Certification Summary

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

## Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C457	04-11-24

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# Method Summary

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	ELLE
533 Prep	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	EPA	ELLE

**Protocol References:**

EPA = US Environmental Protection Agency

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



# Sample Summary

Client: Olympic View Water & Sewer District  
Project/Site: 63600

Job ID: 410-132235-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-132235-1	DEER CREEK SURFACE (S04)	Drinking Water	06/26/23 10:30	06/27/23 09:45
410-132235-2	FRB-DEER CREEK SURFACE	Drinking Water	06/26/23 10:30	06/27/23 09:45

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# Chain of Custody Record



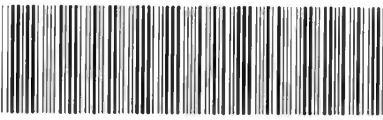
Environment Testing

410-132235-01 Chain of Custody

Client Contact: GW2 WA State Dept of Health		Sampler: <u>Scott R. Dunn</u>		Lab PM: Sachtleben, Kerri S		Carrier Tracking No(s):		COC No: 410-91496-25761.1			
Company: Washington State Dept of Health		Phone: <u>425-774-7769</u>		E-Mail: Kerri.Sachtleben@et.eurofinsus.com		State of Origin:		Page: Page 1 of 1			
Address: 101 Israel Road SE		Due Date Requested:		Analysis Requested		Job #:		Preservation Codes:			
City: Tumwater		TAT Requested (days):		Field Filtered Sample (Yes or No)		Total Number of Containers		A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify)			
State, Zip: WA, 98501		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		PO #: T155417							
Phone: 360-236-3122(Tel)		WO #:		Project #: 41012416							
Email: <u>Scott@ovwater.com</u>		Project Name: OLYMPIC VIEW WATER & SEWER DISTRICT		SSOW#:							
Site: <u>Sample Tap @ Woolley Tank</u>		Site:									
Entry point TO Dist.											
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSB (Yes or No)	Special Instructions/Note:				
DEER CREEK SURFACE					6-26-23	10:30	G	Drinking Water	NY	X	Contact Jeremy Prosser Jeremy@ovwater.com after June 30th
FRB-DEER CREEK SURFACE					6-26-23	10:30	FRB	Drinking Water	NY	X	
											Scott leaving Olympic View June 30th AHL
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:						
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:					
Relinquished by: <u>Scott R. Dunn</u>		Date/Time: <u>6-26-23 15:00</u>		Company: <u>O.V. WSP</u>		Received by: <u>[Signature]</u>		Date/Time: <u>[Signature]</u>		Company:	
Relinquished by: <u>[Signature]</u>		Date/Time: <u>[Signature]</u>		Company: <u>[Signature]</u>		Received by: <u>[Signature]</u>		Date/Time: <u>[Signature]</u>		Company:	
Relinquished by: <u>[Signature]</u>		Date/Time: <u>[Signature]</u>		Company: <u>[Signature]</u>		Received by: <u>[Signature]</u>		Date/Time: <u>6-27-23 9:45</u>		Company: <u>[Signature]</u>	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: <u>278916</u>		Cooler Temperature(s) °C and Other Remarks: <u>RAW: 2.7 CORN: 2.7</u>							

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410-132235-02 Chain of Custody

### Per- and Polyfluoroalkyl Substances (PFAS) 533 Analysis

Date Collected:	System Group Type: (circle one) <b>(A)</b> B Other:
Water System ID Number: <b>5363600 EPA</b> <b>63600-5</b>	System Name: <b>Olympic View Water</b>
Sample Location: <b>Sample Tap @ Woodway Tank</b> <b>Entry Point to Distribution</b>	County: <b>Snohomish</b> <b>SEWER DISTRICT</b> Source Number(s): (list all sources if blended or composi <b>S-04 Dear Creek</b>
Sample Purpose: (check appropriate box) <input type="checkbox"/> RC – Routine/Compliance (satisfies monitoring <input type="checkbox"/> C – Confirmation (confirmation of chemical result)* <input checked="" type="checkbox"/> I – Investigative (does not satisfy monitoring requirements) <del>_____</del> O – Other (specify – does not satisfy monitoring requirements)	
Sample Composition: (check appropriate box) <input checked="" type="checkbox"/> S – Single Source <input type="checkbox"/> B – Blended (list source numbers in "Source Numbers" field) <input type="checkbox"/> C – Composite (list source numbers in "Source Numbers" field) <input type="checkbox"/> D – Distribution Sample	Sample Type: (check one) <input type="checkbox"/> Pre-treatment/Untreated (Raw) <input checked="" type="checkbox"/> Post-treatment (Finished) <input type="checkbox"/> Unknown or Other:  Sample collected by: (Name) <b>Scott R. Dunn</b>  Phone Number: <b>425-774-7769</b>

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## Login Sample Receipt Checklist

Client: Olympic View Water & Sewer District

Job Number: 410-132235-1

**Login Number: 132235**

**List Source: Eurofins Lancaster Laboratories Environment Testing, LLC**

**List Number: 1**

**Creator: Arroyo, Haley**

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (<math>\leq 6^{\circ}\text{C}</math>, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (<math>\leq 6^{\circ}\text{C}</math>, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

