*Eurofins Environment Testing South Central, LLC*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

November 06, 2023

Amy Ewing
Daniel B. Stephens & Assoc.
6020 Academy NE Suite 100
Albuquerque, NM 87109
TEL: (505) 822-9400
FAX: (505) 822-8877

RE: LCLC domestic Well Sampling OrderNo.: 2310374

Dear Amy Ewing:

Eurofins Environment Testing South Central, LLC received 8 sample(s) on 10/6/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Daniel B. Stephens & Assoc. **Client Sample ID:** LCLC-1
**Project:** LCLC domestic Well Sampling **Collection Date:** 10/5/2023 9:20:00 AM
**Lab ID:** 2310374-001 **Matrix:** GROUNDWA **Received Date:** 10/6/2023 3:37:00 PM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JTT** | |
| Fluoride | ND | 0.10 | | mg/L | 1 | 10/6/2023 9:03:12 PM | A100294 |
| Chloride | 55 | 10 | | mg/L | 20 | 10/6/2023 9:15:37 PM | A100294 |
| Nitrogen, Nitrite (As N) | ND | 0.10 | | mg/L | 1 | 10/6/2023 9:03:12 PM | A100294 |
| Bromide | 0.14 | 0.10 | | mg/L | 1 | 10/6/2023 9:03:12 PM | A100294 |
| Nitrogen, Nitrate (As N) | 1.6 | 0.10 | | mg/L | 1 | 10/6/2023 9:03:12 PM | A100294 |
| Phosphorus, Orthophosphate (As P) | ND | 0.50 | | mg/L | 1 | 10/6/2023 9:03:12 PM | A100294 |
| Sulfate | 31 | 0.50 | | mg/L | 1 | 10/6/2023 9:03:12 PM | A100294 |
| **SM2510B: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **RBC** | |
| Conductivity | 580 | 10 | | µmhos/c | 1 | 10/12/2023 7:05:56 PM | R100435 |
| **SM2320B: ALKALINITY** | | | | | | Analyst: **RBC** | |
| Bicarbonate (As CaCO3) | 170.5 | 20.00 | | mg/L Ca | 1 | 10/12/2023 7:05:56 PM | B100435 |
| Carbonate (As CaCO3) | ND | 2.000 | | mg/L Ca | 1 | 10/12/2023 7:05:56 PM | B100435 |
| Total Alkalinity (as CaCO3) | 170.5 | 20.00 | | mg/L Ca | 1 | 10/12/2023 7:05:56 PM | B100435 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **MCA** | |
| Total Dissolved Solids | 369 | 50.0 | | mg/L | 1 | 10/11/2023 2:20:00 PM | 78055 |
| **EPA METHOD 200.7: METALS** | | | | | | Analyst: **JRR** | |
| Calcium | 83 | 1.0 | | mg/L | 1 | 10/12/2023 1:52:02 PM | B100429 |
| Magnesium | 13 | 1.0 | | mg/L | 1 | 10/12/2023 1:52:02 PM | B100429 |
| Potassium | 1.8 | 1.0 | | mg/L | 1 | 10/12/2023 1:52:02 PM | B100429 |
| Sodium | 18 | 1.0 | | mg/L | 1 | 10/12/2023 1:52:02 PM | B100429 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Daniel B. Stephens & Assoc. **Client Sample ID:** LCLC-2
**Project:** LCLC domestic Well Sampling **Collection Date:** 10/5/2023 9:30:00 AM
**Lab ID:** 2310374-002 **Matrix:** GROUNDWA **Received Date:** 10/6/2023 3:37:00 PM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JTT** | |
| Fluoride | ND | 0.10 | | mg/L | 1 | 10/6/2023 9:28:02 PM | A100294 |
| Chloride | 57 | 10 | | mg/L | 20 | 10/6/2023 9:40:26 PM | A100294 |
| Nitrogen, Nitrite (As N) | ND | 0.10 | | mg/L | 1 | 10/6/2023 9:28:02 PM | A100294 |
| Bromide | 0.14 | 0.10 | | mg/L | 1 | 10/6/2023 9:28:02 PM | A100294 |
| Nitrogen, Nitrate (As N) | 1.6 | 0.10 | | mg/L | 1 | 10/6/2023 9:28:02 PM | A100294 |
| Phosphorus, Orthophosphate (As P) | ND | 0.50 | | mg/L | 1 | 10/6/2023 9:28:02 PM | A100294 |
| Sulfate | 31 | 0.50 | | mg/L | 1 | 10/6/2023 9:28:02 PM | A100294 |
| **SM2510B: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **RBC** | |
| Conductivity | 580 | 10 | | µmhos/c | 1 | 10/12/2023 7:27:02 PM | R100435 |
| **SM2320B: ALKALINITY** | | | | | | Analyst: **RBC** | |
| Bicarbonate (As CaCO3) | 170.9 | 20.00 | | mg/L Ca | 1 | 10/12/2023 7:27:02 PM | B100435 |
| Carbonate (As CaCO3) | ND | 2.000 | | mg/L Ca | 1 | 10/12/2023 7:27:02 PM | B100435 |
| Total Alkalinity (as CaCO3) | 170.9 | 20.00 | | mg/L Ca | 1 | 10/12/2023 7:27:02 PM | B100435 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **MCA** | |
| Total Dissolved Solids | 396 | 100 | D | mg/L | 1 | 10/11/2023 2:20:00 PM | 78055 |
| **EPA METHOD 200.7: METALS** | | | | | | Analyst: **JRR** | |
| Calcium | 80 | 1.0 | | mg/L | 1 | 10/12/2023 1:55:37 PM | B100429 |
| Magnesium | 12 | 1.0 | | mg/L | 1 | 10/12/2023 1:55:37 PM | B100429 |
| Potassium | 1.9 | 1.0 | | mg/L | 1 | 10/12/2023 1:55:37 PM | B100429 |
| Sodium | 18 | 1.0 | | mg/L | 1 | 10/12/2023 1:55:37 PM | B100429 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Daniel B. Stephens & Assoc. **Client Sample ID:** LCLC-3
**Project:** LCLC domestic Well Sampling **Collection Date:** 10/5/2023 9:55:00 AM
**Lab ID:** 2310374-003 **Matrix:** GROUNDWA **Received Date:** 10/6/2023 3:37:00 PM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **JTT** | |
| Fluoride | ND | 0.10 | | mg/L | 1 | 10/6/2023 9:52:50 PM | A100294 |
| Chloride | 69 | 10 | | mg/L | 20 | 10/17/2023 1:35:42 AM | A100500 |
| Nitrogen, Nitrite (As N) | ND | 0.10 | | mg/L | 1 | 10/6/2023 9:52:50 PM | A100294 |
| Bromide | 0.17 | 0.10 | | mg/L | 1 | 10/6/2023 9:52:50 PM | A100294 |
| Nitrogen, Nitrate (As N) | 0.38 | 0.10 | | mg/L | 1 | 10/6/2023 9:52:50 PM | A100294 |
| Phosphorus, Orthophosphate (As P) | ND | 0.50 | | mg/L | 1 | 10/6/2023 9:52:50 PM | A100294 |
| Sulfate | 46 | 10 | | mg/L | 20 | 10/17/2023 1:35:42 AM | A100500 |
| **SM2510B: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **RBC** | |
| Conductivity | 720 | 10 | | µmhos/c | 1 | 10/12/2023 7:37:15 PM | R100435 |
| **SM2320B: ALKALINITY** | | | | | | Analyst: **RBC** | |
| Bicarbonate (As CaCO3) | 211.9 | 20.00 | | mg/L Ca | 1 | 10/12/2023 7:37:15 PM | B100435 |
| Carbonate (As CaCO3) | ND | 2.000 | | mg/L Ca | 1 | 10/12/2023 7:37:15 PM | B100435 |
| Total Alkalinity (as CaCO3) | 211.9 | 20.00 | | mg/L Ca | 1 | 10/12/2023 7:37:15 PM | B100435 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **MCA** | |
| Total Dissolved Solids | 428 | 50.0 | | mg/L | 1 | 10/11/2023 2:20:00 PM | 78055 |
| **EPA METHOD 200.7: METALS** | | | | | | Analyst: **JRR** | |
| Calcium | 98 | 1.0 | | mg/L | 1 | 10/12/2023 1:59:35 PM | B100429 |
| Magnesium | 11 | 1.0 | | mg/L | 1 | 10/12/2023 1:59:35 PM | B100429 |
| Potassium | 1.7 | 1.0 | | mg/L | 1 | 10/12/2023 1:59:35 PM | B100429 |
| Sodium | 39 | 1.0 | | mg/L | 1 | 10/12/2023 1:59:35 PM | B100429 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Daniel B. Stephens & Assoc. **Client Sample ID:** LCLC-4
**Project:** LCLC domestic Well Sampling **Collection Date:** 10/5/2023 9:50:00 AM
**Lab ID:** 2310374-004 **Matrix:** GROUNDWA **Received Date:** 10/6/2023 3:37:00 PM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SNS** | |
| Fluoride | ND | 0.10 | | mg/L | 1 | 10/7/2023 12:40:25 PM | R100302 |
| Chloride | ND | 0.50 | | mg/L | 1 | 10/7/2023 12:40:25 PM | R100302 |
| Nitrogen, Nitrite (As N) | ND | 0.10 | H | mg/L | 1 | 10/7/2023 12:40:25 PM | R100302 |
| Bromide | ND | 0.10 | | mg/L | 1 | 10/7/2023 12:40:25 PM | R100302 |
| Nitrogen, Nitrate (As N) | ND | 0.10 | H | mg/L | 1 | 10/7/2023 12:40:25 PM | R100302 |
| Phosphorus, Orthophosphate (As P) | ND | 0.50 | H | mg/L | 1 | 10/7/2023 12:40:25 PM | R100302 |
| Sulfate | ND | 0.50 | | mg/L | 1 | 10/7/2023 12:40:25 PM | R100302 |
| **SM2510B: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **RBC** | |
| Conductivity | ND | 10 | | µmhos/c | 1 | 10/12/2023 7:48:59 PM | R100435 |
| **SM2320B: ALKALINITY** | | | | | | Analyst: **RBC** | |
| Bicarbonate (As CaCO3) | ND | 20.00 | | mg/L Ca | 1 | 10/12/2023 7:48:59 PM | B100435 |
| Carbonate (As CaCO3) | ND | 2.000 | | mg/L Ca | 1 | 10/12/2023 7:48:59 PM | B100435 |
| Total Alkalinity (as CaCO3) | ND | 20.00 | | mg/L Ca | 1 | 10/12/2023 7:48:59 PM | B100435 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **MCA** | |
| Total Dissolved Solids | ND | 50.0 | | mg/L | 1 | 10/11/2023 2:20:00 PM | 78055 |
| **EPA METHOD 200.7: METALS** | | | | | | Analyst: **JRR** | |
| Calcium | ND | 1.0 | | mg/L | 1 | 10/12/2023 2:08:23 PM | B100429 |
| Magnesium | ND | 1.0 | | mg/L | 1 | 10/12/2023 2:08:23 PM | B100429 |
| Potassium | ND | 1.0 | | mg/L | 1 | 10/12/2023 2:08:23 PM | B100429 |
| Sodium | ND | 1.0 | | mg/L | 1 | 10/12/2023 2:08:23 PM | B100429 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Daniel B. Stephens & Assoc. **Client Sample ID:** LCLC-5
**Project:** LCLC domestic Well Sampling **Collection Date:** 10/5/2023 10:25:00 AM
**Lab ID:** 2310374-005 **Matrix:** GROUNDWA **Received Date:** 10/6/2023 3:37:00 PM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SNS** | |
| Fluoride | 0.22 | 0.10 | | mg/L | 1 | 10/7/2023 12:52:50 PM | R100302 |
| Chloride | 8.1 | 0.50 | | mg/L | 1 | 10/7/2023 12:52:50 PM | R100302 |
| Nitrogen, Nitrite (As N) | ND | 0.10 | H | mg/L | 1 | 10/7/2023 12:52:50 PM | R100302 |
| Bromide | 0.13 | 0.10 | | mg/L | 1 | 10/7/2023 12:52:50 PM | R100302 |
| Nitrogen, Nitrate (As N) | 0.77 | 0.10 | H | mg/L | 1 | 10/7/2023 12:52:50 PM | R100302 |
| Phosphorus, Orthophosphate (As P) | ND | 0.50 | H | mg/L | 1 | 10/7/2023 12:52:50 PM | R100302 |
| Sulfate | 44 | 0.50 | | mg/L | 1 | 10/7/2023 12:52:50 PM | R100302 |
| **SM2510B: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **RBC** | |
| Conductivity | 310 | 10 | | µmhos/c | 1 | 10/12/2023 7:54:26 PM | R100435 |
| **SM2320B: ALKALINITY** | | | | | | Analyst: **RBC** | |
| Bicarbonate (As CaCO3) | 98.32 | 20.00 | | mg/L Ca | 1 | 10/12/2023 7:54:26 PM | B100435 |
| Carbonate (As CaCO3) | ND | 2.000 | | mg/L Ca | 1 | 10/12/2023 7:54:26 PM | B100435 |
| Total Alkalinity (as CaCO3) | 98.32 | 20.00 | | mg/L Ca | 1 | 10/12/2023 7:54:26 PM | B100435 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **MCA** | |
| Total Dissolved Solids | 196 | 50.0 | | mg/L | 1 | 10/11/2023 2:20:00 PM | 78055 |
| **EPA METHOD 200.7: METALS** | | | | | | Analyst: **JRR** | |
| Calcium | 32 | 1.0 | | mg/L | 1 | 10/12/2023 2:11:53 PM | B100429 |
| Magnesium | 3.8 | 1.0 | | mg/L | 1 | 10/12/2023 2:11:53 PM | B100429 |
| Potassium | 1.0 | 1.0 | | mg/L | 1 | 10/12/2023 2:11:53 PM | B100429 |
| Sodium | 27 | 1.0 | | mg/L | 1 | 10/12/2023 2:11:53 PM | B100429 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Daniel B. Stephens & Assoc. **Client Sample ID:** LCLC-6
**Project:** LCLC domestic Well Sampling **Collection Date:** 10/5/2023 10:50:00 AM
**Lab ID:** 2310374-006 **Matrix:** GROUNDWA **Received Date:** 10/6/2023 3:37:00 PM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SNS** | |
| Fluoride | ND | 1.0 | | mg/L | 10 | 10/7/2023 1:05:15 PM | R100302 |
| Chloride | 39 | 5.0 | | mg/L | 10 | 10/7/2023 1:05:15 PM | R100302 |
| Nitrogen, Nitrite (As N) | ND | 1.0 | H | mg/L | 10 | 10/7/2023 1:05:15 PM | R100302 |
| Bromide | ND | 1.0 | | mg/L | 10 | 10/7/2023 1:05:15 PM | R100302 |
| Nitrogen, Nitrate (As N) | 2.9 | 1.0 | H | mg/L | 10 | 10/7/2023 1:05:15 PM | R100302 |
| Phosphorus, Orthophosphate (As P) | ND | 5.0 | H | mg/L | 10 | 10/7/2023 1:05:15 PM | R100302 |
| Sulfate | 25 | 5.0 | | mg/L | 10 | 10/7/2023 1:05:15 PM | R100302 |
| **SM2510B: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **RBC** | |
| Conductivity | 540 | 10 | | µmhos/c | 1 | 10/12/2023 8:03:14 PM | R100435 |
| **SM2320B: ALKALINITY** | | | | | | Analyst: **RBC** | |
| Bicarbonate (As CaCO3) | 171.8 | 20.00 | | mg/L Ca | 1 | 10/12/2023 8:03:14 PM | B100435 |
| Carbonate (As CaCO3) | ND | 2.000 | | mg/L Ca | 1 | 10/12/2023 8:03:14 PM | B100435 |
| Total Alkalinity (as CaCO3) | 171.8 | 20.00 | | mg/L Ca | 1 | 10/12/2023 8:03:14 PM | B100435 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **MCA** | |
| Total Dissolved Solids | 338 | 50.0 | | mg/L | 1 | 10/11/2023 2:20:00 PM | 78055 |
| **EPA METHOD 200.7: METALS** | | | | | | Analyst: **JRR** | |
| Calcium | 79 | 1.0 | | mg/L | 1 | 10/12/2023 2:15:21 PM | B100429 |
| Magnesium | 10 | 1.0 | | mg/L | 1 | 10/12/2023 2:15:21 PM | B100429 |
| Potassium | 1.7 | 1.0 | | mg/L | 1 | 10/12/2023 2:15:21 PM | B100429 |
| Sodium | 16 | 1.0 | | mg/L | 1 | 10/12/2023 2:15:21 PM | B100429 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Daniel B. Stephens & Assoc. **Client Sample ID:** LCLC-7
**Project:** LCLC domestic Well Sampling **Collection Date:** 10/5/2023 12:20:00 PM
**Lab ID:** 2310374-007 **Matrix:** GROUNDWA **Received Date:** 10/6/2023 3:37:00 PM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SNS** | |
| Fluoride | ND | 1.0 | | mg/L | 10 | 10/7/2023 1:17:39 PM | R100302 |
| Chloride | 39 | 5.0 | | mg/L | 10 | 10/7/2023 1:17:39 PM | R100302 |
| Nitrogen, Nitrite (As N) | ND | 1.0 | H | mg/L | 10 | 10/7/2023 1:17:39 PM | R100302 |
| Bromide | ND | 1.0 | | mg/L | 10 | 10/7/2023 1:17:39 PM | R100302 |
| Nitrogen, Nitrate (As N) | 3.7 | 1.0 | H | mg/L | 10 | 10/7/2023 1:17:39 PM | R100302 |
| Phosphorus, Orthophosphate (As P) | ND | 5.0 | H | mg/L | 10 | 10/7/2023 1:17:39 PM | R100302 |
| Sulfate | 73 | 5.0 | | mg/L | 10 | 10/7/2023 1:17:39 PM | R100302 |
| **SM2510B: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **RBC** | |
| Conductivity | 610 | 10 | | µmhos/c | 1 | 10/12/2023 8:13:32 PM | R100435 |
| **SM2320B: ALKALINITY** | | | | | | Analyst: **RBC** | |
| Bicarbonate (As CaCO3) | 163.4 | 20.00 | | mg/L Ca | 1 | 10/12/2023 8:13:32 PM | B100435 |
| Carbonate (As CaCO3) | ND | 2.000 | | mg/L Ca | 1 | 10/12/2023 8:13:32 PM | B100435 |
| Total Alkalinity (as CaCO3) | 163.4 | 20.00 | | mg/L Ca | 1 | 10/12/2023 8:13:32 PM | B100435 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **MCA** | |
| Total Dissolved Solids | 385 | 50.0 | | mg/L | 1 | 10/11/2023 2:20:00 PM | 78055 |
| **EPA METHOD 200.7: METALS** | | | | | | Analyst: **JRR** | |
| Calcium | 85 | 1.0 | | mg/L | 1 | 10/12/2023 2:18:44 PM | B100429 |
| Magnesium | 9.9 | 1.0 | | mg/L | 1 | 10/12/2023 2:18:44 PM | B100429 |
| Potassium | 2.4 | 1.0 | | mg/L | 1 | 10/12/2023 2:18:44 PM | B100429 |
| Sodium | 30 | 1.0 | | mg/L | 1 | 10/12/2023 2:18:44 PM | B100429 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Daniel B. Stephens & Assoc. **Client Sample ID:** LCLC-8
**Project:** LCLC domestic Well Sampling **Collection Date:** 10/5/2023 12:35:00 PM
**Lab ID:** 2310374-008 **Matrix:** GROUNDWA **Received Date:** 10/6/2023 3:37:00 PM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SNS** | |
| Fluoride | ND | 0.50 | | mg/L | 5 | 10/7/2023 1:30:03 PM | R100302 |
| Chloride | 9.7 | 2.5 | | mg/L | 5 | 10/7/2023 1:30:03 PM | R100302 |
| Nitrogen, Nitrite (As N) | ND | 0.50 | H | mg/L | 5 | 10/7/2023 1:30:03 PM | R100302 |
| Bromide | ND | 0.50 | | mg/L | 5 | 10/7/2023 1:30:03 PM | R100302 |
| Nitrogen, Nitrate (As N) | 1.4 | 0.50 | H | mg/L | 5 | 10/7/2023 1:30:03 PM | R100302 |
| Phosphorus, Orthophosphate (As P) | ND | 2.5 | H | mg/L | 5 | 10/7/2023 1:30:03 PM | R100302 |
| Sulfate | 29 | 2.5 | | mg/L | 5 | 10/7/2023 1:30:03 PM | R100302 |
| **SM2510B: SPECIFIC CONDUCTANCE** | | | | | | Analyst: **RBC** | |
| Conductivity | 350 | 10 | | µmhos/c | 1 | 10/12/2023 8:27:45 PM | R100435 |
| **SM2320B: ALKALINITY** | | | | | | Analyst: **RBC** | |
| Bicarbonate (As CaCO3) | 118.6 | 20.00 | | mg/L Ca | 1 | 10/12/2023 8:27:45 PM | B100435 |
| Carbonate (As CaCO3) | ND | 2.000 | | mg/L Ca | 1 | 10/12/2023 8:27:45 PM | B100435 |
| Total Alkalinity (as CaCO3) | 118.6 | 20.00 | | mg/L Ca | 1 | 10/12/2023 8:27:45 PM | B100435 |
| **SM2540C MOD: TOTAL DISSOLVED SOLIDS** | | | | | | Analyst: **MCA** | |
| Total Dissolved Solids | 208 | 50.0 | | mg/L | 1 | 10/11/2023 2:20:00 PM | 78055 |
| **EPA METHOD 200.7: METALS** | | | | | | Analyst: **JRR** | |
| Calcium | 41 | 1.0 | | mg/L | 1 | 10/12/2023 2:22:09 PM | B100429 |
| Magnesium | 4.1 | 1.0 | | mg/L | 1 | 10/12/2023 2:22:09 PM | B100429 |
| Potassium | 1.4 | 1.0 | | mg/L | 1 | 10/12/2023 2:22:09 PM | B100429 |
| Sodium | 25 | 1.0 | | mg/L | 1 | 10/12/2023 2:22:09 PM | B100429 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

eurofins | Environment Testing

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Data Submittal
Hall Environmental Analysis Laboratory
4901 Hawkins NE
Suite D
Albuquerque, New Mexico 87109

Generated 11/2/2023 11:39:19 AM

## JOB DESCRIPTION

2310374

## JOB NUMBER

320-105783-1

Eurofins Sacramento
880 Riverside Parkway
West Sacramento CA 95605

See page two for job notes and contact information.

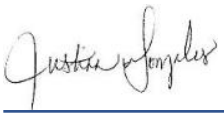
# Eurofins Sacramento

## 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.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

## Authorization



Generated
11/2/2023 11:39:19 AM

Authorized for release by
Justinn Gonzales, Project Manager I
Justinn.Gonzales@et.eurofinsus.com
(916)374-4344

# Table of Contents

# Definitions/Glossary

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

## Qualifiers

### LCMS

| Qualifier | Qualifier Description |
|---|---|
| I | Value is EMPC (estimated maximum possible concentration). |
| J | Estimated: The analyte was positively identified; the quantitation is an estimation |
| M | Manual integrated compound. |
| U | Undetected at the Limit of Detection. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | 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 |

## Job ID: 320-105783-1

### Laboratory: Eurofins Sacramento

**Narrative**

**Job Narrative**
**320-105783-1**

**Receipt**
The samples were received on 10/10/2023 9:10 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 was 3.9º C.

**LCMS**
Method QSM B15: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte: 2310374-006C LCLC-6 (320-105783-6).

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

**Organic Prep**
Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-714316.

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

# Detection Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

## Client Sample ID: 2310374-001C LCLC-1 — Lab Sample ID: 320-105783-1

| Analyte | Result | Qualifier | LOQ | DL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 6.5 | | 1.9 | 0.22 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 27 | | 1.9 | 0.22 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 19 | | 1.9 | 0.51 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 4.7 | | 1.9 | 0.45 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorooctanoic acid (PFOA) | 23 | M | 1.9 | 0.52 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorononanoic acid (PFNA) | 1.4 | J | 1.9 | 0.52 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 17 | | 1.9 | 0.32 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluoropentanesulfonic acid (PFPeS) | 0.93 | J | 1.9 | 0.47 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 11 | | 1.9 | 0.35 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 5.7 | | 1.9 | 0.54 | ng/L | 1 | | QSM B15 | Total/NA |

## Client Sample ID: 2310374-002C LCLC-2 — Lab Sample ID: 320-105783-2

| Analyte | Result | Qualifier | LOQ | DL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 6.4 | | 1.8 | 0.21 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 25 | | 1.8 | 0.21 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 19 | | 1.8 | 0.48 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 4.9 | | 1.8 | 0.42 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorooctanoic acid (PFOA) | 24 | M | 1.8 | 0.49 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorononanoic acid (PFNA) | 1.2 | J | 1.8 | 0.49 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 17 | | 1.8 | 0.30 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluoropentanesulfonic acid (PFPeS) | 0.94 | J | 1.8 | 0.45 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 10 | | 1.8 | 0.33 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 6.0 | | 1.8 | 0.51 | ng/L | 1 | | QSM B15 | Total/NA |

## Client Sample ID: 2310374-003C LCLC-3 — Lab Sample ID: 320-105783-3

| Analyte | Result | Qualifier | LOQ | DL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 10 | | 1.7 | 0.20 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 33 | | 1.7 | 0.20 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 25 | | 1.7 | 0.47 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 5.6 | | 1.7 | 0.41 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorooctanoic acid (PFOA) | 25 | M | 1.7 | 0.47 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorononanoic acid (PFNA) | 4.7 | | 1.7 | 0.47 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorodecanoic acid (PFDA) | 0.56 | J M | 1.7 | 0.28 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 22 | | 1.7 | 0.29 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluoropentanesulfonic acid (PFPeS) | 0.63 | J | 1.7 | 0.43 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 9.3 | | 1.7 | 0.32 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 25 | M | 1.7 | 0.49 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorooctanesulfonamide (FOSA) | 0.48 | J M | 1.7 | 0.44 | ng/L | 1 | | QSM B15 | Total/NA |

## Client Sample ID: 2310374-004C LCLC-4 — Lab Sample ID: 320-105783-4

| Analyte | Result | Qualifier | LOQ | DL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorooctanoic acid (PFOA) | 1.8 | M | 1.7 | 0.48 | ng/L | 1 | | QSM B15 | Total/NA |

## Client Sample ID: 2310374-005C LCLC-5 — Lab Sample ID: 320-105783-5

| Analyte | Result | Qualifier | LOQ | DL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorooctanoic acid (PFOA) | 1.8 | M | 1.8 | 0.51 | ng/L | 1 | | QSM B15 | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

## Client Sample ID: 2310374-006C LCLC-6 — Lab Sample ID: 320-105783-6

| Analyte | Result | Qualifier | LOQ | DL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 4.5 | | 1.7 | 0.21 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 8.3 | | 1.7 | 0.21 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 8.8 | | 1.7 | 0.47 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 2.7 | | 1.7 | 0.41 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorooctanoic acid (PFOA) | 14 | M | 1.7 | 0.48 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 6.3 | | 1.7 | 0.29 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluoropentanesulfonic acid (PFPeS) | 2.1 | | 1.7 | 0.44 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 9.9 | | 1.7 | 0.33 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 7.4 | I | 1.7 | 0.50 | ng/L | 1 | | QSM B15 | Total/NA |
| PFMPA | 0.35 | J | 1.7 | 0.24 | ng/L | 1 | | QSM B15 | Total/NA |

## Client Sample ID: 2310374-007C LCLC-7 — Lab Sample ID: 320-105783-7

| Analyte | Result | Qualifier | LOQ | DL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 1.0 | J M | 1.8 | 0.22 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 2.8 | | 1.8 | 0.22 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 2.3 | | 1.8 | 0.50 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorooctanoic acid (PFOA) | 2.1 | M | 1.8 | 0.51 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 0.54 | J | 1.8 | 0.31 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 0.52 | J M | 1.8 | 0.34 | ng/L | 1 | | QSM B15 | Total/NA |

## Client Sample ID: 2310374-008C LCLC-8 — Lab Sample ID: 320-105783-8

| Analyte | Result | Qualifier | LOQ | DL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 0.31 | J M | 1.8 | 0.21 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 0.60 | J M | 1.8 | 0.21 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 0.70 | J M | 1.8 | 0.49 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorooctanoic acid (PFOA) | 1.9 | M | 1.8 | 0.50 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 0.42 | J M | 1.8 | 0.30 | ng/L | 1 | | QSM B15 | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 0.39 | J M | 1.8 | 0.34 | ng/L | 1 | | QSM B15 | Total/NA |

This Detection Summary does not include radiochemical test results.

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

**Client Sample ID: 2310374-001C LCLC-1**
**Date Collected: 10/05/23 09:20**
**Date Received: 10/10/23 09:10**

**Lab Sample ID: 320-105783-1**
**Matrix: Water**

**Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15**

| Analyte | Result | Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **6.5** | | 1.9 | 0.22 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **27** | | 1.9 | 0.22 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **19** | | 1.9 | 0.51 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **4.7** | | 1.9 | 0.45 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **23** | **M** | 1.9 | 0.52 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| **Perfluorononanoic acid (PFNA)** | **1.4** | **J** | 1.9 | 0.52 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.93 | U M | 1.9 | 0.31 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.4 | U | 1.9 | 0.68 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.93 | U | 1.9 | 0.39 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| Perfluorotridecanoic acid (PFTrDA) | 1.4 | U M | 1.9 | 0.64 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 1.4 | U | 1.9 | 0.47 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **17** | | 1.9 | 0.32 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| **Perfluoropentanesulfonic acid (PFPeS)** | **0.93** | **J** | 1.9 | 0.47 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **11** | | 1.9 | 0.35 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| Perfluoroheptanesulfonic acid (PFHpS) | 1.4 | U | 1.9 | 0.66 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **5.7** | | 1.9 | 0.54 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| Perfluorononanesulfonic acid (PFNS) | 1.4 | U | 1.9 | 0.61 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 1.4 | U | 1.9 | 0.51 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| Perfluorododecanesulfonic acid (PFDoS) | 2.8 | U | 3.7 | 0.79 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 1.4 | U M | 1.9 | 0.48 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| NMeFOSAA | 0.93 | U | 4.6 | 0.43 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| NEtFOSAA | 0.93 | U | 4.6 | 0.32 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 4:2 FTS | 0.93 | U | 1.9 | 0.33 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 6:2 FTS | 0.93 | U M | 4.6 | 0.35 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 8:2 FTS | 1.4 | U | 1.9 | 0.57 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| NEtFOSA | 1.4 | U | 1.9 | 0.69 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| NMeFOSA | 1.4 | U | 1.9 | 0.69 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| NMeFOSE | 0.93 | U | 3.7 | 0.45 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| NEtFOSE | 1.4 | U | 1.9 | 0.67 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 9Cl-PF3ONS | 0.93 | U | 1.9 | 0.39 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| HFPO-DA (GenX) | 1.4 | U | 3.7 | 0.64 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 11Cl-PF3OUdS | 0.93 | U | 1.9 | 0.45 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 1.4 | U M | 1.9 | 0.47 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 3:3 FTCA | 0.93 | U | 1.9 | 0.40 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 5:3 FTCA | 0.93 | U | 1.9 | 0.31 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 7:3 FTCA | 1.4 | U | 1.9 | 0.51 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| NFDHA | 1.4 | U | 1.9 | 0.57 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| PFMBA | 0.93 | U | 1.9 | 0.24 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| PFMPA | 0.93 | U | 1.9 | 0.26 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| PFEESA | 0.93 | U | 1.9 | 0.27 | ng/L | | 10/19/23 12:32 | 11/01/23 04:26 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C8 FOSA* | *89* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:26* | *1* |
| *13C4 PFBA* | *97* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:26* | *1* |
| *13C5 PFPeA* | *99* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:26* | *1* |

## Client Sample ID: 2310374-001C LCLC-1
**Lab Sample ID: 320-105783-1**
**Date Collected: 10/05/23 09:20**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

### Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C2 PFHxA | 100 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 13C4 PFHpA | 107 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 13C4 PFOA | 101 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 13C5 PFNA | 108 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 13C2 PFDA | 98 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 13C2 PFUnA | 89 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 13C2 PFDoA | 86 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 13C2 PFTeDA | 82 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 13C3 PFBS | 98 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 18O2 PFHxS | 98 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 13C4 PFOS | 101 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| d3-NMeFOSAA | 88 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| d5-NEtFOSAA | 97 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| M2-4:2 FTS | 91 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| M2-6:2 FTS | 101 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| M2-8:2 FTS | 91 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| d-N-MeFOSA-M | 63 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| d-N-EtFOSA-M | 60 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| d7-N-MeFOSE-M | 71 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| d9-N-EtFOSE-M | 68 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 13C3 HFPO-DA | 95 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 13C-6:2 FTCA | 89 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |
| 13C-8:2 FTCA | 89 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:26 | 1 |

## Client Sample ID: 2310374-002C LCLC-2
**Lab Sample ID: 320-105783-2**
**Date Collected: 10/05/23 09:30**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

### Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15

| Analyte | Result | Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **6.4** | | 1.8 | 0.21 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **25** | | 1.8 | 0.21 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **19** | | 1.8 | 0.48 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **4.9** | | 1.8 | 0.42 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **24** | **M** | 1.8 | 0.49 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| **Perfluorononanoic acid (PFNA)** | **1.2** | **J** | 1.8 | 0.49 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.88 | U | 1.8 | 0.29 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.3 | U | 1.8 | 0.64 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.88 | U | 1.8 | 0.37 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| Perfluorotridecanoic acid (PFTrDA) | 1.3 | U | 1.8 | 0.61 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 1.3 | U | 1.8 | 0.45 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **17** | | 1.8 | 0.30 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| **Perfluoropentanesulfonic acid (PFPeS)** | **0.94** | **J** | 1.8 | 0.45 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **10** | | 1.8 | 0.33 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| Perfluoroheptanesulfonic acid (PFHpS) | 1.3 | U | 1.8 | 0.62 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **6.0** | | 1.8 | 0.51 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

**Client Sample ID: 2310374-002C LCLC-2**
**Date Collected: 10/05/23 09:30**
**Date Received: 10/10/23 09:10**

**Lab Sample ID: 320-105783-2**
**Matrix: Water**

**Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)**

| Analyte | Result | Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorononanesulfonic acid (PFNS) | 1.3 | U | 1.8 | 0.58 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 1.3 | U | 1.8 | 0.48 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| Perfluorododecanesulfonic acid (PFDoS) | 2.6 | U | 3.5 | 0.75 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 1.3 | U | 1.8 | 0.46 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| NMeFOSAA | 0.88 | U | 4.4 | 0.40 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| NEtFOSAA | 0.88 | U | 4.4 | 0.30 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| 4:2 FTS | 0.88 | U | 1.8 | 0.32 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| 6:2 FTS | 0.88 | U | 4.4 | 0.33 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| 8:2 FTS | 1.3 | U | 1.8 | 0.54 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| NEtFOSA | 1.3 | U M | 1.8 | 0.65 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| NMeFOSA | 1.3 | U | 1.8 | 0.65 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| NMeFOSE | 0.88 | U | 3.5 | 0.42 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| NEtFOSE | 1.3 | U | 1.8 | 0.63 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| 9Cl-PF3ONS | 0.88 | U | 1.8 | 0.37 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| HFPO-DA (GenX) | 1.3 | U | 3.5 | 0.61 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| 11Cl-PF3OUdS | 0.88 | U | 1.8 | 0.42 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 1.3 | U | 1.8 | 0.45 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| 3:3 FTCA | 0.88 | U | 1.8 | 0.38 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| 5:3 FTCA | 0.88 | U | 1.8 | 0.29 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| 7:3 FTCA | 1.3 | U | 1.8 | 0.48 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| NFDHA | 1.3 | U | 1.8 | 0.54 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| PFMBA | 0.88 | U | 1.8 | 0.23 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| PFMPA | 0.88 | U | 1.8 | 0.25 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| PFEESA | 0.88 | U | 1.8 | 0.25 | ng/L | | 10/19/23 12:32 | 11/01/23 04:37 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C8 FOSA* | *83* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *13C4 PFBA* | *98* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *13C5 PFPeA* | *100* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *13C2 PFHxA* | *101* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *13C4 PFHpA* | *102* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *13C4 PFOA* | *94* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *13C5 PFNA* | *94* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *13C2 PFDA* | *91* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *13C2 PFUnA* | *82* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *13C2 PFDoA* | *80* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *13C2 PFTeDA* | *82* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *13C3 PFBS* | *99* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *18O2 PFHxS* | *98* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *13C4 PFOS* | *90* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *d3-NMeFOSAA* | *86* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *d5-NEtFOSAA* | *90* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *M2-4:2 FTS* | *90* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *M2-6:2 FTS* | *93* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *M2-8:2 FTS* | *80* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *d-N-MeFOSA-M* | *65* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *d-N-EtFOSA-M* | *64* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *d7-N-MeFOSE-M* | *79* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |
| *d9-N-EtFOSE-M* | *73* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:37* | *1* |

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

## Client Sample ID: 2310374-002C LCLC-2

**Lab Sample ID: 320-105783-2**

**Date Collected: 10/05/23 09:30**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

### Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C3 HFPO-DA | 95 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| 13C-6:2 FTCA | 97 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:37 | 1 |
| 13C-8:2 FTCA | 71 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 04:37 | 1 |

## Client Sample ID: 2310374-003C LCLC-3

**Lab Sample ID: 320-105783-3**

**Date Collected: 10/05/23 09:55**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

### Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15

| Analyte | Result | Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **10** | | 1.7 | 0.20 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **33** | | 1.7 | 0.20 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **25** | | 1.7 | 0.47 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **5.6** | | 1.7 | 0.41 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **25** | **M** | 1.7 | 0.47 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| **Perfluorononanoic acid (PFNA)** | **4.7** | | 1.7 | 0.47 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| **Perfluorodecanoic acid (PFDA)** | **0.56** | **J M** | 1.7 | 0.28 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.3 | U M | 1.7 | 0.62 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.85 | U | 1.7 | 0.36 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| Perfluorotridecanoic acid (PFTrDA) | 1.3 | U | 1.7 | 0.58 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 1.3 | U | 1.7 | 0.43 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **22** | | 1.7 | 0.29 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| **Perfluoropentanesulfonic acid (PFPeS)** | **0.63** | **J** | 1.7 | 0.43 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **9.3** | | 1.7 | 0.32 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| Perfluoroheptanesulfonic acid (PFHpS) | 1.3 | U | 1.7 | 0.60 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **25** | **M** | 1.7 | 0.49 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| Perfluorononanesulfonic acid (PFNS) | 1.3 | U | 1.7 | 0.56 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 1.3 | U | 1.7 | 0.47 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| Perfluorododecanesulfonic acid (PFDoS) | 2.5 | U | 3.4 | 0.72 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| **Perfluorooctanesulfonamide (FOSA)** | **0.48** | **J M** | 1.7 | 0.44 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| NMeFOSAA | 0.85 | U | 4.2 | 0.39 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| NEtFOSAA | 0.85 | U | 4.2 | 0.29 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| 4:2 FTS | 0.85 | U | 1.7 | 0.30 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| 6:2 FTS | 0.85 | U | 4.2 | 0.32 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| 8:2 FTS | 1.3 | U | 1.7 | 0.52 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| NEtFOSA | 1.3 | U M | 1.7 | 0.63 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| NMeFOSA | 1.3 | U | 1.7 | 0.63 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| NMeFOSE | 0.85 | U | 3.4 | 0.41 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| NEtFOSE | 1.3 | U | 1.7 | 0.61 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| 9Cl-PF3ONS | 0.85 | U | 1.7 | 0.36 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| HFPO-DA (GenX) | 1.3 | U | 3.4 | 0.58 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| 11Cl-PF3OUdS | 0.85 | U M | 1.7 | 0.41 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 1.3 | U | 1.7 | 0.43 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| 3:3 FTCA | 0.85 | U | 1.7 | 0.36 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |

## Client Sample ID: 2310374-003C LCLC-3
**Lab Sample ID: 320-105783-3**
**Date Collected: 10/05/23 09:55**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

### Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)

| Analyte | Result | Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 5:3 FTCA | 0.85 | U | 1.7 | 0.28 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| 7:3 FTCA | 1.3 | U | 1.7 | 0.47 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| NFDHA | 1.3 | U | 1.7 | 0.52 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| PFMBA | 0.85 | U | 1.7 | 0.22 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| PFMPA | 0.85 | U M | 1.7 | 0.24 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |
| PFEESA | 0.85 | U | 1.7 | 0.25 | ng/L | | 10/19/23 12:32 | 11/01/23 04:49 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C8 FOSA* | *81* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C4 PFBA* | *94* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C5 PFPeA* | *92* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C2 PFHxA* | *94* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C4 PFHpA* | *104* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C4 PFOA* | *99* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C5 PFNA* | *94* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C2 PFDA* | *98* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C2 PFUnA* | *84* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C2 PFDoA* | *84* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C2 PFTeDA* | *78* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C3 PFBS* | *93* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *18O2 PFHxS* | *91* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C4 PFOS* | *86* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *d3-NMeFOSAA* | *86* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *d5-NEtFOSAA* | *97* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *M2-4:2 FTS* | *94* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *M2-6:2 FTS* | *91* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *M2-8:2 FTS* | *89* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *d-N-MeFOSA-M* | *66* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *d-N-EtFOSA-M* | *66* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *d7-N-MeFOSE-M* | *74* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *d9-N-EtFOSE-M* | *78* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C3 HFPO-DA* | *90* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C-6:2 FTCA* | *94* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |
| *13C-8:2 FTCA* | *90* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 04:49* | *1* |

## Client Sample ID: 2310374-004C LCLC-4
**Lab Sample ID: 320-105783-4**
**Date Collected: 10/05/23 09:50**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

### Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15

| Analyte | Result | Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 0.43 | U | 1.7 | 0.21 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluoropentanoic acid (PFPeA) | 0.43 | U | 1.7 | 0.21 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluorohexanoic acid (PFHxA) | 1.3 | U | 1.7 | 0.48 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.86 | U M | 1.7 | 0.41 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **1.8** | **M** | 1.7 | 0.48 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluorononanoic acid (PFNA) | 1.3 | U | 1.7 | 0.48 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.86 | U | 1.7 | 0.29 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.3 | U | 1.7 | 0.63 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.86 | U | 1.7 | 0.36 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluorotridecanoic acid (PFTrDA) | 1.3 | U | 1.7 | 0.60 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

## Client Sample ID: 2310374-004C LCLC-4

**Date Collected: 10/05/23 09:50**
**Date Received: 10/10/23 09:10**

## Lab Sample ID: 320-105783-4

**Matrix: Water**

### Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)

| Analyte | Result | Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorotetradecanoic acid (PFTeA) | 1.3 | U | 1.7 | 0.44 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | 0.86 | U | 1.7 | 0.29 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluoropentanesulfonic acid (PFPeS) | 1.3 | U | 1.7 | 0.44 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | 0.86 | U M | 1.7 | 0.33 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluoroheptanesulfonic acid (PFHpS) | 1.3 | U | 1.7 | 0.61 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | 1.3 | U | 1.7 | 0.50 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluorononanesulfonic acid (PFNS) | 1.3 | U | 1.7 | 0.57 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 1.3 | U | 1.7 | 0.48 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluorododecanesulfonic acid (PFDoS) | 2.6 | U | 3.5 | 0.73 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 1.3 | U | 1.7 | 0.45 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| NMeFOSAA | 0.86 | U | 4.3 | 0.40 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| NEtFOSAA | 0.86 | U | 4.3 | 0.29 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| 4:2 FTS | 0.86 | U | 1.7 | 0.31 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| 6:2 FTS | 0.86 | U M | 4.3 | 0.33 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| 8:2 FTS | 1.3 | U | 1.7 | 0.54 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| NEtFOSA | 1.3 | U M | 1.7 | 0.64 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| NMeFOSA | 1.3 | U | 1.7 | 0.64 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| NMeFOSE | 0.86 | U | 3.5 | 0.41 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| NEtFOSE | 1.3 | U | 1.7 | 0.62 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| 9Cl-PF3ONS | 0.86 | U | 1.7 | 0.36 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| HFPO-DA (GenX) | 1.3 | U | 3.5 | 0.60 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| 11Cl-PF3OUdS | 0.86 | U M | 1.7 | 0.41 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 1.3 | U | 1.7 | 0.44 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| 3:3 FTCA | 0.86 | U | 1.7 | 0.37 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| 5:3 FTCA | 0.86 | U | 1.7 | 0.29 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| 7:3 FTCA | 1.3 | U | 1.7 | 0.48 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| NFDHA | 1.3 | U | 1.7 | 0.54 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| PFMBA | 0.86 | U | 1.7 | 0.22 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| PFMPA | 0.86 | U | 1.7 | 0.24 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| PFEESA | 0.86 | U | 1.7 | 0.25 | ng/L | | 10/19/23 12:32 | 11/01/23 05:00 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C8 FOSA* | *90* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |
| *13C4 PFBA* | *103* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |
| *13C5 PFPeA* | *105* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |
| *13C2 PFHxA* | *105* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |
| *13C4 PFHpA* | *106* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |
| *13C4 PFOA* | *102* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |
| *13C5 PFNA* | *98* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |
| *13C2 PFDA* | *96* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |
| *13C2 PFUnA* | *102* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |
| *13C2 PFDoA* | *97* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |
| *13C2 PFTeDA* | *87* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |
| *13C3 PFBS* | *100* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |
| *18O2 PFHxS* | *93* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |
| *13C4 PFOS* | *96* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |
| *d3-NMeFOSAA* | *94* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:00* | *1* |

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

## Client Sample ID: 2310374-004C LCLC-4

**Lab Sample ID: 320-105783-4**

**Date Collected: 10/05/23 09:50**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

### Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| d5-NEtFOSAA | 108 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| M2-4:2 FTS | 95 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| M2-6:2 FTS | 104 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| M2-8:2 FTS | 93 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| d-N-MeFOSA-M | 69 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| d-N-EtFOSA-M | 66 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| d7-N-MeFOSE-M | 79 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| d9-N-EtFOSE-M | 81 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| 13C3 HFPO-DA | 100 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| 13C-6:2 FTCA | 97 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:00 | 1 |
| 13C-8:2 FTCA | 94 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:00 | 1 |

## Client Sample ID: 2310374-005C LCLC-5

**Lab Sample ID: 320-105783-5**

**Date Collected: 10/05/23 10:25**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

### Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15

| Analyte | Result | Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 0.45 | U M | 1.8 | 0.22 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluoropentanoic acid (PFPeA) | 0.45 | U | 1.8 | 0.22 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluorohexanoic acid (PFHxA) | 1.4 | U | 1.8 | 0.50 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.91 | U | 1.8 | 0.43 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **1.8** | **M** | 1.8 | 0.51 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluorononanoic acid (PFNA) | 1.4 | U | 1.8 | 0.51 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.91 | U M | 1.8 | 0.30 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.4 | U | 1.8 | 0.66 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.91 | U | 1.8 | 0.38 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluorotridecanoic acid (PFTrDA) | 1.4 | U | 1.8 | 0.62 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 1.4 | U M | 1.8 | 0.46 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | 0.91 | U | 1.8 | 0.31 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluoropentanesulfonic acid (PFPeS) | 1.4 | U | 1.8 | 0.46 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | 0.91 | U | 1.8 | 0.34 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluoroheptanesulfonic acid (PFHpS) | 1.4 | U | 1.8 | 0.64 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | 1.4 | U | 1.8 | 0.52 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluorononanesulfonic acid (PFNS) | 1.4 | U | 1.8 | 0.60 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 1.4 | U | 1.8 | 0.50 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluorododecanesulfonic acid (PFDoS) | 2.7 | U | 3.6 | 0.77 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 1.4 | U | 1.8 | 0.47 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| NMeFOSAA | 0.91 | U | 4.5 | 0.42 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| NEtFOSAA | 0.91 | U | 4.5 | 0.31 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| 4:2 FTS | 0.91 | U | 1.8 | 0.33 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| 6:2 FTS | 0.91 | U | 4.5 | 0.34 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| 8:2 FTS | 1.4 | U | 1.8 | 0.56 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| NEtFOSA | 1.4 | U M | 1.8 | 0.67 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| NMeFOSA | 1.4 | U | 1.8 | 0.67 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| NMeFOSE | 0.91 | U | 3.6 | 0.43 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| NEtFOSE | 1.4 | U | 1.8 | 0.65 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| 9Cl-PF3ONS | 0.91 | U | 1.8 | 0.38 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |

## Client Sample ID: 2310374-005C LCLC-5
**Lab Sample ID: 320-105783-5**
**Date Collected: 10/05/23 10:25**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

### Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)

| Analyte | Result | Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| HFPO-DA (GenX) | 1.4 | U | 3.6 | 0.62 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| 11Cl-PF3OUdS | 0.91 | U | 1.8 | 0.43 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 1.4 | U M | 1.8 | 0.46 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| 3:3 FTCA | 0.91 | U | 1.8 | 0.39 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| 5:3 FTCA | 0.91 | U | 1.8 | 0.30 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| 7:3 FTCA | 1.4 | U | 1.8 | 0.50 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| NFDHA | 1.4 | U | 1.8 | 0.56 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| PFMBA | 0.91 | U | 1.8 | 0.24 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| PFMPA | 0.91 | U M | 1.8 | 0.25 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |
| PFEESA | 0.91 | U M | 1.8 | 0.26 | ng/L | | 10/19/23 12:32 | 11/01/23 05:11 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C8 FOSA* | *90* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C4 PFBA* | *100* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C5 PFPeA* | *95* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C2 PFHxA* | *102* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C4 PFHpA* | *102* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C4 PFOA* | *103* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C5 PFNA* | *96* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C2 PFDA* | *101* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C2 PFUnA* | *95* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C2 PFDoA* | *83* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C2 PFTeDA* | *89* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C3 PFBS* | *101* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *18O2 PFHxS* | *97* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C4 PFOS* | *95* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *d3-NMeFOSAA* | *100* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *d5-NEtFOSAA* | *95* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *M2-4:2 FTS* | *98* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *M2-6:2 FTS* | *105* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *M2-8:2 FTS* | *88* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *d-N-MeFOSA-M* | *70* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *d-N-EtFOSA-M* | *67* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *d7-N-MeFOSE-M* | *79* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *d9-N-EtFOSE-M* | *85* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C3 HFPO-DA* | *98* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C-6:2 FTCA* | *99* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |
| *13C-8:2 FTCA* | *92* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:11* | *1* |

## Client Sample ID: 2310374-006C LCLC-6
**Lab Sample ID: 320-105783-6**
**Date Collected: 10/05/23 10:50**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

### Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15

| Analyte | Result | Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **4.5** | | 1.7 | 0.21 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **8.3** | | 1.7 | 0.21 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **8.8** | | 1.7 | 0.47 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **2.7** | | 1.7 | 0.41 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **14** | **M** | 1.7 | 0.48 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

**Client Sample ID: 2310374-006C LCLC-6**
**Date Collected: 10/05/23 10:50**
**Date Received: 10/10/23 09:10**

**Lab Sample ID: 320-105783-6**
**Matrix: Water**

**Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)**

| Analyte | Result | Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorononanoic acid (PFNA) | 1.3 | U | 1.7 | 0.48 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.86 | U M | 1.7 | 0.28 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.3 | U | 1.7 | 0.63 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.86 | U | 1.7 | 0.36 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| Perfluorotridecanoic acid (PFTrDA) | 1.3 | U M | 1.7 | 0.59 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 1.3 | U | 1.7 | 0.44 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **6.3** | | 1.7 | 0.29 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| **Perfluoropentanesulfonic acid (PFPeS)** | **2.1** | | 1.7 | 0.44 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **9.9** | | 1.7 | 0.33 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| Perfluoroheptanesulfonic acid (PFHpS) | 1.3 | U | 1.7 | 0.61 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **7.4** | **I** | 1.7 | 0.50 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| Perfluorononanesulfonic acid (PFNS) | 1.3 | U | 1.7 | 0.57 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 1.3 | U | 1.7 | 0.47 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| Perfluorododecanesulfonic acid (PFDoS) | 2.6 | U | 3.4 | 0.73 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 1.3 | U | 1.7 | 0.45 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| NMeFOSAA | 0.86 | U | 4.3 | 0.40 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| NEtFOSAA | 0.86 | U | 4.3 | 0.29 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 4:2 FTS | 0.86 | U | 1.7 | 0.31 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 6:2 FTS | 0.86 | U M | 4.3 | 0.33 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 8:2 FTS | 1.3 | U | 1.7 | 0.53 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| NEtFOSA | 1.3 | U M | 1.7 | 0.64 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| NMeFOSA | 1.3 | U | 1.7 | 0.64 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| NMeFOSE | 0.86 | U | 3.4 | 0.41 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| NEtFOSE | 1.3 | U | 1.7 | 0.62 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 9Cl-PF3ONS | 0.86 | U | 1.7 | 0.36 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| HFPO-DA (GenX) | 1.3 | U | 3.4 | 0.59 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 11Cl-PF3OUdS | 0.86 | U | 1.7 | 0.41 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 1.3 | U | 1.7 | 0.44 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 3:3 FTCA | 0.86 | U | 1.7 | 0.37 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 5:3 FTCA | 0.86 | U | 1.7 | 0.28 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 7:3 FTCA | 1.3 | U | 1.7 | 0.47 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| NFDHA | 1.3 | U | 1.7 | 0.53 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| PFMBA | 0.86 | U | 1.7 | 0.22 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| **PFMPA** | **0.35** | **J** | 1.7 | 0.24 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| PFEESA | 0.86 | U M | 1.7 | 0.25 | ng/L | | 10/19/23 12:32 | 11/01/23 05:23 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C8 FOSA* | *88* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:23* | *1* |
| *13C4 PFBA* | *95* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:23* | *1* |
| *13C5 PFPeA* | *97* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:23* | *1* |
| *13C2 PFHxA* | *98* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:23* | *1* |
| *13C4 PFHpA* | *98* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:23* | *1* |
| *13C4 PFOA* | *101* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:23* | *1* |
| *13C5 PFNA* | *97* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:23* | *1* |
| *13C2 PFDA* | *91* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:23* | *1* |

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

## Client Sample ID: 2310374-006C LCLC-6

**Lab Sample ID: 320-105783-6**

**Date Collected: 10/05/23 10:50**

**Matrix: Water**

**Date Received: 10/10/23 09:10**

### Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C2 PFUnA | 93 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 13C2 PFDoA | 83 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 13C2 PFTeDA | 82 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 13C3 PFBS | 96 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 18O2 PFHxS | 96 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 13C4 PFOS | 89 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| d3-NMeFOSAA | 85 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| d5-NEtFOSAA | 94 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| M2-4:2 FTS | 95 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| M2-6:2 FTS | 94 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| M2-8:2 FTS | 82 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| d-N-MeFOSA-M | 66 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| d-N-EtFOSA-M | 72 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| d7-N-MeFOSE-M | 79 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| d9-N-EtFOSE-M | 77 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 13C3 HFPO-DA | 93 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 13C-6:2 FTCA | 97 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |
| 13C-8:2 FTCA | 91 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:23 | 1 |

## Client Sample ID: 2310374-007C LCLC-7

**Lab Sample ID: 320-105783-7**

**Date Collected: 10/05/23 12:20**

**Matrix: Water**

**Date Received: 10/10/23 09:10**

### Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15

| Analyte | Result | Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **1.0** | **J M** | 1.8 | 0.22 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **2.8** | | 1.8 | 0.22 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **2.3** | | 1.8 | 0.50 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.90 | U | 1.8 | 0.43 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **2.1** | **M** | 1.8 | 0.51 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| Perfluorononanoic acid (PFNA) | 1.4 | U | 1.8 | 0.51 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.90 | U M | 1.8 | 0.30 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.4 | U M | 1.8 | 0.66 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.90 | U | 1.8 | 0.38 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| Perfluorotridecanoic acid (PFTrDA) | 1.4 | U | 1.8 | 0.62 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 1.4 | U | 1.8 | 0.46 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **0.54** | **J** | 1.8 | 0.31 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| Perfluoropentanesulfonic acid (PFPeS) | 1.4 | U | 1.8 | 0.46 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **0.52** | **J M** | 1.8 | 0.34 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| Perfluoroheptanesulfonic acid (PFHpS) | 1.4 | U | 1.8 | 0.64 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | 1.4 | U | 1.8 | 0.52 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| Perfluorononanesulfonic acid (PFNS) | 1.4 | U | 1.8 | 0.60 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 1.4 | U | 1.8 | 0.50 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| Perfluorododecanesulfonic acid (PFDoS) | 2.7 | U | 3.6 | 0.77 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 1.4 | U | 1.8 | 0.47 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| NMeFOSAA | 0.90 | U | 4.5 | 0.42 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

## Client Sample ID: 2310374-007C LCLC-7

**Date Collected: 10/05/23 12:20**
**Date Received: 10/10/23 09:10**

## Lab Sample ID: 320-105783-7

**Matrix: Water**

### Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)

| Analyte | Result | Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| NEtFOSAA | 0.90 | U | 4.5 | 0.31 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| 4:2 FTS | 0.90 | U | 1.8 | 0.33 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| 6:2 FTS | 0.90 | U | 4.5 | 0.34 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| 8:2 FTS | 1.4 | U | 1.8 | 0.56 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| NEtFOSA | 1.4 | U M | 1.8 | 0.67 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| NMeFOSA | 1.4 | U | 1.8 | 0.67 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| NMeFOSE | 0.90 | U | 3.6 | 0.43 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| NEtFOSE | 1.4 | U | 1.8 | 0.65 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| 9Cl-PF3ONS | 0.90 | U | 1.8 | 0.38 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| HFPO-DA (GenX) | 1.4 | U | 3.6 | 0.62 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| 11Cl-PF3OUdS | 0.90 | U | 1.8 | 0.43 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 1.4 | U M | 1.8 | 0.46 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| 3:3 FTCA | 0.90 | U | 1.8 | 0.39 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| 5:3 FTCA | 0.90 | U | 1.8 | 0.30 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| 7:3 FTCA | 1.4 | U | 1.8 | 0.50 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| NFDHA | 1.4 | U | 1.8 | 0.56 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| PFMBA | 0.90 | U | 1.8 | 0.24 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| PFMPA | 0.90 | U | 1.8 | 0.25 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |
| PFEESA | 0.90 | U M | 1.8 | 0.26 | ng/L | | 10/19/23 12:32 | 11/01/23 05:34 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C8 FOSA* | *87* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C4 PFBA* | *97* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C5 PFPeA* | *100* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C2 PFHxA* | *103* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C4 PFHpA* | *98* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C4 PFOA* | *102* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C5 PFNA* | *99* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C2 PFDA* | *101* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C2 PFUnA* | *95* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C2 PFDoA* | *87* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C2 PFTeDA* | *83* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C3 PFBS* | *100* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *18O2 PFHxS* | *96* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C4 PFOS* | *91* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *d3-NMeFOSAA* | *93* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *d5-NEtFOSAA* | *95* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *M2-4:2 FTS* | *92* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *M2-6:2 FTS* | *101* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *M2-8:2 FTS* | *83* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *d-N-MeFOSA-M* | *68* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *d-N-EtFOSA-M* | *68* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *d7-N-MeFOSE-M* | *71* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *d9-N-EtFOSE-M* | *73* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C3 HFPO-DA* | *94* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C-6:2 FTCA* | *103* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |
| *13C-8:2 FTCA* | *100* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:34* | *1* |

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

**Client Sample ID: 2310374-008C LCLC-8**
**Date Collected: 10/05/23 12:35**
**Date Received: 10/10/23 09:10**

**Lab Sample ID: 320-105783-8**
**Matrix: Water**

**Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15**

| Analyte | Result | Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **0.31** | **J M** | 1.8 | 0.21 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **0.60** | **J M** | 1.8 | 0.21 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **0.70** | **J M** | 1.8 | 0.49 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.89 | U | 1.8 | 0.43 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **1.9** | **M** | 1.8 | 0.50 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| Perfluorononanoic acid (PFNA) | 1.3 | U | 1.8 | 0.50 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.89 | U M | 1.8 | 0.29 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.3 | U | 1.8 | 0.65 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.89 | U | 1.8 | 0.37 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| Perfluorotridecanoic acid (PFTrDA) | 1.3 | U M | 1.8 | 0.61 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 1.3 | U | 1.8 | 0.45 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **0.42** | **J M** | 1.8 | 0.30 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| Perfluoropentanesulfonic acid (PFPeS) | 1.3 | U | 1.8 | 0.45 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **0.39** | **J M** | 1.8 | 0.34 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| Perfluoroheptanesulfonic acid (PFHpS) | 1.3 | U | 1.8 | 0.63 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | 1.3 | U | 1.8 | 0.51 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| Perfluorononanesulfonic acid (PFNS) | 1.3 | U | 1.8 | 0.59 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 1.3 | U | 1.8 | 0.49 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| Perfluorododecanesulfonic acid (PFDoS) | 2.7 | U | 3.5 | 0.75 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 1.3 | U | 1.8 | 0.46 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| NMeFOSAA | 0.89 | U | 4.4 | 0.41 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| NEtFOSAA | 0.89 | U | 4.4 | 0.30 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 4:2 FTS | 0.89 | U | 1.8 | 0.32 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 6:2 FTS | 0.89 | U | 4.4 | 0.34 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 8:2 FTS | 1.3 | U | 1.8 | 0.55 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| NEtFOSA | 1.3 | U M | 1.8 | 0.66 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| NMeFOSA | 1.3 | U | 1.8 | 0.66 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| NMeFOSE | 0.89 | U | 3.5 | 0.43 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| NEtFOSE | 1.3 | U | 1.8 | 0.64 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 9Cl-PF3ONS | 0.89 | U | 1.8 | 0.37 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| HFPO-DA (GenX) | 1.3 | U | 3.5 | 0.61 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 11Cl-PF3OUdS | 0.89 | U | 1.8 | 0.43 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 1.3 | U M | 1.8 | 0.45 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 3:3 FTCA | 0.89 | U | 1.8 | 0.38 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 5:3 FTCA | 0.89 | U | 1.8 | 0.29 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 7:3 FTCA | 1.3 | U | 1.8 | 0.49 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| NFDHA | 1.3 | U | 1.8 | 0.55 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| PFMBA | 0.89 | U M | 1.8 | 0.23 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| PFMPA | 0.89 | U | 1.8 | 0.25 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| PFEESA | 0.89 | U | 1.8 | 0.26 | ng/L | | 10/19/23 12:32 | 11/01/23 05:56 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C8 FOSA* | *87* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:56* | *1* |
| *13C4 PFBA* | *100* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:56* | *1* |
| *13C5 PFPeA* | *98* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:56* | *1* |
| *13C2 PFHxA* | *98* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 05:56* | *1* |

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

**Client Sample ID: 2310374-008C LCLC-8**
**Date Collected: 10/05/23 12:35**
**Date Received: 10/10/23 09:10**

**Lab Sample ID: 320-105783-8**
**Matrix: Water**

**Method: DOD 5.3 QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)**

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C4 PFHpA | 104 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 13C4 PFOA | 94 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 13C5 PFNA | 101 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 13C2 PFDA | 98 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 13C2 PFUnA | 96 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 13C2 PFDoA | 91 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 13C2 PFTeDA | 85 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 13C3 PFBS | 98 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 18O2 PFHxS | 100 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 13C4 PFOS | 96 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| d3-NMeFOSAA | 95 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| d5-NEtFOSAA | 94 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| M2-4:2 FTS | 101 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| M2-6:2 FTS | 81 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| M2-8:2 FTS | 84 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| d-N-MeFOSA-M | 69 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| d-N-EtFOSA-M | 67 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| d7-N-MeFOSE-M | 72 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| d9-N-EtFOSE-M | 76 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 13C3 HFPO-DA | 94 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 13C-6:2 FTCA | 98 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |
| 13C-8:2 FTCA | 95 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 05:56 | 1 |

# Isotope Dilution Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

## Method: QSM B15 - PFAS for QSM 5.3, Table B-15

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | PFOSA | PFBA | PFPeA | PFHxA | C4PFHA | PFOA | PFNA | PFDA |
| Lab Sample ID | Client Sample ID | (50-150) | (50-150) | (50-150) | (50-150) | (50-150) | (50-150) | (50-150) | (50-150) |
| 320-105783-1 | 2310374-001C LCLC-1 | 89 | 97 | 99 | 100 | 107 | 101 | 108 | 98 |
| 320-105783-2 | 2310374-002C LCLC-2 | 83 | 98 | 100 | 101 | 102 | 94 | 94 | 91 |
| 320-105783-3 | 2310374-003C LCLC-3 | 81 | 94 | 92 | 94 | 104 | 99 | 94 | 98 |
| 320-105783-4 | 2310374-004C LCLC-4 | 90 | 103 | 105 | 105 | 106 | 102 | 98 | 96 |
| 320-105783-5 | 2310374-005C LCLC-5 | 90 | 100 | 95 | 102 | 102 | 103 | 96 | 101 |
| 320-105783-6 | 2310374-006C LCLC-6 | 88 | 95 | 97 | 98 | 98 | 101 | 97 | 91 |
| 320-105783-7 | 2310374-007C LCLC-7 | 87 | 97 | 100 | 103 | 98 | 102 | 99 | 101 |
| 320-105783-8 | 2310374-008C LCLC-8 | 87 | 100 | 98 | 98 | 104 | 94 | 101 | 98 |
| LCS 320-714316/2-A | Lab Control Sample | 88 | 101 | 101 | 102 | 108 | 98 | 103 | 94 |
| LCSD 320-714316/3-A | Lab Control Sample Dup | 85 | 100 | 101 | 99 | 103 | 96 | 100 | 91 |
| MB 320-714316/1-A | Method Blank | 82 | 93 | 96 | 94 | 98 | 97 | 88 | 93 |

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | PFUnA | PFDoA | PFTDA | C3PFBS | PFHxS | PFOS | d3NMFOS | d5NEFOS |
| Lab Sample ID | Client Sample ID | (50-150) | (50-150) | (50-150) | (50-150) | (50-150) | (50-150) | (50-150) | (50-150) |
| 320-105783-1 | 2310374-001C LCLC-1 | 89 | 86 | 82 | 98 | 98 | 101 | 88 | 97 |
| 320-105783-2 | 2310374-002C LCLC-2 | 82 | 80 | 82 | 99 | 98 | 90 | 86 | 90 |
| 320-105783-3 | 2310374-003C LCLC-3 | 84 | 84 | 78 | 93 | 91 | 86 | 86 | 97 |
| 320-105783-4 | 2310374-004C LCLC-4 | 102 | 97 | 87 | 100 | 93 | 96 | 94 | 108 |
| 320-105783-5 | 2310374-005C LCLC-5 | 95 | 83 | 89 | 101 | 97 | 95 | 100 | 95 |
| 320-105783-6 | 2310374-006C LCLC-6 | 93 | 83 | 82 | 96 | 96 | 89 | 85 | 94 |
| 320-105783-7 | 2310374-007C LCLC-7 | 95 | 87 | 83 | 100 | 96 | 91 | 93 | 95 |
| 320-105783-8 | 2310374-008C LCLC-8 | 96 | 91 | 85 | 98 | 100 | 96 | 95 | 94 |
| LCS 320-714316/2-A | Lab Control Sample | 93 | 90 | 86 | 102 | 101 | 99 | 95 | 99 |
| LCSD 320-714316/3-A | Lab Control Sample Dup | 94 | 92 | 85 | 103 | 100 | 95 | 97 | 92 |
| MB 320-714316/1-A | Method Blank | 91 | 84 | 80 | 96 | 91 | 93 | 90 | 102 |

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | M242FTS | M262FTS | M282FTS | dMeFOSA | dEtFOSA | NMFM | NEFM | HFPODA |
| Lab Sample ID | Client Sample ID | (50-150) | (50-150) | (50-150) | (50-150) | (50-150) | (50-150) | (50-150) | (50-150) |
| 320-105783-1 | 2310374-001C LCLC-1 | 91 | 101 | 91 | 63 | 60 | 71 | 68 | 95 |
| 320-105783-2 | 2310374-002C LCLC-2 | 90 | 93 | 80 | 65 | 64 | 79 | 73 | 95 |
| 320-105783-3 | 2310374-003C LCLC-3 | 94 | 91 | 89 | 66 | 66 | 74 | 78 | 90 |
| 320-105783-4 | 2310374-004C LCLC-4 | 95 | 104 | 93 | 69 | 66 | 79 | 81 | 100 |
| 320-105783-5 | 2310374-005C LCLC-5 | 98 | 105 | 88 | 70 | 67 | 79 | 85 | 98 |
| 320-105783-6 | 2310374-006C LCLC-6 | 95 | 94 | 82 | 66 | 72 | 79 | 77 | 93 |
| 320-105783-7 | 2310374-007C LCLC-7 | 92 | 101 | 83 | 68 | 68 | 71 | 73 | 94 |
| 320-105783-8 | 2310374-008C LCLC-8 | 101 | 81 | 84 | 69 | 67 | 72 | 76 | 94 |
| LCS 320-714316/2-A | Lab Control Sample | 99 | 91 | 84 | 58 | 60 | 84 | 83 | 96 |
| LCSD 320-714316/3-A | Lab Control Sample Dup | 95 | 86 | 81 | 68 | 64 | 80 | 80 | 99 |
| MB 320-714316/1-A | Method Blank | 94 | 91 | 80 | 60 | 60 | 75 | 73 | 90 |

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MFHEA | MFOEA | | | | | | |
| Lab Sample ID | Client Sample ID | (50-150) | (50-150) | | | | | | |
| 320-105783-1 | 2310374-001C LCLC-1 | 89 | 89 | | | | | | |
| 320-105783-2 | 2310374-002C LCLC-2 | 97 | 71 | | | | | | |
| 320-105783-3 | 2310374-003C LCLC-3 | 94 | 90 | | | | | | |
| 320-105783-4 | 2310374-004C LCLC-4 | 97 | 94 | | | | | | |
| 320-105783-5 | 2310374-005C LCLC-5 | 99 | 92 | | | | | | |
| 320-105783-6 | 2310374-006C LCLC-6 | 97 | 91 | | | | | | |
| 320-105783-7 | 2310374-007C LCLC-7 | 103 | 100 | | | | | | |

# Isotope Dilution Summary

Client: Hall Environmental Analysis Laboratory
Job ID: 320-105783-1
Project/Site: 2310374

## Method: QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)

**Matrix: Water**
**Prep Type: Total/NA**

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | MFHEA (50-150) | MFOEA (50-150) | | | | | | | | |
| 320-105783-8 | 2310374-008C LCLC-8 | 98 | 95 | | | | | | | | |
| LCS 320-714316/2-A | Lab Control Sample | 99 | 99 | | | | | | | | |
| LCSD 320-714316/3-A | Lab Control Sample Dup | 96 | 95 | | | | | | | | |
| MB 320-714316/1-A | Method Blank | 92 | 76 | | | | | | | | |

**Surrogate Legend**

PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
HFPODA = 13C3 HFPO-DA
MFHEA = 13C-6:2 FTCA
MFOEA = 13C-8:2 FTCA

## Method: QSM B15 - PFAS for QSM 5.3, Table B-15

**Lab Sample ID: MB 320-714316/1-A**
**Matrix: Water**
**Analysis Batch: 717082**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 714316**

| Analyte | MB Result | MB Qualifier | LOQ | DL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 0.50 | U M | 2.0 | 0.24 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluoropentanoic acid (PFPeA) | 0.50 | U | 2.0 | 0.24 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluorohexanoic acid (PFHxA) | 1.5 | U | 2.0 | 0.55 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 1.0 | U | 2.0 | 0.48 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluorooctanoic acid (PFOA) | 1.5 | U M | 2.0 | 0.56 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluorononanoic acid (PFNA) | 1.5 | U | 2.0 | 0.56 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluorodecanoic acid (PFDA) | 1.0 | U | 2.0 | 0.33 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.5 | U | 2.0 | 0.73 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluorododecanoic acid (PFDoA) | 1.0 | U | 2.0 | 0.42 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluorotridecanoic acid (PFTrDA) | 1.5 | U M | 2.0 | 0.69 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 1.5 | U | 2.0 | 0.51 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | 1.0 | U | 2.0 | 0.34 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluoropentanesulfonic acid (PFPeS) | 1.5 | U | 2.0 | 0.51 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | 1.0 | U | 2.0 | 0.38 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluoroheptanesulfonic acid (PFHpS) | 1.5 | U | 2.0 | 0.71 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | 1.5 | U | 2.0 | 0.58 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluorononanesulfonic acid (PFNS) | 1.5 | U | 2.0 | 0.66 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 1.5 | U | 2.0 | 0.55 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluorododecanesulfonic acid (PFDoS) | 3.0 | U | 4.0 | 0.85 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 1.5 | U M | 2.0 | 0.52 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| NMeFOSAA | 1.0 | U | 5.0 | 0.46 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| NEtFOSAA | 1.0 | U | 5.0 | 0.34 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 4:2 FTS | 1.0 | U | 2.0 | 0.36 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 6:2 FTS | 1.0 | U | 5.0 | 0.38 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 8:2 FTS | 1.5 | U | 2.0 | 0.62 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| NEtFOSA | 1.5 | U M | 2.0 | 0.74 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| NMeFOSA | 1.5 | U | 2.0 | 0.74 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| NMeFOSE | 1.0 | U | 4.0 | 0.48 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| NEtFOSE | 1.5 | U | 2.0 | 0.72 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 9Cl-PF3ONS | 1.0 | U | 2.0 | 0.42 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| HFPO-DA (GenX) | 1.5 | U | 4.0 | 0.69 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 11Cl-PF3OUdS | 1.0 | U M | 2.0 | 0.48 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 1.5 | U M | 2.0 | 0.51 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 3:3 FTCA | 1.0 | U | 2.0 | 0.43 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 5:3 FTCA | 1.0 | U | 2.0 | 0.33 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 7:3 FTCA | 1.5 | U | 2.0 | 0.55 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| NFDHA | 1.5 | U | 2.0 | 0.62 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| PFMBA | 1.0 | U | 2.0 | 0.26 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| PFMPA | 1.0 | U | 2.0 | 0.28 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| PFEESA | 1.0 | U M | 2.0 | 0.29 | ng/L | | 10/19/23 12:32 | 11/01/23 03:52 | 1 |

| *Isotope Dilution* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C8 FOSA* | *82* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 03:52* | *1* |
| *13C4 PFBA* | *93* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 03:52* | *1* |
| *13C5 PFPeA* | *96* | | *50 - 150* | *10/19/23 12:32* | *11/01/23 03:52* | *1* |

## Method: QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)

**Lab Sample ID: MB 320-714316/1-A**
**Matrix: Water**
**Analysis Batch: 717082**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 714316**

| Isotope Dilution | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C2 PFHxA | 94 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 13C4 PFHpA | 98 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 13C4 PFOA | 97 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 13C5 PFNA | 88 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 13C2 PFDA | 93 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 13C2 PFUnA | 91 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 13C2 PFDoA | 84 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 13C2 PFTeDA | 80 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 13C3 PFBS | 96 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 18O2 PFHxS | 91 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 13C4 PFOS | 93 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| d3-NMeFOSAA | 90 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| d5-NEtFOSAA | 102 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| M2-4:2 FTS | 94 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| M2-6:2 FTS | 91 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| M2-8:2 FTS | 80 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| d-N-MeFOSA-M | 60 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| d-N-EtFOSA-M | 60 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| d7-N-MeFOSE-M | 75 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| d9-N-EtFOSE-M | 73 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 13C3 HFPO-DA | 90 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 13C-6:2 FTCA | 92 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |
| 13C-8:2 FTCA | 76 | | 50 - 150 | 10/19/23 12:32 | 11/01/23 03:52 | 1 |

**Lab Sample ID: LCS 320-714316/2-A**
**Matrix: Water**
**Analysis Batch: 717082**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 714316**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 40.0 | 41.1 | | ng/L | | 103 | 73 - 129 |
| Perfluoropentanoic acid (PFPeA) | 40.0 | 39.6 | | ng/L | | 99 | 72 - 129 |
| Perfluorohexanoic acid (PFHxA) | 40.0 | 39.7 | | ng/L | | 99 | 72 - 129 |
| Perfluoroheptanoic acid (PFHpA) | 40.0 | 37.9 | | ng/L | | 95 | 72 - 130 |
| Perfluorooctanoic acid (PFOA) | 40.0 | 42.4 | | ng/L | | 106 | 71 - 133 |
| Perfluorononanoic acid (PFNA) | 40.0 | 40.8 | | ng/L | | 102 | 69 - 130 |
| Perfluorodecanoic acid (PFDA) | 40.0 | 41.7 | | ng/L | | 104 | 71 - 129 |
| Perfluoroundecanoic acid (PFUnA) | 40.0 | 39.9 | | ng/L | | 100 | 69 - 133 |
| Perfluorododecanoic acid (PFDoA) | 40.0 | 43.8 | | ng/L | | 110 | 72 - 134 |
| Perfluorotridecanoic acid (PFTrDA) | 40.0 | 39.5 | | ng/L | | 99 | 65 - 144 |
| Perfluorotetradecanoic acid (PFTeA) | 40.0 | 41.6 | | ng/L | | 104 | 71 - 132 |
| Perfluorobutanesulfonic acid (PFBS) | 35.5 | 38.2 | | ng/L | | 107 | 72 - 130 |
| Perfluoropentanesulfonic acid (PFPeS) | 37.6 | 36.3 | | ng/L | | 96 | 71 - 127 |
| Perfluorohexanesulfonic acid (PFHxS) | 36.5 | 34.2 | | ng/L | | 94 | 68 - 131 |

## Method: QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)

**Lab Sample ID: LCS 320-714316/2-A**
**Matrix: Water**
**Analysis Batch: 717082**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 714316**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Perfluoroheptanesulfonic acid (PFHpS) | 38.2 | 38.2 | | ng/L | | 100 | 69 - 134 |
| Perfluorooctanesulfonic acid (PFOS) | 37.2 | 37.4 | M | ng/L | | 101 | 65 - 140 |
| Perfluorononanesulfonic acid (PFNS) | 38.5 | 37.8 | | ng/L | | 98 | 69 - 127 |
| Perfluorodecanesulfonic acid (PFDS) | 38.6 | 34.6 | | ng/L | | 90 | 53 - 142 |
| Perfluorododecanesulfonic acid (PFDoS) | 38.8 | 33.2 | | ng/L | | 86 | 73 - 125 |
| Perfluorooctanesulfonamide (FOSA) | 40.0 | 46.1 | | ng/L | | 115 | 67 - 137 |
| NMeFOSAA | 40.0 | 42.8 | | ng/L | | 107 | 65 - 136 |
| NEtFOSAA | 40.0 | 39.9 | | ng/L | | 100 | 61 - 135 |
| 4:2 FTS | 37.5 | 34.6 | | ng/L | | 92 | 63 - 143 |
| 6:2 FTS | 38.1 | 36.9 | | ng/L | | 97 | 64 - 140 |
| 8:2 FTS | 38.4 | 45.6 | | ng/L | | 119 | 67 - 138 |
| NEtFOSA | 40.0 | 36.6 | | ng/L | | 92 | 83 - 110 |
| NMeFOSA | 40.0 | 42.0 | | ng/L | | 105 | 68 - 141 |
| NMeFOSE | 40.0 | 37.8 | | ng/L | | 95 | 60 - 137 |
| NEtFOSE | 40.0 | 40.8 | | ng/L | | 102 | 73 - 126 |
| 9Cl-PF3ONS | 37.4 | 35.8 | | ng/L | | 96 | 86 - 129 |
| HFPO-DA (GenX) | 40.0 | 41.3 | | ng/L | | 103 | 84 - 121 |
| 11Cl-PF3OUdS | 37.8 | 33.4 | | ng/L | | 88 | 80 - 131 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 37.8 | 41.3 | | ng/L | | 109 | 87 - 135 |
| 3:3 FTCA | 40.0 | 40.5 | | ng/L | | 101 | 70 - 130 |
| 5:3 FTCA | 40.0 | 41.2 | | ng/L | | 103 | 70 - 130 |
| 7:3 FTCA | 40.0 | 39.5 | | ng/L | | 99 | 70 - 130 |
| NFDHA | 40.0 | 43.7 | | ng/L | | 109 | 70 - 130 |
| PFMBA | 40.0 | 42.6 | | ng/L | | 107 | 70 - 130 |
| PFMPA | 40.0 | 40.4 | | ng/L | | 101 | 70 - 130 |
| PFEESA | 35.7 | 36.0 | | ng/L | | 101 | 70 - 130 |

| *Isotope Dilution* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *13C8 FOSA* | *88* | | *50 - 150* |
| *13C4 PFBA* | *101* | | *50 - 150* |
| *13C5 PFPeA* | *101* | | *50 - 150* |
| *13C2 PFHxA* | *102* | | *50 - 150* |
| *13C4 PFHpA* | *108* | | *50 - 150* |
| *13C4 PFOA* | *98* | | *50 - 150* |
| *13C5 PFNA* | *103* | | *50 - 150* |
| *13C2 PFDA* | *94* | | *50 - 150* |
| *13C2 PFUnA* | *93* | | *50 - 150* |
| *13C2 PFDoA* | *90* | | *50 - 150* |
| *13C2 PFTeDA* | *86* | | *50 - 150* |
| *13C3 PFBS* | *102* | | *50 - 150* |
| *18O2 PFHxS* | *101* | | *50 - 150* |
| *13C4 PFOS* | *99* | | *50 - 150* |
| *d3-NMeFOSAA* | *95* | | *50 - 150* |

## Method: QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)

**Lab Sample ID: LCS 320-714316/2-A**
**Matrix: Water**
**Analysis Batch: 717082**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 714316**

| Isotope Dilution | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| d5-NEtFOSAA | 99 | | 50 - 150 |
| M2-4:2 FTS | 99 | | 50 - 150 |
| M2-6:2 FTS | 91 | | 50 - 150 |
| M2-8:2 FTS | 84 | | 50 - 150 |
| d-N-MeFOSA-M | 58 | | 50 - 150 |
| d-N-EtFOSA-M | 60 | | 50 - 150 |
| d7-N-MeFOSE-M | 84 | | 50 - 150 |
| d9-N-EtFOSE-M | 83 | | 50 - 150 |
| 13C3 HFPO-DA | 96 | | 50 - 150 |
| 13C-6:2 FTCA | 99 | | 50 - 150 |
| 13C-8:2 FTCA | 99 | | 50 - 150 |

**Lab Sample ID: LCSD 320-714316/3-A**
**Matrix: Water**
**Analysis Batch: 717082**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 714316**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | | | 40.0 | 41.1 | | ng/L | | 103 | 73 - 129 | 0 | 30 |
| Perfluoropentanoic acid (PFPeA) | | | 40.0 | 38.5 | | ng/L | | 96 | 72 - 129 | 3 | 30 |
| Perfluorohexanoic acid (PFHxA) | | | 40.0 | 40.9 | | ng/L | | 102 | 72 - 129 | 3 | 30 |
| Perfluoroheptanoic acid (PFHpA) | | | 40.0 | 38.8 | | ng/L | | 97 | 72 - 130 | 2 | 30 |
| Perfluorooctanoic acid (PFOA) | | | 40.0 | 43.0 | | ng/L | | 107 | 71 - 133 | 1 | 30 |
| Perfluorononanoic acid (PFNA) | | | 40.0 | 41.3 | | ng/L | | 103 | 69 - 130 | 1 | 30 |
| Perfluorodecanoic acid (PFDA) | | | 40.0 | 38.9 | | ng/L | | 97 | 71 - 129 | 7 | 30 |
| Perfluoroundecanoic acid (PFUnA) | | | 40.0 | 40.7 | | ng/L | | 102 | 69 - 133 | 2 | 30 |
| Perfluorododecanoic acid (PFDoA) | | | 40.0 | 42.6 | | ng/L | | 107 | 72 - 134 | 3 | 30 |
| Perfluorotridecanoic acid (PFTrDA) | | | 40.0 | 39.3 | | ng/L | | 98 | 65 - 144 | 0 | 30 |
| Perfluorotetradecanoic acid (PFTeA) | | | 40.0 | 43.8 | | ng/L | | 110 | 71 - 132 | 5 | 30 |
| Perfluorobutanesulfonic acid (PFBS) | | | 35.5 | 37.3 | | ng/L | | 105 | 72 - 130 | 2 | 30 |
| Perfluoropentanesulfonic acid (PFPeS) | | | 37.6 | 35.4 | | ng/L | | 94 | 71 - 127 | 2 | 30 |
| Perfluorohexanesulfonic acid (PFHxS) | | | 36.5 | 35.3 | | ng/L | | 97 | 68 - 131 | 3 | 30 |
| Perfluoroheptanesulfonic acid (PFHpS) | | | 38.2 | 38.4 | | ng/L | | 101 | 69 - 134 | 0 | 30 |
| Perfluorooctanesulfonic acid (PFOS) | | | 37.2 | 37.3 | M | ng/L | | 100 | 65 - 140 | 0 | 30 |
| Perfluorononanesulfonic acid (PFNS) | | | 38.5 | 36.6 | | ng/L | | 95 | 69 - 127 | 3 | 30 |
| Perfluorodecanesulfonic acid (PFDS) | | | 38.6 | 32.3 | | ng/L | | 84 | 53 - 142 | 7 | 30 |
| Perfluorododecanesulfonic acid (PFDoS) | | | 38.8 | 35.1 | | ng/L | | 91 | 73 - 125 | 6 | 30 |
| Perfluorooctanesulfonamide (FOSA) | | | 40.0 | 46.4 | | ng/L | | 116 | 67 - 137 | 1 | 30 |
| NMeFOSAA | | | 40.0 | 40.1 | | ng/L | | 100 | 65 - 136 | 7 | 30 |
| NEtFOSAA | | | 40.0 | 41.7 | | ng/L | | 104 | 61 - 135 | 4 | 30 |

## Method: QSM B15 - PFAS for QSM 5.3, Table B-15 (Continued)

**Lab Sample ID: LCSD 320-714316/3-A**
**Matrix: Water**
**Analysis Batch: 717082**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 714316**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4:2 FTS | | | 37.5 | 34.8 | | ng/L | | 93 | 63 - 143 | 1 | 30 |
| 6:2 FTS | | | 38.1 | 35.8 | | ng/L | | 94 | 64 - 140 | 3 | 30 |
| 8:2 FTS | | | 38.4 | 39.5 | | ng/L | | 103 | 67 - 138 | 15 | 30 |
| NEtFOSA | | | 40.0 | 38.4 | | ng/L | | 96 | 83 - 110 | 5 | 30 |
| NMeFOSA | | | 40.0 | 41.2 | | ng/L | | 103 | 68 - 141 | 2 | 30 |
| NMeFOSE | | | 40.0 | 39.4 | | ng/L | | 98 | 60 - 137 | 4 | 30 |
| NEtFOSE | | | 40.0 | 39.8 | | ng/L | | 99 | 73 - 126 | 3 | 30 |
| 9Cl-PF3ONS | | | 37.4 | 34.4 | | ng/L | | 92 | 86 - 129 | 4 | 30 |
| HFPO-DA (GenX) | | | 40.0 | 39.6 | | ng/L | | 99 | 84 - 121 | 4 | 30 |
| 11Cl-PF3OUdS | | | 37.8 | 33.4 | | ng/L | | 88 | 80 - 131 | 0 | 30 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | | | 37.8 | 43.3 | | ng/L | | 114 | 87 - 135 | 5 | 30 |
| 3:3 FTCA | | | 40.0 | 38.9 | | ng/L | | 97 | 70 - 130 | 4 | 30 |
| 5:3 FTCA | | | 40.0 | 42.6 | | ng/L | | 106 | 70 - 130 | 3 | 30 |
| 7:3 FTCA | | | 40.0 | 40.4 | | ng/L | | 101 | 70 - 130 | 2 | 30 |
| NFDHA | | | 40.0 | 42.9 | | ng/L | | 107 | 70 - 130 | 2 | 30 |
| PFMBA | | | 40.0 | 41.8 | | ng/L | | 105 | 70 - 130 | 2 | 30 |
| PFMPA | | | 40.0 | 41.8 | | ng/L | | 104 | 70 - 130 | 3 | 30 |
| PFEESA | | | 35.7 | 36.4 | | ng/L | | 102 | 70 - 130 | 1 | 30 |

| *Isotope Dilution* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *13C8 FOSA* | *85* | | *50 - 150* |
| *13C4 PFBA* | *100* | | *50 - 150* |
| *13C5 PFPeA* | *101* | | *50 - 150* |
| *13C2 PFHxA* | *99* | | *50 - 150* |
| *13C4 PFHpA* | *103* | | *50 - 150* |
| *13C4 PFOA* | *96* | | *50 - 150* |
| *13C5 PFNA* | *100* | | *50 - 150* |
| *13C2 PFDA* | *91* | | *50 - 150* |
| *13C2 PFUnA* | *94* | | *50 - 150* |
| *13C2 PFDoA* | *92* | | *50 - 150* |
| *13C2 PFTeDA* | *85* | | *50 - 150* |
| *13C3 PFBS* | *103* | | *50 - 150* |
| *18O2 PFHxS* | *100* | | *50 - 150* |
| *13C4 PFOS* | *95* | | *50 - 150* |
| *d3-NMeFOSAA* | *97* | | *50 - 150* |
| *d5-NEtFOSAA* | *92* | | *50 - 150* |
| *M2-4:2 FTS* | *95* | | *50 - 150* |
| *M2-6:2 FTS* | *86* | | *50 - 150* |
| *M2-8:2 FTS* | *81* | | *50 - 150* |
| *d-N-MeFOSA-M* | *68* | | *50 - 150* |
| *d-N-EtFOSA-M* | *64* | | *50 - 150* |
| *d7-N-MeFOSE-M* | *80* | | *50 - 150* |
| *d9-N-EtFOSE-M* | *80* | | *50 - 150* |
| *13C3 HFPO-DA* | *99* | | *50 - 150* |
| *13C-6:2 FTCA* | *96* | | *50 - 150* |
| *13C-8:2 FTCA* | *95* | | *50 - 150* |

# QC Association Summary

Client: Hall Environmental Analysis Laboratory
Job ID: 320-105783-1
Project/Site: 2310374

## LCMS

### Prep Batch: 714316

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 320-105783-1 | 2310374-001C LCLC-1 | Total/NA | Water | 3535 | |
| 320-105783-2 | 2310374-002C LCLC-2 | Total/NA | Water | 3535 | |
| 320-105783-3 | 2310374-003C LCLC-3 | Total/NA | Water | 3535 | |
| 320-105783-4 | 2310374-004C LCLC-4 | Total/NA | Water | 3535 | |
| 320-105783-5 | 2310374-005C LCLC-5 | Total/NA | Water | 3535 | |
| 320-105783-6 | 2310374-006C LCLC-6 | Total/NA | Water | 3535 | |
| 320-105783-7 | 2310374-007C LCLC-7 | Total/NA | Water | 3535 | |
| 320-105783-8 | 2310374-008C LCLC-8 | Total/NA | Water | 3535 | |
| MB 320-714316/1-A | Method Blank | Total/NA | Water | 3535 | |
| LCS 320-714316/2-A | Lab Control Sample | Total/NA | Water | 3535 | |
| LCSD 320-714316/3-A | Lab Control Sample Dup | Total/NA | Water | 3535 | |

### Analysis Batch: 717082

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 320-105783-1 | 2310374-001C LCLC-1 | Total/NA | Water | QSM B15 | 714316 |
| 320-105783-2 | 2310374-002C LCLC-2 | Total/NA | Water | QSM B15 | 714316 |
| 320-105783-3 | 2310374-003C LCLC-3 | Total/NA | Water | QSM B15 | 714316 |
| 320-105783-4 | 2310374-004C LCLC-4 | Total/NA | Water | QSM B15 | 714316 |
| 320-105783-5 | 2310374-005C LCLC-5 | Total/NA | Water | QSM B15 | 714316 |
| 320-105783-6 | 2310374-006C LCLC-6 | Total/NA | Water | QSM B15 | 714316 |
| 320-105783-7 | 2310374-007C LCLC-7 | Total/NA | Water | QSM B15 | 714316 |
| 320-105783-8 | 2310374-008C LCLC-8 | Total/NA | Water | QSM B15 | 714316 |
| MB 320-714316/1-A | Method Blank | Total/NA | Water | QSM B15 | 714316 |
| LCS 320-714316/2-A | Lab Control Sample | Total/NA | Water | QSM B15 | 714316 |
| LCSD 320-714316/3-A | Lab Control Sample Dup | Total/NA | Water | QSM B15 | 714316 |

# Lab Chronicle

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

## Client Sample ID: 2310374-001C LCLC-1
**Lab Sample ID: 320-105783-1**
**Date Collected: 10/05/23 09:20**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3535 | | | 269.6 mL | 10.0 mL | 714316 | 10/19/23 12:32 | JS | EET SAC |
| Total/NA | Analysis | QSM B15 | | 1 | 1 mL | 1 mL | 717082 | 11/01/23 04:26 | C1P | EET SAC |

## Client Sample ID: 2310374-002C LCLC-2
**Lab Sample ID: 320-105783-2**
**Date Collected: 10/05/23 09:30**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3535 | | | 284.9 mL | 10.0 mL | 714316 | 10/19/23 12:32 | JS | EET SAC |
| Total/NA | Analysis | QSM B15 | | 1 | 1 mL | 1 mL | 717082 | 11/01/23 04:37 | C1P | EET SAC |

## Client Sample ID: 2310374-003C LCLC-3
**Lab Sample ID: 320-105783-3**
**Date Collected: 10/05/23 09:55**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3535 | | | 295.4 mL | 10.0 mL | 714316 | 10/19/23 12:32 | JS | EET SAC |
| Total/NA | Analysis | QSM B15 | | 1 | 1 mL | 1 mL | 717082 | 11/01/23 04:49 | C1P | EET SAC |

## Client Sample ID: 2310374-004C LCLC-4
**Lab Sample ID: 320-105783-4**
**Date Collected: 10/05/23 09:50**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3535 | | | 289.4 mL | 10.0 mL | 714316 | 10/19/23 12:32 | JS | EET SAC |
| Total/NA | Analysis | QSM B15 | | 1 | 1 mL | 1 mL | 717082 | 11/01/23 05:00 | C1P | EET SAC |

## Client Sample ID: 2310374-005C LCLC-5
**Lab Sample ID: 320-105783-5**
**Date Collected: 10/05/23 10:25**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3535 | | | 276.2 mL | 10.0 mL | 714316 | 10/19/23 12:32 | JS | EET SAC |
| Total/NA | Analysis | QSM B15 | | 1 | 1 mL | 1 mL | 717082 | 11/01/23 05:11 | C1P | EET SAC |

## Client Sample ID: 2310374-006C LCLC-6
**Lab Sample ID: 320-105783-6**
**Date Collected: 10/05/23 10:50**
**Matrix: Water**
**Date Received: 10/10/23 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3535 | | | 290.2 mL | 10.0 mL | 714316 | 10/19/23 12:32 | JS | EET SAC |
| Total/NA | Analysis | QSM B15 | | 1 | 1 mL | 1 mL | 717082 | 11/01/23 05:23 | C1P | EET SAC |

# Lab Chronicle

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

## Client Sample ID: 2310374-007C LCLC-7

**Lab Sample ID: 320-105783-7**

**Date Collected: 10/05/23 12:20**

**Matrix: Water**

**Date Received: 10/10/23 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3535 | | | 276.3 mL | 10.0 mL | 714316 | 10/19/23 12:32 | JS | EET SAC |
| Total/NA | Analysis | QSM B15 | | 1 | 1 mL | 1 mL | 717082 | 11/01/23 05:34 | C1P | EET SAC |

## Client Sample ID: 2310374-008C LCLC-8

**Lab Sample ID: 320-105783-8**

**Date Collected: 10/05/23 12:35**

**Matrix: Water**

**Date Received: 10/10/23 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3535 | | | 281.8 mL | 10.0 mL | 714316 | 10/19/23 12:32 | JS | EET SAC |
| Total/NA | Analysis | QSM B15 | | 1 | 1 mL | 1 mL | 717082 | 11/01/23 05:56 | C1P | EET SAC |

**Laboratory References:**

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

# Accreditation/Certification Summary

Client: Hall Environmental Analysis Laboratory
Job ID: 320-105783-1
Project/Site: 2310374

## Laboratory: Eurofins Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Alaska (UST) | State | 17-020 | 02-20-24 |
| ANAB | Dept. of Defense ELAP | L2468 | 01-20-24 |
| ANAB | Dept. of Energy | L2468.01 | 01-20-24 |
| ANAB | ISO/IEC 17025 | L2468 | 01-20-24 |
| Arizona | State | AZ0708 | 08-11-24 |
| Arkansas DEQ | State | 88-0691 | 05-18-24 |
| California | State | 2897 | 01-22-24 |
| Colorado | State | CA00044 | 08-31-24 |
| Florida | NELAP | E87570 | 06-30-24 |
| Georgia | State | 4040 | 01-29-24 |
| Hawaii | State | <cert No.> | 01-29-24 |
| Illinois | NELAP | 200060 | 03-17-24 |
| Kansas | NELAP | E-10375 | 10-31-24 |
| Louisiana (All) | NELAP | 01944 | 06-30-24 |
| Maine | State | CA00004 | 04-14-24 |
| Michigan | State | 9947 | 01-31-24 |
| Nevada | State | CA00044 | 07-31-24 |
| New Hampshire | NELAP | 2997 | 04-18-24 |
| New Jersey | NELAP | CA005 | 06-30-24 |
| New York | NELAP | 11666 | 04-01-24 |
| Ohio | State | 41252 | 01-29-24 |
| Oregon | NELAP | 4040 | 01-29-24 |
| Texas | NELAP | T104704399-23-17 | 05-31-24 |
| US Fish & Wildlife | US Federal Programs | 58448 | 04-30-24 |
| USDA | US Federal Programs | P330-18-00239 | 02-28-26 |
| Utah | NELAP | CA000442023-16 | 02-29-24 |
| Virginia | NELAP | 460278 | 03-14-24 |
| Washington | State | C581 | 05-05-24 |
| West Virginia (DW) | State | 9930C | 12-31-23 |
| Wisconsin | State | 998204680 | 08-31-24 |
| Wyoming | State Program | 8TMS-L | 01-28-19 * |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Method Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| QSM B15 | PFAS for QSM 5.3, Table B-15 | DOD 5.3 | EET SAC |
| 3535 | Solid-Phase Extraction (SPE) | SW846 | EET SAC |

**Protocol References:**

DOD 5.3 = Department of Defense Quality Systems Manual V5.3

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

# Sample Summary

Client: Hall Environmental Analysis Laboratory
Project/Site: 2310374

Job ID: 320-105783-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 320-105783-1 | 2310374-001C LCLC-1 | Water | 10/05/23 09:20 | 10/10/23 09:10 |
| 320-105783-2 | 2310374-002C LCLC-2 | Water | 10/05/23 09:30 | 10/10/23 09:10 |
| 320-105783-3 | 2310374-003C LCLC-3 | Water | 10/05/23 09:55 | 10/10/23 09:10 |
| 320-105783-4 | 2310374-004C LCLC-4 | Water | 10/05/23 09:50 | 10/10/23 09:10 |
| 320-105783-5 | 2310374-005C LCLC-5 | Water | 10/05/23 10:25 | 10/10/23 09:10 |
| 320-105783-6 | 2310374-006C LCLC-6 | Water | 10/05/23 10:50 | 10/10/23 09:10 |
| 320-105783-7 | 2310374-007C LCLC-7 | Water | 10/05/23 12:20 | 10/10/23 09:10 |
| 320-105783-8 | 2310374-008C LCLC-8 | Water | 10/05/23 12:35 | 10/10/23 09:10 |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

# CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

| | | | |
|---|---|---|---|
| SUB CONTRATOR: TestAm -Sacramento | COMPANY: Eurofins TestAmerica | PHONE: (916) 373-5600 | FAX: |
| ADDRESS: 880 Riverside Parkway | | ACCOUNT #: | EMAIL: |
| CITY, STATE, ZIP: West Sacramento, CA 95605 | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|---|---|---|---|---|---|---|---|
| 1 | 2310374-001C | LCLC-1 | 250HDPE | Groundwater | 10/5/2023 9:20:00 AM | 2 | see attached note. |
| 2 | 2310374-002C | LCLC-2 | 250HDPE | Groundwater | 10/5/2023 9:30:00 AM | 2 | see attached note. |
| 3 | 2310374-003C | LCLC-3 | 250HDPE | Groundwater | 10/5/2023 9:55:00 AM | 2 | see attached note. |
| 4 | 2310374-004C | LCLC-4 | 250HDPE | Groundwater | 10/5/2023 9:50:00 AM | 2 | see attached note. |
| 5 | 2310374-005C | LCLC-5 | 250HDPE | Groundwater | 10/5/2023 10:25:00 AM | 2 | see attached note. |
| 6 | 2310374-006C | LCLC-6 | 250HDPE | Groundwater | 10/5/2023 10:50:00 AM | 2 | see attached note. |
| 7 | 2310374-007C | LCLC-7 | 250HDPE | Groundwater | 10/5/2023 12:20:00 PM | 2 | see attached note. |
| 8 | 2310374-008C | LCLC-8 | 250HDPE | Groundwater | 10/5/2023 12:35:00 PM | 2 | see attached note. |

320-105783 Chain of Custody

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | |
|---|---|---|---|---|---|
| Relinquished By: | Date: 10/6/2023 | Time: 4:06 PM | Received By: | Date: 10/10/23 | Time: 910 |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

TAT: Standard ☒ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples 3.9 °C Attempt to Cool ? _____
Comments: _____

eurofins | Environment Testing

Loc: 320
**105783**

# Sacramento Sample Receiving Notes (SSRN)

Tracking # : 7736 5068 3457

Job:_____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Therm. ID: C10 Corr. Factor: ( + / - ) _____°C

Ice ✓ Wet_____ Gel _____ Other _____

Cooler Custody Seal: ✓

Cooler ID: ✓

Temp Observed: 3.9 °C Corrected: 3.9 °C

From: Temp Blank ☐ Sample ☐

| **Opening/Processing The Shipment** | **Yes** | **No** | **NA** |
|---|---|---|---|
| Cooler compromised/tampered with? | ☐ | ☑ | ☐ |
| Cooler Temperature is acceptable? | ☑ | ☐ | ☐ |
| Frozen samples show signs of thaw? | ☐ | ☐ | ☑ |

Initials: JF Date: 10/10/23

| **Unpacking/Labeling The Samples** | **Yes** | **No** | **NA** |
|---|---|---|---|
| Containers are not broken or leaking? | ☑ | ☐ | ☐ |
| Samples compromised/tampered with? | ☐ | ☑ | ☐ |
| COC is complete w/o discrepancies | ☑ | ☐ | ☐ |
| Sample custody seal? | ☐ | ☐ | ☑ |
| Sample containers have legible labels? | ☑ | ☐ | ☐ |
| Sample date/times are provided? | ☑ | ☐ | ☐ |
| Appropriate containers are used? | ☑ | ☐ | ☐ |
| Sample bottles are completely filled? | ☑ | ☐ | ☐ |
| Sample preservatives verified? | ☐ | ☐ | ☑ |
| Is the Field Sampler's name on COC? | ☐ | ☑ | ☐ |
| Samples w/o discrepancies? | ☑ | ☐ | ☐ |
| Zero headspace?* | ☐ | ☐ | ☑ |
| Alkalinity has no headspace? | ☐ | ☐ | ☑ |
| Perchlorate has headspace? (Methods 314, 331, 6850) | ☐ | ☐ | ☑ |
| Multiphasic samples are not present? | ☑ | ☐ | ☐ |

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")*

Initials: JF Date: 10/10/23

Notes:_____

Trizma Lot #(s): _____

Ammonium Acetate Lot #(s): _____

| **Login Completion** | **Yes** | **No** | **NA** |
|---|---|---|---|
| Receipt Temperature on COC? | ☑ | ☐ | ☐ |
| NCM Filed? | ☐ | ☑ | ☐ |
| Samples received within hold time? | ☑ | ☐ | ☐ |
| Log Release checked in TALS? | ☐ | ☐ | ☐ |

Initials: JF Date: 10/10/23 10/10/23 JF 10/10/23

**PFAS *for isotope dilution liquid chromatography*/tandem mass spectrometry methods adhering to DOD's QSM Version 5.3 Table B-15**

Desiree Dominguez
San e Con rol Manager
Hall Env onmen a
4°0 r a k ns NE
A buq er ue N M 8 09
Ph 505 345-39 5 (Ex 109

# Login Sample Receipt Checklist

Client: Hall Environmental Analysis Laboratory

Job Number: 320-105783-1

**Login Number: 105783**
**List Number: 1**
**Creator: Fisher, Jamyiah L**

**List Source: Eurofins Sacramento**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | Refer to srrn |
| The cooler's custody seal, if present, is intact. | N/A | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | N/A | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | N/A | |
| Cooler Temperature is recorded. | N/A | |
| COC is present. | N/A | |
| COC is filled out in ink and legible. | N/A | |
| COC is filled out with all pertinent information. | N/A | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | N/A | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | N/A | |
| Sample containers have legible labels. | N/A | |
| Containers are not broken or leaking. | N/A | |
| Sample collection date/times are provided. | N/A | |
| Appropriate sample containers are used. | N/A | |
| Sample bottles are completely filled. | N/A | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | N/A | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | N/A | |
| Residual Chlorine Checked. | N/A | |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2310374**

***06-Nov-23***

**Client:** Daniel B. Stephens & Assoc.

**Project:** LCLC domestic Well Sampling

| Sample ID: **MB-B** | SampType: **MBLK** | TestCode: **EPA Method 200.7: Metals** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **B100429** | RunNo: **100429** |
| Prep Date: | Analysis Date: **10/12/2023** | SeqNo: **3678993** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 1.0 | | | | | | | | |
| Magnesium | ND | 1.0 | | | | | | | | |
| Potassium | ND | 1.0 | | | | | | | | |
| Sodium | ND | 1.0 | | | | | | | | |

| Sample ID: **LCSLL-B** | SampType: **LCSLL** | TestCode: **EPA Method 200.7: Metals** |
|---|---|---|
| Client ID: **BatchQC** | Batch ID: **B100429** | RunNo: **100429** |
| Prep Date: | Analysis Date: **10/12/2023** | SeqNo: **3678994** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 1.0 | 0.5000 | 0 | 104 | 50 | 150 | | | |
| Magnesium | ND | 1.0 | 0.5000 | 0 | 104 | 50 | 150 | | | |
| Potassium | ND | 1.0 | 0.5000 | 0 | 111 | 50 | 150 | | | |
| Sodium | ND | 1.0 | 0.5000 | 0 | 102 | 50 | 150 | | | |

| Sample ID: **LCS-B** | SampType: **LCS** | TestCode: **EPA Method 200.7: Metals** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **B100429** | RunNo: **100429** |
| Prep Date: | Analysis Date: **10/12/2023** | SeqNo: **3678995** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 49 | 1.0 | 50.00 | 0 | 98.1 | 85 | 115 | | | |
| Magnesium | 49 | 1.0 | 50.00 | 0 | 98.5 | 85 | 115 | | | |
| Potassium | 49 | 1.0 | 50.00 | 0 | 98.9 | 85 | 115 | | | |
| Sodium | 48 | 1.0 | 50.00 | 0 | 96.8 | 85 | 115 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2310374**

***06-Nov-23***

**Client:** Daniel B. Stephens & Assoc.

**Project:** LCLC domestic Well Sampling

| Sample ID: **MB** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **A100294** | RunNo: **100294** |
| Prep Date: | Analysis Date: **10/6/2023** | SeqNo: **3672471** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | 0.10 | | | | | | | | |
| Chloride | ND | 0.50 | | | | | | | | |
| Nitrogen, Nitrite (As N) | ND | 0.10 | | | | | | | | |
| Bromide | ND | 0.10 | | | | | | | | |
| Nitrogen, Nitrate (As N) | ND | 0.10 | | | | | | | | |
| Phosphorus, Orthophosphate (As P) | ND | 0.50 | | | | | | | | |
| Sulfate | ND | 0.50 | | | | | | | | |

| Sample ID: **LCS** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **A100294** | RunNo: **100294** |
| Prep Date: | Analysis Date: **10/6/2023** | SeqNo: **3672472** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.47 | 0.10 | 0.5000 | 0 | 94.4 | 90 | 110 | | | |
| Chloride | 4.8 | 0.50 | 5.000 | 0 | 95.9 | 90 | 110 | | | |
| Nitrogen, Nitrite (As N) | 0.99 | 0.10 | 1.000 | 0 | 98.5 | 90 | 110 | | | |
| Bromide | 2.4 | 0.10 | 2.500 | 0 | 97.9 | 90 | 110 | | | |
| Nitrogen, Nitrate (As N) | 2.5 | 0.10 | 2.500 | 0 | 102 | 90 | 110 | | | |
| Phosphorus, Orthophosphate (As P) | 4.8 | 0.50 | 5.000 | 0 | 96.3 | 90 | 110 | | | |
| Sulfate | 9.8 | 0.50 | 10.00 | 0 | 98.4 | 90 | 110 | | | |

| Sample ID: **MB** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R100302** | RunNo: **100302** |
| Prep Date: | Analysis Date: **10/7/2023** | SeqNo: **3672932** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | 0.10 | | | | | | | | |
| Chloride | ND | 0.50 | | | | | | | | |
| Nitrogen, Nitrite (As N) | ND | 0.10 | | | | | | | | |
| Bromide | ND | 0.10 | | | | | | | | |
| Nitrogen, Nitrate (As N) | ND | 0.10 | | | | | | | | |
| Phosphorus, Orthophosphate (As P) | ND | 0.50 | | | | | | | | |
| Sulfate | ND | 0.50 | | | | | | | | |

| Sample ID: **LCS** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R100302** | RunNo: **100302** |
| Prep Date: | Analysis Date: **10/7/2023** | SeqNo: **3672933** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.48 | 0.10 | 0.5000 | 0 | 95.9 | 90 | 110 | | | |

**Qualifiers:**

| | |
|---|---|
| * | Value exceeds Maximum Contaminant Level. |
| D | Sample Diluted Due to Matrix |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. |
| B | Analyte detected in the associated Method Blank |
| E | Above Quantitation Range/Estimated Value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2310374**

***06-Nov-23***

**Client:** Daniel B. Stephens & Assoc.

**Project:** LCLC domestic Well Sampling

| Sample ID: **LCS** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R100302** | RunNo: **100302** |
| Prep Date: | Analysis Date: **10/7/2023** | SeqNo: **3672933** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4.7 | 0.50 | 5.000 | 0 | 94.4 | 90 | 110 | | | |
| Nitrogen, Nitrite (As N) | 0.97 | 0.10 | 1.000 | 0 | 96.7 | 90 | 110 | | | |
| Bromide | 2.4 | 0.10 | 2.500 | 0 | 96.4 | 90 | 110 | | | |
| Nitrogen, Nitrate (As N) | 2.5 | 0.10 | 2.500 | 0 | 100 | 90 | 110 | | | |
| Phosphorus, Orthophosphate (As P) | 4.7 | 0.50 | 5.000 | 0 | 93.1 | 90 | 110 | | | |
| Sulfate | 9.7 | 0.50 | 10.00 | 0 | 96.6 | 90 | 110 | | | |

| Sample ID: **MB** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **A100500** | RunNo: **100500** |
| Prep Date: | Analysis Date: **10/16/2023** | SeqNo: **3683592** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | |
| Sulfate | ND | 0.50 | | | | | | | | |

| Sample ID: **LCS** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **A100500** | RunNo: **100500** |
| Prep Date: | Analysis Date: **10/16/2023** | SeqNo: **3683593** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4.8 | 0.50 | 5.000 | 0 | 95.8 | 90 | 110 | | | |
| Sulfate | 9.7 | 0.50 | 10.00 | 0 | 97.3 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2310374**

***06-Nov-23***

**Client:** Daniel B. Stephens & Assoc.

**Project:** LCLC domestic Well Sampling

| Sample ID: **LCS-1 99.5uS eC** | SampType: **LCS** | TestCode: **SM2510B: Specific Conductance** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **R100435** | RunNo: **100435** |
| Prep Date: | Analysis Date: **10/12/2023** | SeqNo: **3679238** Units: **µmhos/cm** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Conductivity | 99 | 10 | 99.50 | 0 | 99.9 | 85 | 115 | | | |

| Sample ID: **2310374-001A DUP** | SampType: **DUP** | TestCode: **SM2510B: Specific Conductance** |
|---|---|---|
| Client ID: **LCLC-1** | Batch ID: **R100435** | RunNo: **100435** |
| Prep Date: | Analysis Date: **10/12/2023** | SeqNo: **3679240** Units: **µmhos/cm** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Conductivity | 570 | 10 | | | | | | 0.556 | 20 | |

**Qualifiers:**

| | |
|---|---|
| * | Value exceeds Maximum Contaminant Level. |
| D | Sample Diluted Due to Matrix |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. |
| B | Analyte detected in the associated Method Blank |
| E | Above Quantitation Range/Estimated Value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2310374**

***06-Nov-23***

**Client:** Daniel B. Stephens & Assoc.

**Project:** LCLC domestic Well Sampling

| Sample ID: **MB-3 Alk** | SampType: **MBLK** | TestCode: **SM2320B: Alkalinity** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **B100435** | RunNo: **100435** | | | | | | | |
| Prep Date: | Analysis Date: **10/12/2023** | SeqNo: **3679212** | Units: **mg/L CaCO3** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | ND | 20.00 | | | | | | | | |

| Sample ID: **LCS-3 Alk** | SampType: **LCS** | TestCode: **SM2320B: Alkalinity** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **B100435** | RunNo: **100435** | | | | | | | |
| Prep Date: | Analysis Date: **10/12/2023** | SeqNo: **3679213** | Units: **mg/L CaCO3** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | 78.04 | 20.00 | 80.00 | 0 | 97.6 | 90 | 110 | | | |

| Sample ID: **2310374-001A DUP** | SampType: **DUP** | TestCode: **SM2320B: Alkalinity** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCLC-1** | Batch ID: **B100435** | RunNo: **100435** | | | | | | | |
| Prep Date: | Analysis Date: **10/12/2023** | SeqNo: **3679218** | Units: **mg/L CaCO3** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Total Alkalinity (as CaCO3) | 170.5 | 20.00 | | | | | | 0 | 20 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quanitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **2310374**

***06-Nov-23***

**Client:** Daniel B. Stephens & Assoc.

**Project:** LCLC domestic Well Sampling

| Sample ID: **MB-78055** | SampType: **MBLK** | TestCode: **SM2540C MOD: Total Dissolved Solids** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **78055** | RunNo: **100381** |
| Prep Date: **10/10/2023** | Analysis Date: **10/11/2023** | SeqNo: **3676775** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | ND | 50.0 | | | | | | | | |

| Sample ID: **LCS-78055** | SampType: **LCS** | TestCode: **SM2540C MOD: Total Dissolved Solids** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **78055** | RunNo: **100381** |
| Prep Date: **10/10/2023** | Analysis Date: **10/11/2023** | SeqNo: **3676776** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1010 | 50.0 | 1000 | 0 | 101 | 80 | 120 | | | |

| Sample ID: **2310374-004ADUP** | SampType: **DUP** | TestCode: **SM2540C MOD: Total Dissolved Solids** |
|---|---|---|
| Client ID: **LCLC-4** | Batch ID: **78055** | RunNo: **100381** |
| Prep Date: **10/10/2023** | Analysis Date: **10/11/2023** | SeqNo: **3676794** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | ND | 50.0 | | | | | | 0 | 10 | |

**Qualifiers:**

| | |
|---|---|
| * | Value exceeds Maximum Contaminant Level. |
| D | Sample Diluted Due to Matrix |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| PQL | Practical Quanitative Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. |
| B | Analyte detected in the associated Method Blank |
| E | Above Quantitation Range/Estimated Value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

# Sample Log-In Check List

Client Name: Daniel B. Stephens & Assoc.

Work Order Number: 2310374

RcptNo: 1

Received By: Juan Rojas 10/6/2023 3:37:00 PM

Completed By: Desiree Dominguez 10/6/2023 3:55:43 PM

Reviewed By: JR 10/6/23

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. How was the sample delivered? | Client | | |

## Log In

| | | | |
|---|---|---|---|
| 3. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 4. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 5. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 6. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 7. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 8. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 9. Received at least 1 vial with headspace <1/4" for AQ VOA? | Yes ☐ | No ☐ | NA ☑ |
| 10. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | |
| 12. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | |
| 13. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 14. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | |

# of preserved bottles checked for pH: 8 (<2 or >12 unless noted)

Adjusted? NO

Checked by: SCM 10/6/23

## Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 5.7 | Good | Not Present | Morty | | |

# Chain-of-Custody Record

Client: DBS&A

Mailing Address: 6020 Academy NE Suite 100
Albuquerque, NM 87109

Phone #: 505-822-9400

email or Fax#: aewing@geo-logic.com

QA/QC Package:
☑ Standard ☒ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: LCLC Domestic Well Sampling

Project #: DB23.1188.00 P2

Project Manager: Amy Ewing

Sampler: Jonas Fisher

On Ice: ☑ Yes ☐ No

# of Coolers: 1 Metz

Cooler Temp(Including CF): 5.7+0=5.7 (°C)


HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107


Analysis Request

| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. 2310374 | BTEX / MTBE / TMB's (8021) | TPH:8015D(GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | Cl, F, Br, $NO_3$, $NO_2$, $PO_4$, $SO_4$ | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) | Cation/Anion Balance | PFAS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/5/23 | 0920 | GW | LCLC-1 | 1-500mL Poly 3-250mL Poly | HNO3, TRIS | -001 | | | | | | | | | | | X | X |
| | 0930 | | LCLC-2 | | | -002 | | | | | | | | | | | X | X |
| | 0955 | | LCLC-3 | | | -003 | | | | | | | | | | | X | X |
| | 0950 | | LCLC-4 | | | -004 | | | | | | | | | | | X | X |
| | 1025 | | LCLC-5 | | | -005 | | | | | | | | | | | X | X |
| | 1050 | | LCLC-6 | | | -006 | | | | | | | | | | | X | X |
| | 1220 | | LCLC-7 | | | -007 | | | | | | | | | | | X | X |
| ↓ | 1235 | ↓ | LCLC-8 | ↓ | ↓ | -008 | | | | | | | | | | | X | X |

Amy Ewing 10/5/23

| Date: | Time: | Relinquished by: | Received by: | Via: | Date | Time |
|---|---|---|---|---|---|---|
| 10/6/23 | 1537 | Amy Ewing/DBS&A | | | | |
| Date: | Time: | Relinquished by: | Received by: | Via: | Date | Time |
| | | | | COC | 10/6/23 | 15:37 |

Remarks: CAB-See Attachment
PFAS-Isotope Dilution Chromatography/Tandem Mass Spectroscopy (LC/MS/MS) Methods Adhering to DOD's Quality System Manual (QSM) Version 5.3 Table B-15
See Attachment

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.