**CONFIRMATION SOIL SAMPLING REPORT**

**Facility Name: Fort Lupton Compressor Station**
**Facility Number: 466243**
**Initial Form 27 Number: 403954600**
**NW 1/4, SW 1/4, Section 21, Township 1N, Range 66W**
**40.033382, -104.790116**
**Weld County, Colorado**

**Prepared for:**

Annette Garrigues
Rocky Mountain Midstream, LLC
13781 Pacific Circle
Mead, Colorado 80542

January 9, 2025

**Prepared by:**

Apex Companies, LLC
1746 Cole Blvd., Suite 250
Lakewood, CO 80401

Prepared by:

Adam Varns
Assistant Project Manager

Reviewed by:

Skyler Bruno
Project Manager

APEX

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## Attachments

## 1.0 INTRODUCTION

On behalf of Rocky Mountain Midstream, LLC (RMM), Apex Companies, LLC (Apex) has prepared this Confirmation Soil Sampling Report for the Fort Lupton Compressor Station (Site), located in the northwest quarter of the southwest quarter of Section 21, Township 1N, Range 66W in Weld County, Colorado (**Figure 1**).

## 2.0 GENERAL SITE INFORMATION

The Site is in an agricultural area, northeast of the intersection of Weld County Road (WCR) 6 and WCR 29 in Wattenberg, Colorado. It is currently operating as the Fort Lupton Compressor Station.

### 2.1 *Initial Release and Spill Response*

Based on the initial Form 27 report submitted to the Colorado Energy and Carbon Management Commission (ECMC, form number 403954600), condensate was released to the ground on July 22, 2019, after a threaded connection failed due to a sudden change in pressure in the pipeline. Approximately six barrels (BBLs) of condensate material was released. The release was contained on site and the pipeline repair and subsequent cleanup were initiated. Impacted soils were excavated by RMM from an area approximately 25 feet by 11 feet, and to a depth of three feet deep. All impacted soils were disposed of offsite. The excavation was then backfilled with clean fill dirt. No records of disposal or laboratory analytical reports have been identified from that timeframe. RMM estimates that 30 cubic yards were removed from the Site, based on the limited information available and statements from employees onsite during the spill response and remediation activities.

### *2.2 Soil Sampling*

On November 12, 2024, Apex collected six soil samples via hand auger within the former excavation footprint, located at and around the release point (**Figure 2**). The sampling occurred to confirm impacted soil was fully excavated, and to determine if additional remediation is required. All samples were taken between 3.5 and 4.0 feet below ground surface (bgs), below the fill material of the excavation. Prior to sample collection, soils were field screened for volatile organic compounds (VOCs) using a handheld photo-ionization detector (PID). No elevated PID readings were observed during soil sample collection (**Table 1**).

During soil sample collection, a portion of the sample was placed in a baggie or soil jar for head-space analysis and the other portion was placed within a soil jar for laboratory submittal. A laboratory sample was not collected from soil used for head-space analysis. Each soil sample was placed into a laboratory-supplied Terra Core Sampling Kit, labeled, and immediately placed in a chilled cooler. The samples were shipped to ALS Environmental in Holland, Michigan, for laboratory analysis of Total Petroleum Hydrocarbons (TPH) (C6-C36) and Table 915-1 Organic Compounds in Soil. Lab-analyzed potential hydrogen (pH) results were above the Residential Soil Screening Level (RSL) acceptable highest value of 8.3. All other soil sample results were reported below the RSLs and the Protection of Groundwater Soil Screening levels (PGWS, **Table 2**).

## 3.0 INVESTIGATION CONCLUSIONS

Laboratory results from the confirmation soil samples collected on November 12, 2024, indicate past remediation efforts to remove impacted soils at the Fort Lupton Compression Station were successful. It does not appear additional remediation is necessary for this release at this time.

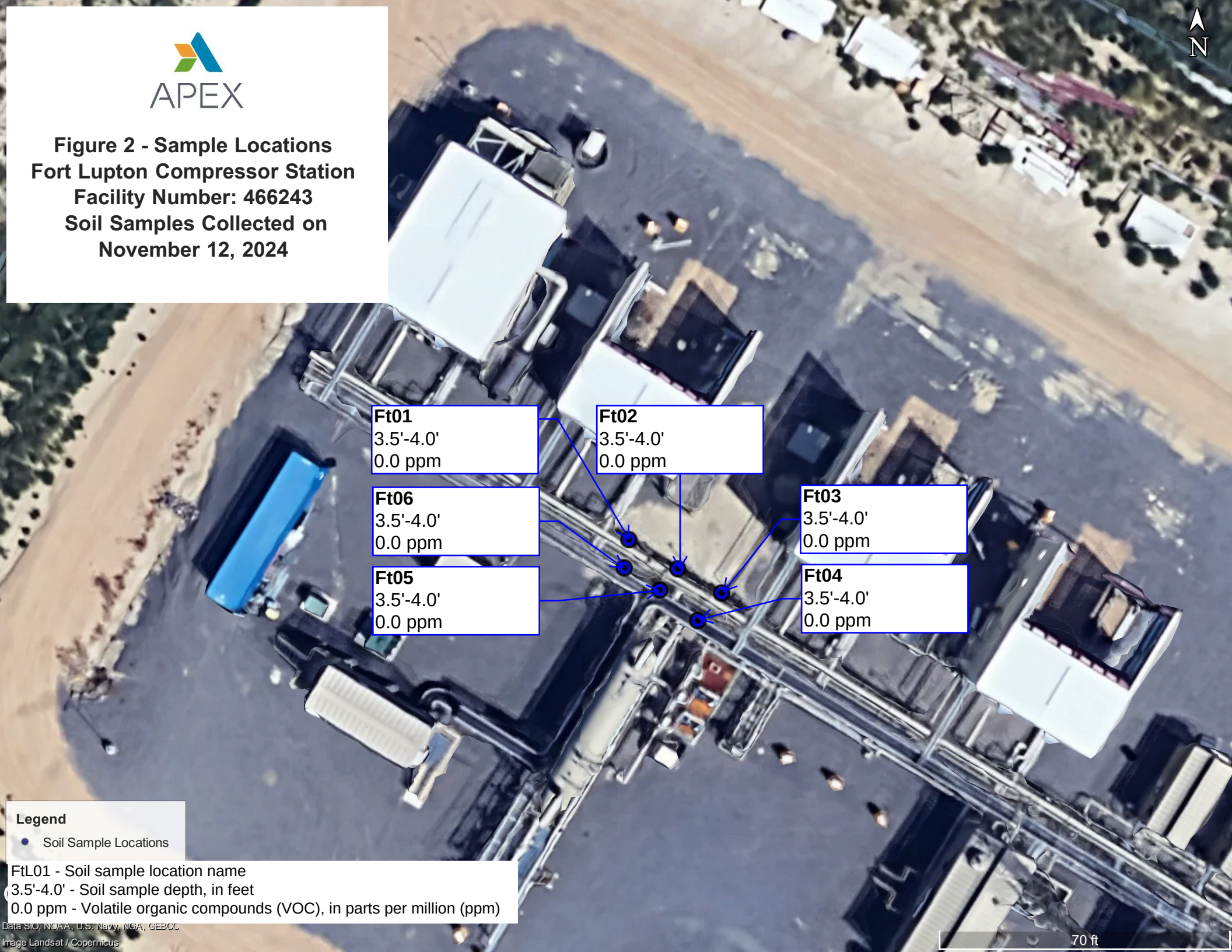
## ATTACHMENTS

APEX

# Figure 1 - Site Location
# Fort Lupton Compressor Station
# Facility Number: 466243
# 40.033261, -104.790022,
# Weld County, Colorado

APEX

# Figure 2 - Sample Locations
# Fort Lupton Compressor Station
# Facility Number: 466243
# Soil Samples Collected on November 12, 2024



# Table 1 - PID Field Measurements, November 12, 2024

| Sample Date | Soil Sample Location | Sample Depth PID Results (ppm) | | | |
|---|---|---|---|---|---|
| | | 1.0'-1.5' bgs | 2.0'-2.5' bgs | 3.0'-3.5' bgs | 3.5'-4.0' bgs |
| 11/12/2024 | FtL01 | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/12/2024 | FtL02 | 0.0 | 0.1 | 0.0 | 0.0 |
| 11/12/2024 | FtL03 | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/12/2024 | FtL04 | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/12/2024 | FtL05 | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/12/2024 | FtL06 | 0.0 | 0.0 | 0.0 | 0.0 |

**Legend:**

Samples submitted to ALS for analysis

**PID - Photoionization Detector**

**ppm - parts per million**

**bgs - below ground surface**

# Table 1 - Soil Analytical Results

| | | | | Organic Compounds in Soils (mg/kg) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ECMC Residential Soil Screening Levels --> | | | | 500 | | 1.2 | 490 | 5.8 | 58 | 30 | 27 | 360 | 1800 | 1.1 | 1.1 | 11 |
| Protection of Groundwater Levels (Soil) --> | | | | | | 0.0026(M) | 0.69(M) | 0.78(M) | 9.9(M) | 0.0081(R) | 0.0087(R) | 0.55(R) | 5.8(R) | 0.011(R) | 0.3(R) | 2.9(R) |
| **Sample Date** | **Solid/Soil Source [Vault/Sump, Spill, Pit, Cuttings, Background, Tank Battery, Wellhead, Flowline, etc.]** | **Sample ID** | **PID (ppm)** | TPH-GRO (C6-C10) Low Fraction | TPH-DRO (C10-C36) High Fraction | Benzene | Toluene | Ethylbenzene | Xylenes (sum of o-, m- and p-isomers = total xylenes) | 1,2,4-Trimethylbenzene | 1,3,5-Trimethylbenzene | Acenaphthene | Anthracene | Benzo(a)anthracene | Benzo(b)fluoranthene | Benzo(k)fluoranthene |
| **11/12/2024** | **Excavation** | FtL01@3.5'-4.0' | **0.0** | *<5.7* | **29** | *<0.00060* | *<0.0020* | *<0.0010* | *<0.0039* | *<0.0021* | *<0.0018* | *<0.0043* | *<0.0020* | *<0.0081* | *<0.0067* | *<0.0017* |
| **11/12/2024** | **Excavation** | FtL02@3.5'-4.0' | **0.0** | *<5.9* | **19** | *<0.00051* | *<0.0017* | *<0.00085* | *<0.0033* | *<0.0018* | *<0.0016* | *<0.0044* | *<0.0021* | *<0.0082* | *<0.0068* | *<0.0017* |
| **11/12/2024** | **Excavation** | FtL03@3.5'-4.0' | **0.0** | *<4.1* | **28** | *<0.00048* | *<0.0016* | *<0.00080* | *<0.0031* | *<0.0017* | *<0.0015* | *<0.0047* | *<0.0022* | *<0.0088* | *<0.0074* | *<0.0018* |
| **11/12/2024** | **Excavation** | FtL04@3.5'-4.0' | **0.0** | *<5.4* | **25** | *<0.00048* | *<0.0016* | *<0.00080* | *<0.0031* | *<0.0017* | *<0.0015* | *<0.0044* | *<0.0021* | *<0.0083* | *<0.0069* | *<0.0017* |
| **11/12/2024** | **Excavation** | FtL05@3.5'-4.0' | **0.0** | *<5.5* | **20** | *<0.00044* | *<0.0015* | *<0.00074* | *<0.0029* | *<0.0015* | *<0.0014* | *<0.0046* | *<0.0022* | *<0.0087* | *<0.0073* | *<<0.0018* |
| **11/12/2024** | **Excavation** | FtL06@3.5'-4.0' | **0.0** | *<5.2* | **26** | *<0.00046* | *<0.0016* | *<0.00078* | *<0.0031* | *<0.0016* | *<0.0014* | *<0.0046* | *<0.0022* | *<0.0087* | *<0.0072* | *<0.0018* |

**Legend:**

**ECMC - Colorado Energy and Carbon Management Commission**

Orange Highlight - ECMC Table 915-1 TPH, BTEX, organic, metal exceedance

**Light Blue Highlight - exceedance of protection of groundwater soil screening level concentrations risk based (R) or MCL based (M)**

**Yellow Highlight - ECMC Table 915-1 inorganic exceedance**

**Grey Highlight - below laboratory detection limit**

**TPH-GRO - Total Petroleum Hydrocarbons Gasoline Range Organics**

**TPH-DRO - Total Petroleum Hydrocarbons Diesel Range Organics**

**MCL - maximum contaminant level**

**PID - Photoionization Detector**

**ppm - parts per million**

**mg/kg - milligrams per kilogram**

**mg/L - milligrams per liter**

**mmhos/cm - millimhos per centimeter**

**' - feet**

# Table 1 - Soil Analytical Results

| | | | | Organic Compounds in Soils (mg/kg) | | | | | | | | | | Soil Suitability for Reclamation | | | | Metals by Saturated Paste (mg/L) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ECMC Residential Soil Screening Levels --> | | | | 0.11 | 110 | 0.11 | 240 | 240 | 1.1 | 18 | 24 | 2 | 180 | 4 | 6 | (6-8.3) | 2 | | | |
| Protection of Groundwater Levels (Soil) --> | | | | 0.24(M) | 9(R) | 0.096(R) | 8.9(R) | 0.54(R) | 0.98(R) | 0.006(R) | 0.019(R) | 0.0038(R) | 1.3(R) | | | | | | | |
| Sample Date | Solid/Soil Source [Vault/Sump, Spill, Pit, Cuttings, Background, Tank Battery, Wellhead, Flowline, etc.] | Sample ID | PID (ppm) | Benzo(a)pyrene | Chrysene | Dibenzo(a,h)anthracene | Fluoranthene | Fluorene | Indeno(1,2,3-cd)pyrene | 1-Methylnaphthalene | 2-Methylnaphthalene | Naphthalene | Pyrene | Electrical Conductivity (EC) (by saturated paste method) (mmhos/cm) | Sodium Adsorption Ratio (SAR) (by saturated paste method) (Calculation) | pH (by saturated paste method) (pH Units) | Boron (hot water soluble soil extract) (mg/L) | Calcium | Magnesium | Sodium |
| **11/12/2024** | **Excavation** | FtL01@3.5'-4.0' | **0.0** | *<0.0076* | *<0.0074* | *<0.0065* | *<0.0056* | *<0.0028* | *<0.0078* | *<0.0023* | *<0.0026* | *<0.0021* | *<0.0071* | **1.6** | **1.7** | **9.46** | **0.86** | **150** | **30** | **90** |
| **11/12/2024** | **Excavation** | FtL02@3.5'-4.0' | **0.0** | *<0.0077* | *<0.0075* | *<0.0066* | *<0.0057* | *<0.0028* | *<0.0078* | *<0.0023* | *<0.0027* | *<0.0021* | *<0.0072* | **0.98** | **0.66** | **8.73** | **0.56** | **110** | **24** | **29** |
| **11/12/2024** | **Excavation** | FtL03@3.5'-4.0' | **0.0** | *<0.0083* | *<0.0081* | *<0.0071* | *<0.0061* | *<0.0030* | *<0.0085* | *<0.0025* | *<0.0029* | *<0.0023* | *<0.0078* | **1.0** | **0.56** | **9.25** | **0.62** | **110** | **23** | **25** |
| **11/12/2024** | **Excavation** | FtL04@3.5'-4.0' | **0.0** | *<0.0077* | *<0.0076* | *<0.0067* | *<0.0057* | *<0.0028* | *<0.0079* | *<0.0023* | *<0.0027* | *<0.0022* | *<0.0073* | **0.94** | **0.56** | **8.81** | **0.49** | **100** | **23** | **24** |
| **11/12/2024** | **Excavation** | FtL05@3.5'-4.0' | **0.0** | *<0.0082* | *<0.0080* | *<0.0070* | *<0.0061* | *<0.0030* | *<0.0084* | *<0.0025* | *<0.0028* | *<0.0023* | *<0.0077* | **0.90** | **0.45** | **9.06** | **0.59** | **100** | **22** | **19** |
| **11/12/2024** | **Excavation** | FtL06@3.5'-4.0' | **0.0** | *<0.0081* | *<0.0079* | *<0.0070* | *<0.0060* | *<0.0030* | *<0.0083* | *<0.0025* | *<0.0028* | *<0.0023* | *<0.0077* | **0.79** | **0.88** | **8.84** | **0.71** | **88** | **16** | **34** |

**Legend:**

**ECMC - Colorado Energy and Carbon Management Commission**

Orange Highlight - ECMC Table 915-1 TPH, BTEX, organic, metal exceedance

**Light Blue Highlight - exceedance of protection of groundwater soil screening level concentrations risk based (R) or MCL based (M)**

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**TPH-GRO - Total Petroleum Hydrocarbons Gasoline Range Organics**

**TPH-DRO - Total Petroleum Hydrocarbons Diesel Range Organics**

**MCL - maximum contaminant level**

**PID - Photoionization Detector**

**ppm - parts per million**

**mg/kg - milligrams per kilogram**

**mg/L - milligrams per liter**

**mmhos/cm - millimhos per centimeter**

**' - feet**

04-Dec-2024

Annette Garrigues
Williams Midstream
2717 County Road 215
Parachute, CO  81635

Re: **WP0188995** Work Order: **24110389**

Dear Annette,

ALS Environmental received 6 samples on 13-Nov-2024 09:45 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications.  Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 32.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070  FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

## ALS Group, USA

Date: 04-Dec-24

**Client:** Williams Midstream
**Project:** WP0188995
**Work Order:** **24110389**

# Work Order Sample Summary

| Lab Samp ID | Client Sample ID | Matrix | Tag Number | Collection Date | Date Received | Hold |
|---|---|---|---|---|---|---|
| 24110389-01 | FtL01 @ 3.5'-4.0' | Soil | | 11/12/2024 10:50 | 11/13/2024 09:45 | ☐ |
| 24110389-02 | FtL02 @ 3.5'-4.0' | Soil | | 11/12/2024 11:30 | 11/13/2024 09:45 | ☐ |
| 24110389-03 | FtL03 @ 3.5'-4.0' | Soil | | 11/12/2024 12:40 | 11/13/2024 09:45 | ☐ |
| 24110389-04 | FtL04 @ 3.5'-4.0' | Soil | | 11/12/2024 13:20 | 11/13/2024 09:45 | ☐ |
| 24110389-05 | FtL05 @ 3.5'-4.0' | Soil | | 11/12/2024 14:00 | 11/13/2024 09:45 | ☐ |
| 24110389-06 | FtL06 @ 3.5'-4.0' | Soil | | 11/12/2024 14:30 | 11/13/2024 09:45 | ☐ |

**Client:** Williams Midstream
**Project:** WP0188995
**Work Order:** 24110389

# Case Narrative

The attached "Sample Receipt Checklist" documents the date of receipt, status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. A copy of the laboratory's scope of accreditation is available upon request.

Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting.

Any flags on MS/MSD samples not addressed in this narrative are unrelated to samples in this report.

With the following exceptions, all sample analyses achieved analytical criteria.

Batch 249534, Method SW8015C, Sample 24110389-02C MSD: The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for the following analyte(s): ERO, surrogate 4-Terphenyl-d14.

**Client:** Williams Midstream
**Project:** WP0188995
**WorkOrder:** **24110389**

# QUALIFIERS, ACRONYMS, UNITS

| Qualifier | Description |
|---|---|
| * | Value exceeds Regulatory Limit |
| ** | Estimated Value |
| a | Analyte is non-accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| Hr | BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated. |
| J | Analyte is present at an estimated concentration between the MDL and Report Limit |
| n | Analyte accreditation is not offered |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL |
| X | Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level. |

| Acronym | Description |
|---|---|
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| LOD | Limit of Detection (see MDL) |
| LOQ | Limit of Quantitation (see PQL) |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PQL | Practical Quantitation Limit |
| RPD | Relative Percent Difference |
| TDL | Target Detection Limit |
| TNTC | Too Numerous To Count |
| A | APHA Standard Methods |
| D | ASTM |
| E | EPA |
| SW | SW-846 Update III |

| Units Reported | Description |
|---|---|
| % of sample | Percent of Sample |
| µg/Kg-dry | Micrograms per Kilogram Dry Weight |
| mg/Kg-dry | Milligrams per Kilogram Dry Weight |
| mg/L | Milligrams per Liter |
| mmhos/cm @25°C | Millimhos-Centimeter at 25 Degrees Celcius |
| none | |

# ALS Group, USA

**Date:** *04-Dec-24*

**Client:** Williams Midstream
**Project:** WP0188995
**Sample ID:** FtL01 @ 3.5'-4.0'
**Collection Date:** 11/12/2024 10:50 AM

**Work Order:** 24110389
**Lab ID:** 24110389-01
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DIESEL RANGE ORGANICS BY GC-FID** | | Method: **SW8015C** | | | Prep: SW3546 / 11/21/24 | | Analyst: **QNG** |
| **ERO (C10-C36)** | **29** | J | **7.4** | **56** | **mg/Kg-dry** | 1 | 11/21/2024 20:07 |
| *Surr: 4-Terphenyl-d14* | *30.2* | | | *10-131* | *%REC* | 1 | 11/21/2024 20:07 |
| **GASOLINE RANGE ORGANICS BY GC-FID** | | Method: **SW8015C** | | | Prep: SW5035A / 11/15/24 | | Analyst: **QNG** |
| GRO (C6-C10) | U | | 5,700 | 6,100 | µg/Kg-dry | 1 | 11/15/2024 18:35 |
| *Surr: Toluene-d8* | *92.8* | | | *75-120* | *%REC* | 1 | 11/15/2024 18:35 |
| **SOLUBLE CATIONS FOR SAR** | | Method: **SW6020B** | | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **STP** |
| **Calcium** | **150** | | **2.5** | **5.0** | **mg/L** | 10 | 12/2/2024 18:19 |
| **Magnesium** | **30** | | **0.50** | **2.0** | **mg/L** | 10 | 12/2/2024 18:19 |
| **Sodium** | **90** | | **1.8** | **2.0** | **mg/L** | 10 | 12/2/2024 18:19 |
| **HOT WATER SOLUBLE BORON BY ICP-MS** | | Method: **SW6020B** | | | Prep: EXTRACT / 11/25/24 | | Analyst: **STP** |
| **Boron (Hot Water Soluble)** | **0.86** | | **0.018** | **0.46** | **mg/Kg-dry** | 10 | 11/25/2024 21:44 |
| **SODIUM ADSORPTION RATIO** | | Method: **USDA H60 METHOD 20B** | | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **STP** |
| **Sodium Adsorption Ratio** | **1.7** | | **0.010** | **0.010** | **none** | 1 | 12/2/2024 |
| **POLYNUCLEAR AROMATIC HYDROCARBONS (SIM)** | | Method: **SW8270E** | | | Prep: SW3546 / 11/18/24 | | Analyst: **SMT** |
| 1-Methylnaphthalene | U | | 2.3 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| 2-Methylnaphthalene | U | | 2.6 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| Acenaphthene | U | | 4.3 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| Anthracene | U | | 2.0 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| Benzo(a)anthracene | U | | 8.1 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| Benzo(a)pyrene | U | | 7.6 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| Benzo(b)fluoranthene | U | | 6.7 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| Benzo(k)fluoranthene | U | | 1.7 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| Chrysene | U | | 7.4 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| Dibenzo(a,h)anthracene | U | | 6.5 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| Fluoranthene | U | | 5.6 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| Fluorene | U | | 2.8 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| Indeno(1,2,3-cd)pyrene | U | | 7.8 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| Naphthalene | U | | 2.1 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| Pyrene | U | | 7.1 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:14 |
| *Surr: 2-Fluorobiphenyl* | *93.6* | | | *44-132* | *%REC* | 1 | 11/19/2024 00:14 |
| *Surr: 4-Terphenyl-d14* | *86.5* | | | *35-133* | *%REC* | 1 | 11/19/2024 00:14 |
| *Surr: Nitrobenzene-d5* | *89.3* | | | *30-133* | *%REC* | 1 | 11/19/2024 00:14 |
| **VOLATILE ORGANIC COMPOUNDS - LOW LEVEL** | | Method: **SW8260D** | | | | | Analyst: **NTJ** |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Williams Midstream
**Project:** WP0188995
**Sample ID:** FtL01 @ 3.5'-4.0'
**Collection Date:** 11/12/2024 10:50 AM

**Work Order:** 24110389
**Lab ID:** 24110389-01
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | U | | 2.1 | 5.8 | µg/Kg-dry | 0.971 | 11/22/2024 01:30 |
| 1,3,5-Trimethylbenzene | U | | 1.8 | 5.8 | µg/Kg-dry | 0.971 | 11/22/2024 01:30 |
| Benzene | U | | 0.60 | 5.8 | µg/Kg-dry | 0.971 | 11/22/2024 01:30 |
| Ethylbenzene | U | | 1.0 | 5.8 | µg/Kg-dry | 0.971 | 11/22/2024 01:30 |
| m,p-Xylene | U | | 2.5 | 2.9 | µg/Kg-dry | 0.971 | 11/22/2024 01:30 |
| o-Xylene | U | | 1.4 | 2.9 | µg/Kg-dry | 0.971 | 11/22/2024 01:30 |
| Toluene | U | | 2.0 | 5.8 | µg/Kg-dry | 0.971 | 11/22/2024 01:30 |
| Xylenes, Total | U | | 2.5 | 5.8 | µg/Kg-dry | 0.971 | 11/22/2024 01:30 |
| *Surr: 1,2-Dichloroethane-d4* | *115* | | | *83-132* | *%REC* | 0.971 | 11/22/2024 01:30 |
| *Surr: 4-Bromofluorobenzene* | *101* | | | *83-111* | *%REC* | 0.971 | 11/22/2024 01:30 |
| *Surr: Dibromofluoromethane* | *105* | | | *77-125* | *%REC* | 0.971 | 11/22/2024 01:30 |
| *Surr: Toluene-d8* | *96.6* | | | *86-108* | *%REC* | 0.971 | 11/22/2024 01:30 |
| **ELECTRICAL CONDUCTIVITY (SAR)** | | Method: | **USDA H60 METHOD 20B** | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **JB** |
| **Electrical Conductivity @ Saturation** | **1.6** | | **0.011** | **0.10** | **mmhos/cm @25°C** | 20 | 12/4/2024 09:55 |
| **MOISTURE** | | Method: | **SW3550C** | | | | Analyst: **EVC** |
| **Moisture** | **16** | | **0.10** | **0.10** | **% of sample** | 1 | 11/16/2024 12:47 |
| **PH MEASURED IN SOIL PASTE** | | Method: | **USDA METHOD 20B** | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **JB** |
| **pH @ Saturation** | **9.46** | | **0.12** | **0.12** | **s.u.-dry** | 1 | 12/4/2024 09:25 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Williams Midstream
**Project:** WP0188995
**Sample ID:** FtL02 @ 3.5'-4.0'
**Collection Date:** 11/12/2024 11:30 AM

**Work Order:** 24110389
**Lab ID:** 24110389-02
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DIESEL RANGE ORGANICS BY GC-FID** | | Method: **SW8015C** | | | Prep: SW3546 / 11/21/24 | | Analyst: **QNG** |
| **ERO (C10-C36)** | **19** | J | **3.0** | **23** | **mg/Kg-dry** | 1 | 11/21/2024 20:30 |
| *Surr: 4-Terphenyl-d14* | *16.1* | | | *10-131* | *%REC* | 1 | 11/21/2024 20:30 |
| **GASOLINE RANGE ORGANICS BY GC-FID** | | Method: **SW8015C** | | | Prep: SW5035A / 11/15/24 | | Analyst: **QNG** |
| GRO (C6-C10) | U | | 5,900 | 6,300 | µg/Kg-dry | 1 | 11/15/2024 18:57 |
| *Surr: Toluene-d8* | *95.8* | | | *75-120* | *%REC* | 1 | 11/15/2024 18:57 |
| **SOLUBLE CATIONS FOR SAR** | | Method: **SW6020B** | | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **STP** |
| **Calcium** | **110** | | **2.5** | **5.0** | **mg/L** | 10 | 12/2/2024 18:21 |
| **Magnesium** | **24** | | **0.50** | **2.0** | **mg/L** | 10 | 12/2/2024 18:21 |
| **Sodium** | **29** | | **1.8** | **2.0** | **mg/L** | 10 | 12/2/2024 18:21 |
| **HOT WATER SOLUBLE BORON BY ICP-MS** | | Method: **SW6020B** | | | Prep: EXTRACT / 11/25/24 | | Analyst: **STP** |
| **Boron (Hot Water Soluble)** | **0.56** | | **0.018** | **0.45** | **mg/Kg-dry** | 10 | 11/25/2024 21:49 |
| **SODIUM ADSORPTION RATIO** | | Method: **USDA H60 METHOD 20B** | | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **STP** |
| **Sodium Adsorption Ratio** | **0.66** | | **0.010** | **0.010** | **none** | 1 | 12/2/2024 |
| **POLYNUCLEAR AROMATIC HYDROCARBONS (SIM)** | | Method: **SW8270E** | | | Prep: SW3546 / 11/18/24 | | Analyst: **SMT** |
| 1-Methylnaphthalene | U | | 2.3 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| 2-Methylnaphthalene | U | | 2.7 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| Acenaphthene | U | | 4.4 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| Anthracene | U | | 2.1 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| Benzo(a)anthracene | U | | 8.2 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| Benzo(a)pyrene | U | | 7.7 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| Benzo(b)fluoranthene | U | | 6.8 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| Benzo(k)fluoranthene | U | | 1.7 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| Chrysene | U | | 7.5 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| Dibenzo(a,h)anthracene | U | | 6.6 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| Fluoranthene | U | | 5.7 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| Fluorene | U | | 2.8 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| Indeno(1,2,3-cd)pyrene | U | | 7.8 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| Naphthalene | U | | 2.1 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| Pyrene | U | | 7.2 | 11 | µg/Kg-dry | 1 | 11/19/2024 00:30 |
| *Surr: 2-Fluorobiphenyl* | *94.7* | | | *44-132* | *%REC* | 1 | 11/19/2024 00:30 |
| *Surr: 4-Terphenyl-d14* | *95.3* | | | *35-133* | *%REC* | 1 | 11/19/2024 00:30 |
| *Surr: Nitrobenzene-d5* | *88.5* | | | *30-133* | *%REC* | 1 | 11/19/2024 00:30 |
| **VOLATILE ORGANIC COMPOUNDS - LOW LEVEL** | | Method: **SW8260D** | | | | | Analyst: **NTJ** |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Williams Midstream
**Project:** WP0188995
**Sample ID:** FtL02 @ 3.5'-4.0'
**Collection Date:** 11/12/2024 11:30 AM

**Work Order:** 24110389
**Lab ID:** 24110389-02
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | U | | 1.8 | 4.9 | µg/Kg-dry | 0.843 | 11/22/2024 01:46 |
| 1,3,5-Trimethylbenzene | U | | 1.6 | 4.9 | µg/Kg-dry | 0.843 | 11/22/2024 01:46 |
| Benzene | U | | 0.51 | 4.9 | µg/Kg-dry | 0.843 | 11/22/2024 01:46 |
| Ethylbenzene | U | | 0.85 | 4.9 | µg/Kg-dry | 0.843 | 11/22/2024 01:46 |
| m,p-Xylene | U | | 2.1 | 2.4 | µg/Kg-dry | 0.843 | 11/22/2024 01:46 |
| o-Xylene | U | | 1.2 | 2.4 | µg/Kg-dry | 0.843 | 11/22/2024 01:46 |
| Toluene | U | | 1.7 | 4.9 | µg/Kg-dry | 0.843 | 11/22/2024 01:46 |
| Xylenes, Total | U | | 2.1 | 4.9 | µg/Kg-dry | 0.843 | 11/22/2024 01:46 |
| *Surr: 1,2-Dichloroethane-d4* | *118* | | | *83-132* | *%REC* | 0.843 | 11/22/2024 01:46 |
| *Surr: 4-Bromofluorobenzene* | *100* | | | *83-111* | *%REC* | 0.843 | 11/22/2024 01:46 |
| *Surr: Dibromofluoromethane* | *108* | | | *77-125* | *%REC* | 0.843 | 11/22/2024 01:46 |
| *Surr: Toluene-d8* | *94.7* | | | *86-108* | *%REC* | 0.843 | 11/22/2024 01:46 |
| **ELECTRICAL CONDUCTIVITY (SAR)** | | Method: | **USDA H60 METHOD 20B** | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **JB** |
| **Electrical Conductivity @ Saturation** | **0.98** | | **0.011** | **0.10** | **mmhos/cm @25°C** | 20 | 12/4/2024 09:55 |
| **MOISTURE** | | Method: | **SW3550C** | | | | Analyst: **EVC** |
| **Moisture** | **14** | | **0.10** | **0.10** | **% of sample** | 1 | 11/16/2024 12:47 |
| **PH MEASURED IN SOIL PASTE** | | Method: | **USDA METHOD 20B** | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **JB** |
| **pH @ Saturation** | **8.73** | | **0.12** | **0.12** | **s.u.-dry** | 1 | 12/4/2024 09:25 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Williams Midstream
**Project:** WP0188995
**Sample ID:** FtL03 @ 3.5'-4.0'
**Collection Date:** 11/12/2024 12:40 PM

**Work Order:** 24110389
**Lab ID:** 24110389-03
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DIESEL RANGE ORGANICS BY GC-FID** | | Method: **SW8015C** | | | Prep: SW3546 / 11/21/24 | | Analyst: **QNG** |
| **ERO (C10-C36)** | **28** | | **3.1** | **24** | **mg/Kg-dry** | 1 | 11/21/2024 20:53 |
| *Surr: 4-Terphenyl-d14* | *24.2* | | | *10-131* | *%REC* | 1 | 11/21/2024 20:53 |
| **GASOLINE RANGE ORGANICS BY GC-FID** | | Method: **SW8015C** | | | Prep: SW5035A / 11/15/24 | | Analyst: **QNG** |
| GRO (C6-C10) | U | | 4,100 | 4,400 | µg/Kg-dry | 1 | 11/15/2024 19:19 |
| *Surr: Toluene-d8* | *96.6* | | | *75-120* | *%REC* | 1 | 11/15/2024 19:19 |
| **SOLUBLE CATIONS FOR SAR** | | Method: **SW6020B** | | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **STP** |
| **Calcium** | **110** | | **2.5** | **5.0** | **mg/L** | 10 | 12/2/2024 18:23 |
| **Magnesium** | **23** | | **0.50** | **2.0** | **mg/L** | 10 | 12/2/2024 18:23 |
| **Sodium** | **25** | | **1.8** | **2.0** | **mg/L** | 10 | 12/2/2024 18:23 |
| **HOT WATER SOLUBLE BORON BY ICP-MS** | | Method: **SW6020B** | | | Prep: EXTRACT / 11/25/24 | | Analyst: **STP** |
| **Boron (Hot Water Soluble)** | **0.62** | | **0.019** | **0.46** | **mg/Kg-dry** | 10 | 11/25/2024 21:51 |
| **SODIUM ADSORPTION RATIO** | | Method: **USDA H60 METHOD 20B** | | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **STP** |
| **Sodium Adsorption Ratio** | **0.56** | | **0.010** | **0.010** | **none** | 1 | 12/2/2024 |
| **POLYNUCLEAR AROMATIC HYDROCARBONS (SIM)** | | Method: **SW8270E** | | | Prep: SW3546 / 11/18/24 | | Analyst: **SMT** |
| 1-Methylnaphthalene | U | | 2.5 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| 2-Methylnaphthalene | U | | 2.9 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| Acenaphthene | U | | 4.7 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| Anthracene | U | | 2.2 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| Benzo(a)anthracene | U | | 8.8 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| Benzo(a)pyrene | U | | 8.3 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| Benzo(b)fluoranthene | U | | 7.4 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| Benzo(k)fluoranthene | U | | 1.8 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| Chrysene | U | | 8.1 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| Dibenzo(a,h)anthracene | U | | 7.1 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| Fluoranthene | U | | 6.1 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| Fluorene | U | | 3.0 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| Indeno(1,2,3-cd)pyrene | U | | 8.5 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| Naphthalene | U | | 2.3 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| Pyrene | U | | 7.8 | 12 | µg/Kg-dry | 1 | 11/19/2024 00:46 |
| *Surr: 2-Fluorobiphenyl* | *90.1* | | | *44-132* | *%REC* | 1 | 11/19/2024 00:46 |
| *Surr: 4-Terphenyl-d14* | *92.8* | | | *35-133* | *%REC* | 1 | 11/19/2024 00:46 |
| *Surr: Nitrobenzene-d5* | *87.4* | | | *30-133* | *%REC* | 1 | 11/19/2024 00:46 |
| **VOLATILE ORGANIC COMPOUNDS - LOW LEVEL** | | Method: **SW8260D** | | | | | Analyst: **NTJ** |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Williams Midstream
**Project:** WP0188995
**Sample ID:** FtL03 @ 3.5'-4.0'
**Collection Date:** 11/12/2024 12:40 PM

**Work Order:** 24110389
**Lab ID:** 24110389-03
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | U | | 1.7 | 4.6 | µg/Kg-dry | 0.775 | 11/22/2024 02:02 |
| 1,3,5-Trimethylbenzene | U | | 1.5 | 4.6 | µg/Kg-dry | 0.775 | 11/22/2024 02:02 |
| Benzene | U | | 0.48 | 4.6 | µg/Kg-dry | 0.775 | 11/22/2024 02:02 |
| Ethylbenzene | U | | 0.80 | 4.6 | µg/Kg-dry | 0.775 | 11/22/2024 02:02 |
| m,p-Xylene | U | | 2.0 | 2.3 | µg/Kg-dry | 0.775 | 11/22/2024 02:02 |
| o-Xylene | U | | 1.1 | 2.3 | µg/Kg-dry | 0.775 | 11/22/2024 02:02 |
| Toluene | U | | 1.6 | 4.6 | µg/Kg-dry | 0.775 | 11/22/2024 02:02 |
| Xylenes, Total | U | | 2.0 | 4.6 | µg/Kg-dry | 0.775 | 11/22/2024 02:02 |
| *Surr: 1,2-Dichloroethane-d4* | *112* | | | *83-132* | *%REC* | 0.775 | 11/22/2024 02:02 |
| *Surr: 4-Bromofluorobenzene* | *98.9* | | | *83-111* | *%REC* | 0.775 | 11/22/2024 02:02 |
| *Surr: Dibromofluoromethane* | *106* | | | *77-125* | *%REC* | 0.775 | 11/22/2024 02:02 |
| *Surr: Toluene-d8* | *96.1* | | | *86-108* | *%REC* | 0.775 | 11/22/2024 02:02 |
| **ELECTRICAL CONDUCTIVITY (SAR)** | | Method: | **USDA H60 METHOD 20B** | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **JB** |
| **Electrical Conductivity @ Saturation** | **1.0** | | **0.011** | **0.10** | **mmhos/cm @25°C** | 20 | 12/4/2024 09:55 |
| **MOISTURE** | | Method: | **SW3550C** | | | | Analyst: **EVC** |
| **Moisture** | **16** | | **0.10** | **0.10** | **% of sample** | 1 | 11/16/2024 12:47 |
| **PH MEASURED IN SOIL PASTE** | | Method: | **USDA METHOD 20B** | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **JB** |
| **pH @ Saturation** | **9.25** | | **0.12** | **0.12** | **s.u.-dry** | 1 | 12/4/2024 09:25 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Williams Midstream
**Project:** WP0188995
**Sample ID:** FtL04 @ 3.5'-4.0'
**Collection Date:** 11/12/2024 01:20 PM

**Work Order:** 24110389
**Lab ID:** 24110389-04
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DIESEL RANGE ORGANICS BY GC-FID** | | Method: **SW8015C** | | | Prep: SW3546 / 11/21/24 | | Analyst: **QNG** |
| **ERO (C10-C36)** | **25** | | **2.8** | **22** | **mg/Kg-dry** | 1 | 11/21/2024 21:16 |
| *Surr: 4-Terphenyl-d14* | *16.1* | | | *10-131* | *%REC* | 1 | 11/21/2024 21:16 |
| **GASOLINE RANGE ORGANICS BY GC-FID** | | Method: **SW8015C** | | | Prep: SW5035A / 11/15/24 | | Analyst: **QNG** |
| GRO (C6-C10) | U | | 5,400 | 5,800 | µg/Kg-dry | 1 | 11/15/2024 19:42 |
| *Surr: Toluene-d8* | *98.6* | | | *75-120* | *%REC* | 1 | 11/15/2024 19:42 |
| **SOLUBLE CATIONS FOR SAR** | | Method: **SW6020B** | | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **STP** |
| **Calcium** | **100** | | **2.5** | **5.0** | **mg/L** | 10 | 12/2/2024 18:24 |
| **Magnesium** | **23** | | **0.50** | **2.0** | **mg/L** | 10 | 12/2/2024 18:24 |
| **Sodium** | **24** | | **1.8** | **2.0** | **mg/L** | 10 | 12/2/2024 18:24 |
| **HOT WATER SOLUBLE BORON BY ICP-MS** | | Method: **SW6020B** | | | Prep: EXTRACT / 11/25/24 | | Analyst: **STP** |
| **Boron (Hot Water Soluble)** | **0.49** | | **0.018** | **0.44** | **mg/Kg-dry** | 10 | 11/25/2024 21:52 |
| **SODIUM ADSORPTION RATIO** | | Method: **USDA H60 METHOD 20B** | | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **STP** |
| **Sodium Adsorption Ratio** | **0.56** | | **0.010** | **0.010** | **none** | 1 | 12/2/2024 |
| **POLYNUCLEAR AROMATIC HYDROCARBONS (SIM)** | | Method: **SW8270E** | | | Prep: SW3546 / 11/18/24 | | Analyst: **SMT** |
| 1-Methylnaphthalene | U | | 2.3 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| 2-Methylnaphthalene | U | | 2.7 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| Acenaphthene | U | | 4.4 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| Anthracene | U | | 2.1 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| Benzo(a)anthracene | U | | 8.3 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| Benzo(a)pyrene | U | | 7.7 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| Benzo(b)fluoranthene | U | | 6.9 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| Benzo(k)fluoranthene | U | | 1.7 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| Chrysene | U | | 7.6 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| Dibenzo(a,h)anthracene | U | | 6.7 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| Fluoranthene | U | | 5.7 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| Fluorene | U | | 2.8 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| Indeno(1,2,3-cd)pyrene | U | | 7.9 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| Naphthalene | U | | 2.2 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| Pyrene | U | | 7.3 | 11 | µg/Kg-dry | 1 | 11/19/2024 01:02 |
| *Surr: 2-Fluorobiphenyl* | *94.7* | | | *44-132* | *%REC* | 1 | 11/19/2024 01:02 |
| *Surr: 4-Terphenyl-d14* | *105* | | | *35-133* | *%REC* | 1 | 11/19/2024 01:02 |
| *Surr: Nitrobenzene-d5* | *89.5* | | | *30-133* | *%REC* | 1 | 11/19/2024 01:02 |
| **VOLATILE ORGANIC COMPOUNDS - LOW LEVEL** | | Method: **SW8260D** | | | | | Analyst: **NTJ** |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Williams Midstream
**Project:** WP0188995
**Sample ID:** FtL04 @ 3.5'-4.0'
**Collection Date:** 11/12/2024 01:20 PM

**Work Order:** 24110389
**Lab ID:** 24110389-04
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | U | | 1.7 | 4.6 | µg/Kg-dry | 0.812 | 11/22/2024 02:18 |
| 1,3,5-Trimethylbenzene | U | | 1.5 | 4.6 | µg/Kg-dry | 0.812 | 11/22/2024 02:18 |
| Benzene | U | | 0.48 | 4.6 | µg/Kg-dry | 0.812 | 11/22/2024 02:18 |
| Ethylbenzene | U | | 0.80 | 4.6 | µg/Kg-dry | 0.812 | 11/22/2024 02:18 |
| m,p-Xylene | U | | 2.0 | 2.3 | µg/Kg-dry | 0.812 | 11/22/2024 02:18 |
| o-Xylene | U | | 1.1 | 2.3 | µg/Kg-dry | 0.812 | 11/22/2024 02:18 |
| Toluene | U | | 1.6 | 4.6 | µg/Kg-dry | 0.812 | 11/22/2024 02:18 |
| Xylenes, Total | U | | 2.0 | 4.6 | µg/Kg-dry | 0.812 | 11/22/2024 02:18 |
| *Surr: 1,2-Dichloroethane-d4* | *118* | | | *83-132* | *%REC* | 0.812 | 11/22/2024 02:18 |
| *Surr: 4-Bromofluorobenzene* | *99.7* | | | *83-111* | *%REC* | 0.812 | 11/22/2024 02:18 |
| *Surr: Dibromofluoromethane* | *108* | | | *77-125* | *%REC* | 0.812 | 11/22/2024 02:18 |
| *Surr: Toluene-d8* | *94.6* | | | *86-108* | *%REC* | 0.812 | 11/22/2024 02:18 |
| **ELECTRICAL CONDUCTIVITY (SAR)** | | Method: | **USDA H60 METHOD 20B** | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **JB** |
| **Electrical Conductivity @ Saturation** | **0.94** | | **0.011** | **0.10** | **mmhos/cm @25°C** | 20 | 12/4/2024 09:55 |
| **MOISTURE** | | Method: | **SW3550C** | | | | Analyst: **EVC** |
| **Moisture** | **12** | | **0.10** | **0.10** | **% of sample** | 1 | 11/16/2024 12:47 |
| **PH MEASURED IN SOIL PASTE** | | Method: | **USDA METHOD 20B** | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **JB** |
| **pH @ Saturation** | **8.81** | | **0.11** | **0.11** | **s.u.-dry** | 1 | 12/4/2024 09:25 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Williams Midstream
**Project:** WP0188995
**Sample ID:** FtL05 @ 3.5'-4.0'
**Collection Date:** 11/12/2024 02:00 PM

**Work Order:** 24110389
**Lab ID:** 24110389-05
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DIESEL RANGE ORGANICS BY GC-FID** | | Method: **SW8015C** | | | Prep: SW3546 / 11/21/24 | | Analyst: **QNG** |
| **ERO (C10-C36)** | **20** | J | **7.4** | **56** | **mg/Kg-dry** | 1 | 11/21/2024 23:12 |
| *Surr: 4-Terphenyl-d14* | *36.2* | | | *10-131* | *%REC* | 1 | 11/21/2024 23:12 |
| **GASOLINE RANGE ORGANICS BY GC-FID** | | Method: **SW8015C** | | | Prep: SW5035A / 11/15/24 | | Analyst: **QNG** |
| GRO (C6-C10) | U | | 5,500 | 5,900 | µg/Kg-dry | 1 | 11/15/2024 20:04 |
| *Surr: Toluene-d8* | *92.1* | | | *75-120* | *%REC* | 1 | 11/15/2024 20:04 |
| **SOLUBLE CATIONS FOR SAR** | | Method: **SW6020B** | | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **STP** |
| **Calcium** | **100** | | **2.5** | **5.0** | **mg/L** | 10 | 12/2/2024 18:26 |
| **Magnesium** | **22** | | **0.50** | **2.0** | **mg/L** | 10 | 12/2/2024 18:26 |
| **Sodium** | **19** | | **1.8** | **2.0** | **mg/L** | 10 | 12/2/2024 18:26 |
| **HOT WATER SOLUBLE BORON BY ICP-MS** | | Method: **SW6020B** | | | Prep: EXTRACT / 11/25/24 | | Analyst: **STP** |
| **Boron (Hot Water Soluble)** | **0.59** | | **0.019** | **0.47** | **mg/Kg-dry** | 10 | 11/25/2024 21:54 |
| **SODIUM ADSORPTION RATIO** | | Method: **USDA H60 METHOD 20B** | | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **STP** |
| **Sodium Adsorption Ratio** | **0.45** | | **0.010** | **0.010** | **none** | 1 | 12/2/2024 |
| **POLYNUCLEAR AROMATIC HYDROCARBONS (SIM)** | | Method: **SW8270E** | | | Prep: SW3546 / 11/18/24 | | Analyst: **SMT** |
| 1-Methylnaphthalene | U | | 2.5 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| 2-Methylnaphthalene | U | | 2.8 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| Acenaphthene | U | | 4.6 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| Anthracene | U | | 2.2 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| Benzo(a)anthracene | U | | 8.7 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| Benzo(a)pyrene | U | | 8.2 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| Benzo(b)fluoranthene | U | | 7.3 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| Benzo(k)fluoranthene | U | | 1.8 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| Chrysene | U | | 8.0 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| Dibenzo(a,h)anthracene | U | | 7.0 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| Fluoranthene | U | | 6.1 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| Fluorene | U | | 3.0 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| Indeno(1,2,3-cd)pyrene | U | | 8.4 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| Naphthalene | U | | 2.3 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| Pyrene | U | | 7.7 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:18 |
| *Surr: 2-Fluorobiphenyl* | *93.1* | | | *44-132* | *%REC* | 1 | 11/19/2024 01:18 |
| *Surr: 4-Terphenyl-d14* | *92.9* | | | *35-133* | *%REC* | 1 | 11/19/2024 01:18 |
| *Surr: Nitrobenzene-d5* | *87.5* | | | *30-133* | *%REC* | 1 | 11/19/2024 01:18 |
| **VOLATILE ORGANIC COMPOUNDS - LOW LEVEL** | | Method: **SW8260D** | | | | | Analyst: **NTJ** |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Williams Midstream
**Project:** WP0188995
**Sample ID:** FtL05 @ 3.5'-4.0'
**Collection Date:** 11/12/2024 02:00 PM

**Work Order:** 24110389
**Lab ID:** 24110389-05
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | U | | 1.5 | 4.2 | µg/Kg-dry | 0.715 | 11/22/2024 02:34 |
| 1,3,5-Trimethylbenzene | U | | 1.4 | 4.2 | µg/Kg-dry | 0.715 | 11/22/2024 02:34 |
| Benzene | U | | 0.44 | 4.2 | µg/Kg-dry | 0.715 | 11/22/2024 02:34 |
| Ethylbenzene | U | | 0.74 | 4.2 | µg/Kg-dry | 0.715 | 11/22/2024 02:34 |
| m,p-Xylene | U | | 1.9 | 2.1 | µg/Kg-dry | 0.715 | 11/22/2024 02:34 |
| o-Xylene | U | | 1.0 | 2.1 | µg/Kg-dry | 0.715 | 11/22/2024 02:34 |
| Toluene | U | | 1.5 | 4.2 | µg/Kg-dry | 0.715 | 11/22/2024 02:34 |
| Xylenes, Total | U | | 1.9 | 4.2 | µg/Kg-dry | 0.715 | 11/22/2024 02:34 |
| *Surr: 1,2-Dichloroethane-d4* | *111* | | | *83-132* | *%REC* | 0.715 | 11/22/2024 02:34 |
| *Surr: 4-Bromofluorobenzene* | *103* | | | *83-111* | *%REC* | 0.715 | 11/22/2024 02:34 |
| *Surr: Dibromofluoromethane* | *106* | | | *77-125* | *%REC* | 0.715 | 11/22/2024 02:34 |
| *Surr: Toluene-d8* | *97.1* | | | *86-108* | *%REC* | 0.715 | 11/22/2024 02:34 |
| **ELECTRICAL CONDUCTIVITY (SAR)** | | Method: | **USDA H60 METHOD 20B** | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **JB** |
| **Electrical Conductivity @ Saturation** | **0.90** | | **0.011** | **0.10** | **mmhos/cm @25°C** | 20 | 12/4/2024 09:55 |
| **MOISTURE** | | Method: | **SW3550C** | | | | Analyst: **EVC** |
| **Moisture** | **16** | | **0.10** | **0.10** | **% of sample** | 1 | 11/16/2024 12:47 |
| **PH MEASURED IN SOIL PASTE** | | Method: | **USDA METHOD 20B** | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **JB** |
| **pH @ Saturation** | **9.06** | | **0.12** | **0.12** | **s.u.-dry** | 1 | 12/4/2024 09:25 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Williams Midstream
**Project:** WP0188995
**Sample ID:** FtL06 @ 3.5'-4.0'
**Collection Date:** 11/12/2024 02:30 PM

**Work Order:** 24110389
**Lab ID:** 24110389-06
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DIESEL RANGE ORGANICS BY GC-FID** | | Method: **SW8015C** | | | Prep: SW3546 / 11/21/24 | | Analyst: **QNG** |
| **ERO (C10-C36)** | **26** | J | **7.4** | **56** | **mg/Kg-dry** | 1 | 11/21/2024 23:36 |
| *Surr: 4-Terphenyl-d14* | *34.2* | | | *10-131* | *%REC* | 1 | 11/21/2024 23:36 |
| **GASOLINE RANGE ORGANICS BY GC-FID** | | Method: **SW8015C** | | | Prep: SW5035A / 11/15/24 | | Analyst: **QNG** |
| GRO (C6-C10) | U | | 5,200 | 5,600 | µg/Kg-dry | 1 | 11/15/2024 20:26 |
| *Surr: Toluene-d8* | *97.6* | | | *75-120* | *%REC* | 1 | 11/15/2024 20:26 |
| **SOLUBLE CATIONS FOR SAR** | | Method: **SW6020B** | | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **STP** |
| **Calcium** | **88** | | **2.5** | **5.0** | **mg/L** | 10 | 12/2/2024 18:27 |
| **Magnesium** | **16** | | **0.50** | **2.0** | **mg/L** | 10 | 12/2/2024 18:27 |
| **Sodium** | **34** | | **1.8** | **2.0** | **mg/L** | 10 | 12/2/2024 18:27 |
| **HOT WATER SOLUBLE BORON BY ICP-MS** | | Method: **SW6020B** | | | Prep: EXTRACT / 11/25/24 | | Analyst: **STP** |
| **Boron (Hot Water Soluble)** | **0.71** | | **0.018** | **0.46** | **mg/Kg-dry** | 10 | 11/25/2024 21:56 |
| **SODIUM ADSORPTION RATIO** | | Method: **USDA H60 METHOD 20B** | | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **STP** |
| **Sodium Adsorption Ratio** | **0.88** | | **0.010** | **0.010** | **none** | 1 | 12/2/2024 |
| **POLYNUCLEAR AROMATIC HYDROCARBONS (SIM)** | | Method: **SW8270E** | | | Prep: SW3546 / 11/18/24 | | Analyst: **SMT** |
| 1-Methylnaphthalene | U | | 2.5 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| 2-Methylnaphthalene | U | | 2.8 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| Acenaphthene | U | | 4.6 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| Anthracene | U | | 2.2 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| Benzo(a)anthracene | U | | 8.7 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| Benzo(a)pyrene | U | | 8.1 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| Benzo(b)fluoranthene | U | | 7.2 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| Benzo(k)fluoranthene | U | | 1.8 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| Chrysene | U | | 7.9 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| Dibenzo(a,h)anthracene | U | | 7.0 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| Fluoranthene | U | | 6.0 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| Fluorene | U | | 3.0 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| Indeno(1,2,3-cd)pyrene | U | | 8.3 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| Naphthalene | U | | 2.3 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| Pyrene | U | | 7.7 | 12 | µg/Kg-dry | 1 | 11/19/2024 01:34 |
| *Surr: 2-Fluorobiphenyl* | *92.1* | | | *44-132* | *%REC* | 1 | 11/19/2024 01:34 |
| *Surr: 4-Terphenyl-d14* | *92.0* | | | *35-133* | *%REC* | 1 | 11/19/2024 01:34 |
| *Surr: Nitrobenzene-d5* | *88.1* | | | *30-133* | *%REC* | 1 | 11/19/2024 01:34 |
| **VOLATILE ORGANIC COMPOUNDS - LOW LEVEL** | | Method: **SW8260D** | | | | | Analyst: **NTJ** |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Williams Midstream
**Project:** WP0188995
**Sample ID:** FtL06 @ 3.5'-4.0'
**Collection Date:** 11/12/2024 02:30 PM

**Work Order:** 24110389
**Lab ID:** 24110389-06
**Matrix:** SOIL

| Analyses | Result | Qual | MDL | Report Limit | Units | Dilution Factor | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | U | | 1.6 | 4.5 | µg/Kg-dry | 0.762 | 11/22/2024 02:51 |
| 1,3,5-Trimethylbenzene | U | | 1.4 | 4.5 | µg/Kg-dry | 0.762 | 11/22/2024 02:51 |
| Benzene | U | | 0.46 | 4.5 | µg/Kg-dry | 0.762 | 11/22/2024 02:51 |
| Ethylbenzene | U | | 0.78 | 4.5 | µg/Kg-dry | 0.762 | 11/22/2024 02:51 |
| m,p-Xylene | U | | 2.0 | 2.2 | µg/Kg-dry | 0.762 | 11/22/2024 02:51 |
| o-Xylene | U | | 1.1 | 2.2 | µg/Kg-dry | 0.762 | 11/22/2024 02:51 |
| Toluene | U | | 1.6 | 4.5 | µg/Kg-dry | 0.762 | 11/22/2024 02:51 |
| Xylenes, Total | U | | 2.0 | 4.5 | µg/Kg-dry | 0.762 | 11/22/2024 02:51 |
| *Surr: 1,2-Dichloroethane-d4* | *118* | | | *83-132* | *%REC* | 0.762 | 11/22/2024 02:51 |
| *Surr: 4-Bromofluorobenzene* | *102* | | | *83-111* | *%REC* | 0.762 | 11/22/2024 02:51 |
| *Surr: Dibromofluoromethane* | *109* | | | *77-125* | *%REC* | 0.762 | 11/22/2024 02:51 |
| *Surr: Toluene-d8* | *94.2* | | | *86-108* | *%REC* | 0.762 | 11/22/2024 02:51 |
| **ELECTRICAL CONDUCTIVITY (SAR)** | | Method: | **USDA H60 METHOD 20B** | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **JB** |
| **Electrical Conductivity @ Saturation** | **0.79** | | **0.011** | **0.10** | **mmhos/cm @25°C** | 20 | 12/4/2024 09:55 |
| **MOISTURE** | | Method: | **SW3550C** | | | | Analyst: **EVC** |
| **Moisture** | **15** | | **0.10** | **0.10** | **% of sample** | 1 | 11/16/2024 12:47 |
| **PH MEASURED IN SOIL PASTE** | | Method: | **USDA METHOD 20B** | | Prep: USDA Method 20B / 12/2/24 | | Analyst: **JB** |
| **pH @ Saturation** | **8.84** | | **0.12** | **0.12** | **s.u.-dry** | 1 | 12/4/2024 09:25 |

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 04-Dec-24

**Client:** Williams Midstream

**Work Order:** 24110389

**Project:** WP0188995

# QC BATCH REPORT

Batch ID: **249534** Instrument ID **GC15** Method: **SW8015C**

**MBLK** Sample ID: **MBLK-249534-249534** Units: **mg/Kg** Analysis Date: **11/25/2024 04:46 PM**

Client ID: Run ID: **GC15_241125A** SeqNo: **11277505** Prep Date: **11/21/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| ERO (C10-C36) | U | 20 | | | | | | | | |
| *Surr: 4-Terphenyl-d14* | *0.4833* | 0 | *0.828* | 0 | *58.4* | *10-131* | 0 | | | |

**LCS** Sample ID: **LCS-249534-249534** Units: **mg/Kg** Analysis Date: **11/21/2024 07:20 PM**

Client ID: Run ID: **GC8_241121B** SeqNo: **11270974** Prep Date: **11/21/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| ERO (C10-C36) | 683 | 20 | 833 | 0 | 82 | 54-114 | 0 | | | |
| *Surr: 4-Terphenyl-d14* | *0.7* | 0 | *0.828* | 0 | *84.5* | *10-131* | 0 | | | |

**MS** Sample ID: **24110389-02C MS** Units: **mg/Kg** Analysis Date: **11/21/2024 09:40 PM**

Client ID: **FtL02 @ 3.5'-4.0'** Run ID: **GC8_241121B** SeqNo: **11270980** Prep Date: **11/21/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| ERO (C10-C36) | 504.1 | 20 | 816.3 | 16.76 | 59.7 | 54-114 | 0 | | | |
| *Surr: 4-Terphenyl-d14* | *0.3593* | 0 | *0.8114* | 0 | *44.3* | *10-131* | 0 | | | |

**MSD** Sample ID: **24110389-02C MSD** Units: **mg/Kg** Analysis Date: **11/21/2024 10:03 PM**

Client ID: **FtL02 @ 3.5'-4.0'** Run ID: **GC8_241121B** SeqNo: **11270981** Prep Date: **11/21/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| ERO (C10-C36) | 54.44 | 19 | 806.2 | 16.76 | 4.67 | 54-114 | 504.1 | 161 | 30 | SR |
| *Surr: 4-Terphenyl-d14* | *0.04839* | 0 | *0.8014* | 0 | *6.04* | *10-131* | 0.3593 | *153* | *30* | *SR* |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 24110389-01C | 24110389-02C | 24110389-03C |
| 24110389-04C | 24110389-05C | 24110389-06C |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Williams Midstream
**Work Order:** 24110389
**Project:** WP0188995

# QC BATCH REPORT

Batch ID: **249329** Instrument ID **GC9** Method: **SW8015C**

**MBLK** Sample ID: **MBLK-249329-249329** Units: **µg/Kg-dry** Analysis Date: **11/15/2024 06:13 PM**
Client ID: Run ID: **GC9_241115A** SeqNo: **11261497** Prep Date: **11/15/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| GRO (C6-C10) | U | 5,000 | 0 | 0 | 0 | | 0 | | | |
| *Surr: Toluene-d8* | *4664* | 0 | *5000* | 0 | *93.3* | *75-120* | 0 | | | |

**LCS** Sample ID: **LCS-249329-249329** Units: **µg/Kg-dry** Analysis Date: **11/15/2024 05:29 PM**
Client ID: Run ID: **GC9_241115A** SeqNo: **11261496** Prep Date: **11/15/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| GRO (C6-C10) | 233900 | 5,000 | 250000 | 0 | 93.6 | 63-126 | 0 | | | |
| *Surr: Toluene-d8* | *5014* | 0 | *5000* | 0 | *100* | *75-120* | 0 | | | |

**MS** Sample ID: **24110389-02A MS** Units: **µg/Kg-dry** Analysis Date: **11/15/2024 08:48 PM**
Client ID: **FtL02 @ 3.5'-4.0'** Run ID: **GC9_241115A** SeqNo: **11261504** Prep Date: **11/15/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| GRO (C6-C10) | 341700 | 6,300 | 316000 | 0 | 108 | 63-126 | 0 | | | |
| *Surr: Toluene-d8* | *6699* | 0 | *6320* | 0 | *106* | *75-120* | 0 | | | |

**MSD** Sample ID: **24110389-02A MSD** Units: **µg/Kg-dry** Analysis Date: **11/15/2024 09:10 PM**
Client ID: **FtL02 @ 3.5'-4.0'** Run ID: **GC9_241115A** SeqNo: **11261505** Prep Date: **11/15/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| GRO (C6-C10) | 343100 | 6,300 | 316000 | 0 | 109 | 63-126 | 0 | 0 | 30 | |
| *Surr: Toluene-d8* | *6582* | 0 | *6320* | 0 | *104* | *75-120* | 0 | *0* | *30* | |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 24110389-01A | 24110389-02A | 24110389-03A |
| 24110389-04A | 24110389-05A | 24110389-06A |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Williams Midstream
**Work Order:** 24110389
**Project:** WP0188995

# QC BATCH REPORT

Batch ID: **249734** Instrument ID **ICPMS3** Method: **SW6020B**

**MBLK** Sample ID: **MBLK-249734-249734** Units: **mg/Kg** Analysis Date: **11/25/2024 09:40 PM**
Client ID: Run ID: **ICPMS3_241125B** SeqNo: **11277678** Prep Date: **11/25/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Boron (Hot Water Soluble) | 0.00638 | 0.040 | | | | | | | | J |

**LCS** Sample ID: **LCS-249734-249734** Units: **mg/Kg** Analysis Date: **11/25/2024 09:42 PM**
Client ID: Run ID: **ICPMS3_241125B** SeqNo: **11277679** Prep Date: **11/25/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Boron (Hot Water Soluble) | 0.8874 | 0.040 | 1 | 0 | 88.7 | 80-120 | 0 | | | |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 24110389-01C | 24110389-02C | 24110389-03C |
| 24110389-04C | 24110389-05C | 24110389-06C |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Williams Midstream
**Work Order:** 24110389
**Project:** WP0188995

# QC BATCH REPORT

Batch ID: **249887** Instrument ID **ICPMS3** Method: **SW6020B**

**DUP** Sample ID: **24110502-02ADUP** Units: **mg/L** Analysis Date: **12/2/2024 06:33 PM**
Client ID: Run ID: **ICPMS3_241202A** SeqNo: **11287305** Prep Date: **12/2/2024** DF: **10**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 261.3 | 5.0 | 0 | 0 | 0 | 0-0 | 513.1 | 65 | | |
| Magnesium | 118.3 | 2.0 | 0 | 0 | 0 | 0-0 | 235.8 | 66.4 | | |
| Sodium | 43.84 | 2.0 | 0 | 0 | 0 | 0-0 | 83.68 | 62.5 | | |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 24110389-01D | 24110389-02D | 24110389-03D |
| 24110389-04D | 24110389-05D | 24110389-06D |

Batch ID: **249887** Instrument ID **SAR** Method: **USDA H60 Metho**

**DUP** Sample ID: **24110502-02ADUP** Units: **none** Analysis Date: **12/2/2024**
Client ID: Run ID: **SAR_241202A** SeqNo: **11287370** Prep Date: **12/2/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Sodium Adsorption Ratio | 0.5651 | 0.010 | 0 | 0 | 0 | | 0.7673 | 30.3 | 50 | |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 24110389-01D | 24110389-02D | 24110389-03D |
| 24110389-04D | 24110389-05D | 24110389-06D |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Williams Midstream
**Work Order:** 24110389
**Project:** WP0188995

# QC BATCH REPORT

Batch ID: **249365** Instrument ID **SVMS6** Method: **SW8270E**

**MBLK** Sample ID: **MBLK-249365-249365** Units: **µg/Kg** Analysis Date: **11/18/2024 04:13 PM**
Client ID: Run ID: **SVMS6_241118A** SeqNo: **11262296** Prep Date: **11/18/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | U | 4.2 | | | | | | | | |
| 2-Methylnaphthalene | U | 4.2 | | | | | | | | |
| Acenaphthene | U | 4.2 | | | | | | | | |
| Anthracene | U | 4.2 | | | | | | | | |
| Benzo(a)anthracene | U | 4.2 | | | | | | | | |
| Benzo(a)pyrene | U | 4.2 | | | | | | | | |
| Benzo(b)fluoranthene | U | 4.2 | | | | | | | | |
| Benzo(k)fluoranthene | U | 4.2 | | | | | | | | |
| Chrysene | U | 4.2 | | | | | | | | |
| Dibenzo(a,h)anthracene | U | 4.2 | | | | | | | | |
| Fluoranthene | U | 4.2 | | | | | | | | |
| Fluorene | U | 4.2 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | U | 4.2 | | | | | | | | |
| Naphthalene | U | 4.2 | | | | | | | | |
| Pyrene | U | 4.2 | | | | | | | | |
| *Surr: 2-Fluorobiphenyl* | *594.6* | 0 | *666.6* | 0 | *89.2* | *44-132* | 0 | | | |
| *Surr: 4-Terphenyl-d14* | *626* | 0 | *666.6* | 0 | *93.9* | *35-133* | 0 | | | |
| *Surr: Nitrobenzene-d5* | *570.4* | 0 | *666.6* | 0 | *85.6* | *30-133* | 0 | | | |

**LCS** Sample ID: **LCS-249365-249365** Units: **µg/Kg** Analysis Date: **11/18/2024 04:29 PM**
Client ID: Run ID: **SVMS6_241118A** SeqNo: **11262297** Prep Date: **11/18/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 580.4 | 4.2 | 666.6 | 0 | 87.1 | 39-165 | 0 | | | |
| 2-Methylnaphthalene | 581.5 | 4.2 | 666.6 | 0 | 87.2 | 32-158 | 0 | | | |
| Acenaphthene | 598.9 | 4.2 | 666.6 | 0 | 89.8 | 42-155 | 0 | | | |
| Anthracene | 452.3 | 4.2 | 666.6 | 0 | 67.8 | 41-155 | 0 | | | |
| Benzo(a)anthracene | 568.2 | 4.2 | 666.6 | 0 | 85.2 | 39-155 | 0 | | | |
| Benzo(a)pyrene | 601.3 | 4.2 | 666.6 | 0 | 90.2 | 36-158 | 0 | | | |
| Benzo(b)fluoranthene | 586.2 | 4.2 | 666.6 | 0 | 87.9 | 36-146 | 0 | | | |
| Benzo(k)fluoranthene | 599.6 | 4.2 | 666.6 | 0 | 89.9 | 36-150 | 0 | | | |
| Chrysene | 549.1 | 4.2 | 666.6 | 0 | 82.4 | 41-162 | 0 | | | |
| Dibenzo(a,h)anthracene | 551.8 | 4.2 | 666.6 | 0 | 82.8 | 27-167 | 0 | | | |
| Fluoranthene | 489.8 | 4.2 | 666.6 | 0 | 73.5 | 39-156 | 0 | | | |
| Fluorene | 577.6 | 4.2 | 666.6 | 0 | 86.7 | 37-153 | 0 | | | |
| Indeno(1,2,3-cd)pyrene | 590.1 | 4.2 | 666.6 | 0 | 88.5 | 24-171 | 0 | | | |
| Naphthalene | 560.1 | 4.2 | 666.6 | 0 | 84 | 43-156 | 0 | | | |
| Pyrene | 556.8 | 4.2 | 666.6 | 0 | 83.5 | 32-147 | 0 | | | |
| *Surr: 2-Fluorobiphenyl* | *551.4* | 0 | *666.6* | 0 | *82.7* | *44-132* | 0 | | | |
| *Surr: 4-Terphenyl-d14* | *601.1* | 0 | *666.6* | 0 | *90.2* | *35-133* | 0 | | | |
| *Surr: Nitrobenzene-d5* | *490.8* | 0 | *666.6* | 0 | *73.6* | *30-133* | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Williams Midstream
**Work Order:** 24110389
**Project:** WP0188995

# QC BATCH REPORT

Batch ID: **249365** Instrument ID **SVMS6** Method: **SW8270E**

**MS** Sample ID: **24110343-06A MS** Units: **µg/Kg** Analysis Date: **11/18/2024 09:34 PM**

Client ID: Run ID: **SVMS6_241118A** SeqNo: **11262298** Prep Date: **11/18/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 3337 | 19 | 3056 | 0 | 109 | 39-165 | 0 | | | |
| 2-Methylnaphthalene | 3434 | 19 | 3056 | 9.582 | 112 | 32-158 | 0 | | | |
| Acenaphthene | 3141 | 19 | 3056 | 0 | 103 | 42-155 | 0 | | | |
| Anthracene | 2580 | 19 | 3056 | 0 | 84.4 | 41-155 | 0 | | | |
| Benzo(a)anthracene | 3294 | 19 | 3056 | 0 | 108 | 39-155 | 0 | | | |
| Benzo(a)pyrene | 3761 | 19 | 3056 | 0 | 123 | 36-158 | 0 | | | |
| Benzo(b)fluoranthene | 3704 | 19 | 3056 | 0 | 121 | 36-146 | 0 | | | |
| Benzo(k)fluoranthene | 3778 | 19 | 3056 | 0 | 124 | 36-150 | 0 | | | |
| Chrysene | 3251 | 19 | 3056 | 0 | 106 | 41-162 | 0 | | | |
| Dibenzo(a,h)anthracene | 3076 | 19 | 3056 | 0 | 101 | 27-167 | 0 | | | |
| Fluoranthene | 2975 | 19 | 3056 | 0 | 97.4 | 39-156 | 0 | | | |
| Fluorene | 3037 | 19 | 3056 | 0 | 99.4 | 37-153 | 0 | | | |
| Indeno(1,2,3-cd)pyrene | 3245 | 19 | 3056 | 0 | 106 | 24-171 | 0 | | | |
| Naphthalene | 3331 | 19 | 3056 | 0 | 109 | 43-156 | 0 | | | |
| Pyrene | 3230 | 19 | 3056 | 0 | 106 | 32-147 | 0 | | | |
| *Surr: 2-Fluorobiphenyl* | *3125* | 0 | *3056* | 0 | *102* | *44-132* | 0 | | | |
| *Surr: 4-Terphenyl-d14* | *3225* | 0 | *3056* | 0 | *106* | *35-133* | 0 | | | |
| *Surr: Nitrobenzene-d5* | *2826* | 0 | *3056* | 0 | *92.5* | *30-133* | 0 | | | |

**MSD** Sample ID: **24110343-06A MSD** Units: **µg/Kg** Analysis Date: **11/18/2024 09:50 PM**

Client ID: Run ID: **SVMS6_241118A** SeqNo: **11262299** Prep Date: **11/18/2024** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 3208 | 19 | 3057 | 0 | 105 | 39-165 | 3337 | 3.95 | 30 | |
| 2-Methylnaphthalene | 3176 | 19 | 3057 | 9.582 | 104 | 32-158 | 3434 | 7.82 | 30 | |
| Acenaphthene | 3058 | 19 | 3057 | 0 | 100 | 42-155 | 3141 | 2.69 | 30 | |
| Anthracene | 2471 | 19 | 3057 | 0 | 80.8 | 41-155 | 2580 | 4.35 | 30 | |
| Benzo(a)anthracene | 3116 | 19 | 3057 | 0 | 102 | 39-155 | 3294 | 5.54 | 30 | |
| Benzo(a)pyrene | 3350 | 19 | 3057 | 0 | 110 | 36-158 | 3761 | 11.6 | 30 | |
| Benzo(b)fluoranthene | 3219 | 19 | 3057 | 0 | 105 | 36-146 | 3704 | 14 | 30 | |
| Benzo(k)fluoranthene | 3394 | 19 | 3057 | 0 | 111 | 36-150 | 3778 | 10.7 | 30 | |
| Chrysene | 3019 | 19 | 3057 | 0 | 98.7 | 41-162 | 3251 | 7.4 | 30 | |
| Dibenzo(a,h)anthracene | 3082 | 19 | 3057 | 0 | 101 | 27-167 | 3076 | 0.182 | 30 | |
| Fluoranthene | 2637 | 19 | 3057 | 0 | 86.3 | 39-156 | 2975 | 12 | 30 | |
| Fluorene | 3198 | 19 | 3057 | 0 | 105 | 37-153 | 3037 | 5.18 | 30 | |
| Indeno(1,2,3-cd)pyrene | 3260 | 19 | 3057 | 0 | 107 | 24-171 | 3245 | 0.472 | 30 | |
| Naphthalene | 3368 | 19 | 3057 | 0 | 110 | 43-156 | 3331 | 1.11 | 30 | |
| Pyrene | 3065 | 19 | 3057 | 0 | 100 | 32-147 | 3230 | 5.24 | 30 | |
| *Surr: 2-Fluorobiphenyl* | *3034* | 0 | *3057* | 0 | *99.2* | *44-132* | 3125 | *2.95* | *30* | |
| *Surr: 4-Terphenyl-d14* | *3182* | 0 | *3057* | 0 | *104* | *35-133* | 3225 | *1.35* | *30* | |
| *Surr: Nitrobenzene-d5* | *2746* | 0 | *3057* | 0 | *89.8* | *30-133* | 2826 | *2.86* | *30* | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Williams Midstream
**Work Order:** 24110389
**Project:** WP0188995

# QC BATCH REPORT

Batch ID: **249365** Instrument ID **SVMS6** Method: **SW8270E**

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 24110389-01C | 24110389-02C | 24110389-03C |
| 24110389-04C | 24110389-05C | 24110389-06C |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Williams Midstream
**Work Order:** 24110389
**Project:** WP0188995

# QC BATCH REPORT

Batch ID: **R415148a** Instrument ID **VMS9** Method: **SW8260D**

**MBLK** Sample ID: **9V-BLKS1-241121-R415148a** Units: **µg/Kg** Analysis Date: **11/21/2024 10:33 PM**
Client ID: Run ID: **VMS9_241121A** SeqNo: **11270392** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | U | 5.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | U | 5.0 | | | | | | | | |
| Benzene | U | 5.0 | | | | | | | | |
| Ethylbenzene | U | 5.0 | | | | | | | | |
| m,p-Xylene | U | 2.5 | | | | | | | | |
| o-Xylene | U | 2.5 | | | | | | | | |
| Toluene | U | 5.0 | | | | | | | | |
| Xylenes, Total | U | 5.0 | | | | | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *19.81* | 0 | *20* | 0 | *99* | *83-132* | 0 | | | |
| *Surr: 4-Bromofluorobenzene* | *18.92* | 0 | *20* | 0 | *94.6* | *83-111* | 0 | | | |
| *Surr: Dibromofluoromethane* | *19.86* | 0 | *20* | 0 | *99.3* | *77-125* | 0 | | | |
| *Surr: Toluene-d8* | *19.33* | 0 | *20* | 0 | *96.6* | *86-108* | 0 | | | |

**MBLK** Sample ID: **9V-BLKS1-241121-R415148a** Units: **µg/Kg** Analysis Date: **11/21/2024 10:33 PM**
Client ID: Run ID: **VMS9_241121A** SeqNo: **11270421** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | U | 5.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | U | 5.0 | | | | | | | | |
| Benzene | U | 5.0 | | | | | | | | |
| Ethylbenzene | U | 5.0 | | | | | | | | |
| m,p-Xylene | U | 2.5 | | | | | | | | |
| o-Xylene | U | 2.5 | | | | | | | | |
| Toluene | U | 5.0 | | | | | | | | |
| Xylenes, Total | U | 5.0 | | | | | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *19.81* | 0 | *20* | 0 | *99* | *70-130* | 0 | | | |
| *Surr: 4-Bromofluorobenzene* | *18.92* | 0 | *20* | 0 | *94.6* | *70-130* | 0 | | | |
| *Surr: Dibromofluoromethane* | *19.86* | 0 | *20* | 0 | *99.3* | *70-130* | 0 | | | |
| *Surr: Toluene-d8* | *19.33* | 0 | *20* | 0 | *96.6* | *70-130* | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Williams Midstream
**Work Order:** 24110389
**Project:** WP0188995

# QC BATCH REPORT

Batch ID: **R415148a** Instrument ID **VMS9** Method: **SW8260D**

| LCS | Sample ID: **9V-LCSS1-241121-R415148a** | | | | Units: **µg/Kg** | | | Analysis Date: **11/21/2024 09:29 PM** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | | Run ID: **VMS9_241121A** | | | SeqNo: **11270389** | | Prep Date: | | DF: **1** | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| 1,2,4-Trimethylbenzene | 18.38 | 5.0 | 20 | 0 | 91.9 | 71-133 | 0 | | | |
| 1,3,5-Trimethylbenzene | 19.38 | 5.0 | 20 | 0 | 96.9 | 71-139 | 0 | | | |
| Benzene | 18.98 | 5.0 | 20 | 0 | 94.9 | 77-133 | 0 | | | |
| Ethylbenzene | 18.26 | 5.0 | 20 | 0 | 91.3 | 75-133 | 0 | | | |
| m,p-Xylene | 37.99 | 2.5 | 40 | 0 | 95 | 75-134 | 0 | | | |
| o-Xylene | 18.55 | 2.5 | 20 | 0 | 92.8 | 76-130 | 0 | | | |
| Toluene | 18.83 | 5.0 | 20 | 0 | 94.2 | 76-130 | 0 | | | |
| Xylenes, Total | 56.54 | 5.0 | 60 | 0 | 94.2 | 75-132 | 0 | | | |
| *Surr: 1,2-Dichloroethane-d4* | *20.06* | 0 | *20* | 0 | *100* | *83-132* | 0 | | | |
| *Surr: 4-Bromofluorobenzene* | *20.69* | 0 | *20* | 0 | *103* | *83-111* | 0 | | | |
| *Surr: Dibromofluoromethane* | *19.9* | 0 | *20* | 0 | *99.5* | *77-125* | 0 | | | |
| *Surr: Toluene-d8* | *20.46* | 0 | *20* | 0 | *102* | *86-108* | 0 | | | |

| LCS | Sample ID: **9V-LCSS1-241121-R415148a** | | | | Units: **µg/Kg** | | | Analysis Date: **11/21/2024 09:29 PM** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | | Run ID: **VMS9_241121A** | | | SeqNo: **11270418** | | Prep Date: | | DF: **1** | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| 1,2,4-Trimethylbenzene | 18.38 | 5.0 | 20 | 0 | 91.9 | 65-135 | 0 | | | |
| 1,3,5-Trimethylbenzene | 19.38 | 5.0 | 20 | 0 | 96.9 | 65-135 | 0 | | | |
| Benzene | 18.98 | 5.0 | 20 | 0 | 94.9 | 75-125 | 0 | | | |
| Ethylbenzene | 18.26 | 5.0 | 20 | 0 | 91.3 | 75-125 | 0 | | | |
| m,p-Xylene | 37.99 | 2.5 | 40 | 0 | 95 | 80-125 | 0 | | | |
| o-Xylene | 18.55 | 2.5 | 20 | 0 | 92.8 | 75-125 | 0 | | | |
| Toluene | 18.83 | 5.0 | 20 | 0 | 94.2 | 70-125 | 0 | | | |
| *Surr: 1,2-Dichloroethane-d4* | *20.06* | 0 | *20* | 0 | *100* | *70-130* | 0 | | | |
| *Surr: 4-Bromofluorobenzene* | *20.69* | 0 | *20* | 0 | *103* | *70-130* | 0 | | | |
| *Surr: Dibromofluoromethane* | *19.9* | 0 | *20* | 0 | *99.5* | *70-130* | 0 | | | |
| *Surr: Toluene-d8* | *20.46* | 0 | *20* | 0 | *102* | *70-130* | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Williams Midstream
**Work Order:** 24110389
**Project:** WP0188995

# QC BATCH REPORT

Batch ID: **R415148a** Instrument ID **VMS9** Method: **SW8260D**

**MS** Sample ID: **24110318-01A MS** Units: **µg/Kg** Analysis Date: **11/22/2024 04:11 AM**
Client ID: Run ID: **VMS9_241121A** SeqNo: **11270413** Prep Date: DF: **0.998**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | 10.78 | 5.0 | 19.96 | 0 | 54 | 71-133 | 0 | | | S |
| 1,3,5-Trimethylbenzene | 13.34 | 5.0 | 19.96 | 0 | 66.9 | 71-139 | 0 | | | S |
| Benzene | 17.23 | 5.0 | 19.96 | 0.4035 | 84.3 | 77-133 | 0 | | | |
| Ethylbenzene | 14.42 | 5.0 | 19.96 | 0.3492 | 70.5 | 75-133 | 0 | | | S |
| m,p-Xylene | 27.95 | 2.5 | 39.92 | 0.3337 | 69.2 | 75-134 | 0 | | | S |
| o-Xylene | 14.26 | 2.5 | 19.96 | 0 | 71.4 | 76-130 | 0 | | | S |
| Toluene | 15.84 | 5.0 | 19.96 | 0.9079 | 74.8 | 76-130 | 0 | | | S |
| Xylenes, Total | 42.22 | 5.0 | 59.88 | 0 | 70.5 | 75-132 | 0 | | | S |
| *Surr: 1,2-Dichloroethane-d4* | *21.7* | 0 | *19.96* | 0 | *109* | *83-132* | 0 | | | |
| *Surr: 4-Bromofluorobenzene* | *21.44* | 0 | *19.96* | 0 | *107* | *83-111* | 0 | | | |
| *Surr: Dibromofluoromethane* | *21.01* | 0 | *19.96* | 0 | *105* | *77-125* | 0 | | | |
| *Surr: Toluene-d8* | *19.41* | 0 | *19.96* | 0 | *97.2* | *86-108* | 0 | | | |

**MS** Sample ID: **24110318-01A MS** Units: **µg/Kg** Analysis Date: **11/22/2024 04:11 AM**
Client ID: Run ID: **VMS9_241121A** SeqNo: **11270451** Prep Date: DF: **0.998**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | 10.78 | 5.0 | 19.96 | 0 | 54 | 65-135 | 0 | | | S |
| 1,3,5-Trimethylbenzene | 13.34 | 5.0 | 19.96 | 0 | 66.9 | 65-135 | 0 | | | |
| Benzene | 17.23 | 5.0 | 19.96 | 0.4035 | 84.3 | 75-125 | 0 | | | |
| Ethylbenzene | 14.42 | 5.0 | 19.96 | 0.3492 | 70.5 | 75-125 | 0 | | | S |
| m,p-Xylene | 27.95 | 2.5 | 39.92 | 0.3337 | 69.2 | 80-125 | 0 | | | S |
| o-Xylene | 14.26 | 2.5 | 19.96 | 0 | 71.4 | 75-125 | 0 | | | S |
| Toluene | 15.84 | 5.0 | 19.96 | 0.9079 | 74.8 | 70-125 | 0 | | | |
| *Surr: 1,2-Dichloroethane-d4* | *21.7* | 0 | *19.96* | 0 | *109* | *70-130* | 0 | | | |
| *Surr: 4-Bromofluorobenzene* | *21.44* | 0 | *19.96* | 0 | *107* | *70-130* | 0 | | | |
| *Surr: Dibromofluoromethane* | *21.01* | 0 | *19.96* | 0 | *105* | *70-130* | 0 | | | |
| *Surr: Toluene-d8* | *19.41* | 0 | *19.96* | 0 | *97.2* | *70-130* | 0 | | | |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Williams Midstream
**Work Order:** 24110389
**Project:** WP0188995

# QC BATCH REPORT

Batch ID: **R415148a** Instrument ID **VMS9** Method: **SW8260D**

**MSD** Sample ID: **24110318-01A MSD** Units: **µg/Kg** Analysis Date: **11/22/2024 04:27 AM**
Client ID: Run ID: **VMS9_241121A** SeqNo: **11270414** Prep Date: DF: **0.978**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | 10.24 | 4.9 | 19.56 | 0 | 52.4 | 71-133 | 10.78 | 5.13 | 30 | S |
| 1,3,5-Trimethylbenzene | 12.37 | 4.9 | 19.56 | 0 | 63.2 | 71-139 | 13.34 | 7.56 | 30 | S |
| Benzene | 15.88 | 4.9 | 19.56 | 0.4035 | 79.1 | 77-133 | 17.23 | 8.11 | 30 | |
| Ethylbenzene | 13.22 | 4.9 | 19.56 | 0.3492 | 65.8 | 75-133 | 14.42 | 8.67 | 30 | S |
| m,p-Xylene | 25.76 | 2.4 | 39.12 | 0.3337 | 65 | 75-134 | 27.95 | 8.17 | 30 | S |
| o-Xylene | 13.49 | 2.4 | 19.56 | 0 | 68.9 | 76-130 | 14.26 | 5.58 | 30 | S |
| Toluene | 15.17 | 4.9 | 19.56 | 0.9079 | 72.9 | 76-130 | 15.84 | 4.32 | 30 | S |
| Xylenes, Total | 39.25 | 4.9 | 58.68 | 0 | 66.9 | 75-132 | 42.22 | 7.29 | 30 | S |
| *Surr: 1,2-Dichloroethane-d4* | *20.55* | 0 | *19.56* | 0 | *105* | *83-132* | 21.7 | *5.44* | *30* | |
| *Surr: 4-Bromofluorobenzene* | *20.13* | 0 | *19.56* | 0 | *103* | *83-111* | 21.44 | *6.3* | *30* | |
| *Surr: Dibromofluoromethane* | *20.19* | 0 | *19.56* | 0 | *103* | *77-125* | 21.01 | *3.99* | *30* | |
| *Surr: Toluene-d8* | *19.5* | 0 | *19.56* | 0 | *99.7* | *86-108* | 19.41 | *0.464* | *30* | |

**MSD** Sample ID: **24110318-01A MSD** Units: **µg/Kg** Analysis Date: **11/22/2024 04:27 AM**
Client ID: Run ID: **VMS9_241121A** SeqNo: **11270452** Prep Date: DF: **0.978**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | 10.24 | 4.9 | 19.56 | 0 | 52.4 | 65-135 | 10.78 | 5.13 | 30 | S |
| 1,3,5-Trimethylbenzene | 12.37 | 4.9 | 19.56 | 0 | 63.2 | 65-135 | 13.34 | 7.56 | 30 | S |
| Benzene | 15.88 | 4.9 | 19.56 | 0.4035 | 79.1 | 75-125 | 17.23 | 8.11 | 30 | |
| Ethylbenzene | 13.22 | 4.9 | 19.56 | 0.3492 | 65.8 | 75-125 | 14.42 | 8.67 | 30 | S |
| m,p-Xylene | 25.76 | 2.4 | 39.12 | 0.3337 | 65 | 80-125 | 27.95 | 8.17 | 30 | S |
| o-Xylene | 13.49 | 2.4 | 19.56 | 0 | 68.9 | 75-125 | 14.26 | 5.58 | 30 | S |
| Toluene | 15.17 | 4.9 | 19.56 | 0.9079 | 72.9 | 70-125 | 15.84 | 4.32 | 30 | |
| *Surr: 1,2-Dichloroethane-d4* | *20.55* | 0 | *19.56* | 0 | *105* | *70-130* | 21.7 | *5.44* | *30* | |
| *Surr: 4-Bromofluorobenzene* | *20.13* | 0 | *19.56* | 0 | *103* | *70-130* | 21.44 | *6.3* | *30* | |
| *Surr: Dibromofluoromethane* | *20.19* | 0 | *19.56* | 0 | *103* | *70-130* | 21.01 | *3.99* | *30* | |
| *Surr: Toluene-d8* | *19.5* | 0 | *19.56* | 0 | *99.7* | *70-130* | 19.41 | *0.464* | *30* | |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 24110389-01A | 24110389-02A | 24110389-03A |
| 24110389-04A | 24110389-05A | 24110389-06A |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Williams Midstream
**Work Order:** 24110389
**Project:** WP0188995

# QC BATCH REPORT

Batch ID: **249887** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

**DUP** Sample ID: **24110502-02A DUP** Units: **mmhos/cm @25°** Analysis Date: **12/4/2024 09:55 AM**

Client ID: Run ID: **WETCHEM_241204D** SeqNo: **11290259** Prep Date: **12/2/2024** DF: **20**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Electrical Conductivity @ Saturation | 4.95 | 0.10 | 0 | 0 | 0 | | 5.272 | 6.3 | 50 | |

**DUP** Sample ID: **24110559-01A DUP** Units: **mmhos/cm @25°** Analysis Date: **12/4/2024 09:55 AM**

Client ID: Run ID: **WETCHEM_241204D** SeqNo: **11290261** Prep Date: **12/2/2024** DF: **20**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Electrical Conductivity @ Saturation | 0.2742 | 0.10 | 0 | 0 | 0 | | 0.3668 | 28.9 | 50 | |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 24110389-01D | 24110389-02D | 24110389-03D |
| 24110389-04D | 24110389-05D | 24110389-06D |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Williams Midstream
**Work Order:** 24110389
**Project:** WP0188995

# QC BATCH REPORT

Batch ID: **R414835** Instrument ID **MOIST** Method: **SW3550C**

**MBLK** Sample ID: **MBLK-R414835** Units: **% of sample** Analysis Date: **11/16/2024 12:47 PM**
Client ID: Run ID: **MOIST_241116A** SeqNo: **11259988** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | U | 0.10 | | | | | | | | |

**LCS** Sample ID: **LCS-R414835** Units: **% of sample** Analysis Date: **11/16/2024 12:47 PM**
Client ID: Run ID: **MOIST_241116A** SeqNo: **11259987** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | 100 | 0.10 | 100 | 0 | 100 | 98-102 | 0 | | | |

**DUP** Sample ID: **24110433-01B DUP** Units: **% of sample** Analysis Date: **11/16/2024 12:47 PM**
Client ID: Run ID: **MOIST_241116A** SeqNo: **11259984** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | 4.7 | 0.10 | 0 | 0 | 0 | 0-0 | 4.68 | 0.426 | 10 | |

**DUP** Sample ID: **24110433-02A DUP** Units: **% of sample** Analysis Date: **11/16/2024 12:47 PM**
Client ID: Run ID: **MOIST_241116A** SeqNo: **11259986** Prep Date: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Moisture | 7.96 | 0.10 | 0 | 0 | 0 | 0-0 | 7.52 | 5.68 | 10 | |

**The following samples were analyzed in this batch:**

| | | |
|---|---|---|
| 24110389-01B | 24110389-02B | 24110389-03B |
| 24110389-04B | 24110389-05B | 24110389-06B |

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

# 24110389

WILLIAMSMIDSTREAM: Williams Midstream
Project: WP0188995

# Chain of Custody Form

Page 1 of 1

COC ID: 075119


Houston, TX +1 281 530 5656
Valparaiso, IN +1 219 299 8127
South Charleston, WV +1 304 356 3168
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
Rochester, NY +1 585 288 5380


| | | | |
|---|---|---|---|
| Purchase O | | ALS Project Manager: | ALS Work Order #: |
| Quote # | | Project Number | WP0188995 |
| Company Name | Williams | Bill To Company | Annette Garrigues |
| Send Report To | Annette Garrigues | Invoice Attn | Annette.Garrigues@williams.com |
| Address | | Address | |
| City/State/Zip | | City/State/Zip | |
| Phone | | Phone | |
| Fax | | Fax | |
| e-Mail Address | Annette.Garrigues@williams.com | e-Mail Address | True ADV |

Project Information

Parameter/Method Request for Analysis

A ERO C10-C36
B GRO C6-C10
C EC
D SAR
E pH (USDA method)
F BTEX/TMBs
G Hot water soluble Boron
H Table 915-1 PA Hs
I
J

| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FtL01@ 3.5'-4.0' | 11-12-24 | ~~11:30~~ | 10:00 | g | 6 | X | X | X | X | X | X | X | X | | | |
| 2 | FtL02@ 3.5'-4.0' | | ~~12:40~~ | 11:30 | g | 6 | X | X | X | X | X | X | X | X | | | |
| 3 | FtL03@ 3.5'-4.0' | | ~~13:20~~ | 12:40 | g | 6 | X | X | X | X | X | X | X | X | | | |
| 4 | FtL04@ 3.5'-4.0' | | ~~14:00~~ | 13:20 | g | 6 | X | X | X | X | X | X | X | X | | | |
| 5 | FtL05@ 3.5'-4.0' | | | 14:00 | g | 6 | X | X | X | X | X | X | X | X | | | |
| 6 | FtL06@ 3.5'-4.0' | | | 14:30 | g | 6 | X | X | X | X | X | X | X | X | | | |
| 7 | | | | | g | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

Sampler(s) Please Print & Sign: Adam Varns

Shipment Method: overnight STD

Turnaround Time in Business Days (BD): ☒ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD Other: Standard

Results Due Date:

| | | | | |
|---|---|---|---|---|
| Relinquished by: | Date: 11-12-24 | Time: 16:15 | Received by: | |
| Relinquished by: | Date: | Time: | Received by (Laboratory): | |
| Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory): | |

Notes: Matrix, 3 all Soil

| Cooler ID | Cooler Temp. |
|---|---|
| | |
| | |
| | |

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other _____

Preservative Key: 1-HCl 2-$HNO_3$ 3-$H_2SO_4$ 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.


ALS-COC-2022-R00

ALS Group, USA
Holland, Michigan

## Sample Receipt Checklist

Client Name: **WILLIAMSMIDSTREAM** Date/Time Received: **13-Nov-24 09:45**

Work Order: **24110389** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 14-Nov-24 (Date) Reviewed by: Chad Whelton (eSignature) 18-Nov-24 (Date)

Matrices: Soil
Carrier name: FedEx

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |
| Sample(s) received on ice? | Yes ☑ | No ☐ | |
| Temperature(s)/Thermometer(s): | 2.9/2.9 c | DF2 | |
| Cooler(s)/Kit(s): | | | |
| Date/Time sample(s) sent to storage: | 11/14/2024 4:28:04 PM | | |
| Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA vials submitted ☑ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | N/A ☑ |
| pH adjusted? | Yes ☐ | No ☐ | N/A ☑ |
| pH adjusted by: | - | | |

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: