



Chris Brand
Environmental Remediation/ Facility Decom Advisor

VIA ELECTRONIC MAIL

July 23, 2024

New Mexico Oil Conservation Division
District I
1625 N. French Drive
Hobbs, New Mexico 88240

Re: West Lovington Unit #041
Soil Remediation Work Plan
Incident No. nGRL1006731469
Case No. 1RP-2446

Dear Whom it May Concern:

Please find enclosed for your files, copies of the following:
West Lovington Unit #041 Soil Remediation Work Plan

The Work Plan was prepared by Arcadis U.S., Inc. (Arcadis) on behalf of Chevron Environmental Management Company (CEMC) for Chevron USA.

Please do not hesitate to call Scott Foord with Arcadis at 713.953.4853, or myself at 661.401.0359, should you have any questions.

Sincerely,

Chris Brand

Encl. West Lovington Unit #041 Work Plan

cc. Scott Foord – Arcadis
Morgan Jordan – Arcadis

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Chevron Environmental Management Company

2024 Work Plan

West Lovington Unit #041

Lea County, New Mexico

Incident # nGRL1006731469

July 2024

2024 Work Plan
West Lovington Unit #041

2024 Work Plan

West Lovington Unit #041
Incident # nGRL1006731469
Lea County, New Mexico

July 2024

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2024 Work Plan
West Lovington Unit #041

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2024 Work Plan
West Lovington Unit #041

1 Introduction

Arcadis U.S., Inc. (Arcadis) has prepared this Work Plan, for Chevron Environmental Management Company (CEMC) on behalf of Chevron U.S.A. Inc., through its division Chevron North America Exploration and Production Company, for the release site known as the West Lovington Unit #041 (Site) located at 32.854805, -103.392172. Details of the release are summarized in the New Mexico Oil Conservation Division (NMOCD) Initial C-141 Form included as **Appendix A**.

2 Project Summary

The Site is located on privately owned land approximately 6-miles southwest of the City of Lovington in Unit B, Section 7, Township 17 South, Range 36 East, Lea County, New Mexico. The site is located within a low karst area. A Site Location Map is included as **Figure 1** and a Topographic Map as **Figure 2**.

2.1 Incident # nGRL1006731469

According to the Initial C-141 Form, on March 27, 2009, an injection line leaked below ground releasing approximately 20 barrels (bbls) of produced water. The Initial C-141 Form stated water pooled on the surface and that a vacuum truck recovered approximately 14 bbls of produced water. The Initial C-141 Form for this release was submitted to the New Mexico Oil Conservation Division (NMOCD) on April 2, 2009, and approved by NMOCD on March 8, 2010. The release was assigned remediation permit number 1RP-2446 and incident number nGRL1006731469. The Initial C-141 Form for this release is included as **Appendix A**.

3 Site Characterization

After a review of the New Mexico Office of State Engineers (NMOSE) and USGS databases, USGS well 325108103233801 located approximately 0.29 miles northwest of the Site was identified and gauged with a water level meter by Arcadis on May 2, 2024. The well was verified as dry at 52.14 feet below ground surface (bgs). Photographic documentation of gauging activities by Arcadis are included in **Appendix B**.

The following site characteristics were determined in accordance with 19.15.29 New Mexico Administrative Code (NMAC):

- Shallowest depth to groundwater beneath the area affected by the release in ft bgs: Between 51 and 75 feet;
- Method used to determine the depth to groundwater: direct measurement;
- Distance to continuously flowing watercourse or any other significant watercourse: >5 miles;
- Distance to lakebed, sinkhole, or playa lake: Between 0.50 and 1 mile;
- Distance to occupied permanent residence, school, hospital, institution, or church: Between 1 and 5 miles;
- Distance to spring or private domestic fresh water well used by less than five households for domestic or stock watering purposes: Between 0.50 and 1 mile;
- Distance to other fresh water well or spring: Between 0.50 and 1 mile;

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- Distance to incorporated municipal boundaries or a defined municipal fresh water well field: Between 1 and 5 miles;
- Distance to wetland: Between 1,000 feet and 0.5 mile;
- Distance to subsurface mine: >5 miles;
- Distance to (non-karst) unstable area: >5 miles;
- Categorize the risk of this well/site being in a karst geology: Low;
- Distance to a 100-year floodplain: >5 miles; and
- Did the release impact areas not on an exploration, development, production, or storage site? No

Site characteristic data is included in **Appendix D**.

4 NMAC Regulatory Criteria

Per Table I of NMAC part 19.15.29.12, the following closure criteria apply to the Site for reclamation activities within the first 4 feet of soil:

Constituent	Limit (mg/kg)
Benzene	10 mg/kg
Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)	50 mg/kg
Total Petroleum Hydrocarbons (TPH) – Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Oil Range Organics (ORO)	100 mg/kg
Chloride	600 mg/kg

Per Table I of NMAC part 19.15.29.12, the following closure criteria apply to the Site for remediation activities for soils at depths greater than 4 feet bgs due to depth to groundwater measured by Arcadis as dry at 52.14 feet bgs within USGS well 325108103233801 located approximately 0.29 miles northwest of the Site:

Constituent	Limit (mg/kg)
Benzene	10 mg/kg
BTEX	50 mg/kg
TPH –GRO, DRO, and ORO	2,500 mg/kg
Chloride	10,000 mg/kg

5 Site Assessment Activities

In January 2021, and subsequently in March 2023 and January 2024, Arcadis performed site assessment activities to evaluate soil impacts stemming from the release. A total of twenty-four (24) sample points (SB-1

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through SB-24) were advanced to depths ranging from the surface to 6 feet bgs inside and surrounding the release area to evaluate the vertical and horizontal extents of the release. Soil sample locations are shown on **Figure 3**. A photo log is included in **Appendix B**. Boring logs are included in **Appendix C**. Soil samples were collected for chemical analyses, placed directly into laboratory-provided sample containers, stored on ice, and transported under the proper chain-of-custody protocol to Eurofins Laboratories in Midland, Texas.

The samples were analyzed for TPH by United States Environmental Protection Agency (EPA) Method 8015, modified BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Soil samples analyzed for BTEX were reported with concentrations ranging from 0.00101 mg/kg (S-15) to 0.0253 mg/kg (S-23). Soil samples analyzed for TPH were reported with concentrations ranging from 16.4 J mg/kg (S-6) to 236 mg/kg (S-4). Soil samples analyzed for chloride were reported with concentrations ranging from 3.39 J mg/kg (S-18) to 6,150 mg/kg (S-2).

Horizontal and vertical delineation of the area of concern was completed during assessment activities. Analytical data collected to date and field screening during proposed remediation activities will be utilized to guide remediation activities. Soil sample analytical results from assessment activities are summarized in **Table 1**. Laboratory reports for soil samples collected during the initial site assessment, including analytical methods, results, and chain-of-custody documents, are attached in **Appendix E**. NMOCD correspondence is shown in **Appendix F**.

6 Proposed Work Plan

Based on the analytical data and the detected TPH and chloride concentrations in soil samples collected during site assessment activities, CEMC proposes to remediate the areas of concern via excavation illustrated in orange as shown in **Figure 3** and bolded in **Table 1**.

The proposed excavation area encompasses a surface area of approximately 27,500 square feet. An estimated 4,100 cubic yards of soil will be removed and transported to the R360 CRI Facility, which is listed as an NMOCD approved disposal facility.

In accordance with NMAC 19.15.29.12(D)(1)(b), CEMC proposes the following confirmation sampling plan to adhere with NMOCD requirements. Five-point composite confirmation soil samples will be collected from the excavation floor and sidewalls at 200 square foot intervals for analysis of BTEX by EPA Method 8260, TPH for GRO, DRO, and ORO by EPA Method 8015, and chloride by EPA Method 300.0. Lateral and vertical limits of the excavation will halt once confirmation sample analytical results are in accordance with NMAC 19.15.29.12(D)(1)(c).

Backfill material will be verified to be non-waste containing prior to backfilling the remediated area by obtaining analytical data from the backfill material supplier (R360) if available, or by collecting a five-point composite sample and analyzing for BTEX by EPA Method 8260, TPH for GRO, DRO, and ORO by EPA Method 8015, and chloride by EPA Method 300.0. Following completion of excavation activities and confirmation that the backfill material is non-waste containing, the areas will be backfilled with the clean material and graded to match the original surface conditions and drainage. Approximately 27,500 square feet of the area of concern located within the pasture area will be reclaimed to original condition and re-seeded following remediation activities.

The proposed remediation activities will be implemented within 90 days following approval of this work plan by the NMOCD. The anticipated schedule includes 30 days to prepare and schedule field work and confirm sub-contractors, 30 days to complete on-site remediation activities, and 30 days to prepare a soil remediation summary and closure request report.

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7 Work Plan Approval Request

Upon completion of the above proposed soil remediation activities, a final closure request report describing the remediation activities and a separate reclamation report will be submitted to the NMOCD for review. If you have any questions regarding this work plan or need additional information, please do not hesitate to contact Scott Foord at 281-725-7447 or Morgan Jordan at 281-644-9437.

Tables

Table 1
Soil Analytical Results
Chevron Environmental Management Company
WLU 41



Sample I.D.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	TPH-GRO	TPH-DRO	TPH GRO + DRO	TPH MRO	Total TPH	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMAC Standard (> 4 feet)			10	--	--	--	50	--	--	1,000	--	2,500	10,000
Restoration Requirements < 4 ft)			10	--	--	--	50	--	--	--	--	100	600
SB-1	0-0.5	01/14/21	<0.000385	<0.000456	<0.000565	<0.000344	<0.000344	<15.0	<15.0	<15.0	<15.0	<15.0	1,090
	1-2	01/14/21	<0.000386	<0.000457	<0.000566	<0.000345	<0.000345	<15.0	<15.0	<15.0	<15.0	<15.0	2,140
	3-3.5	01/14/21	<0.000384	<0.000455	<0.000564	<0.000344	<0.000344	<15.0	<15.0	<15.0	<15.0	<15.0	1,230
SB-2	0-0.5	01/14/21	<0.000386	<0.000457	<0.000567	<0.000346	<0.000346	<15.0	38.8 J	38.8 J	<15.0	38.8 J	6,150
	1-2	01/14/21	<0.000381	<0.000451	<0.000559	<0.000341	<0.000341	<15.0	59.8	59.8	21.8 J	81.6	4,220
	3-3.5	01/14/21	<0.000383	<0.000454	<0.000563	<0.000343	<0.000343	<15.0	30.3 J	30.3 J	<15.0	30.3 J	3,790
SB-3	0-0.5	01/14/21	<0.000383	<0.000454	<0.000563	<0.000343	<0.000343	17.9 J	26.9 J	44.8 J	<15.0	44.8 J	4,610
	1-2	01/14/21	<0.000385	<0.000456	<0.000565	<0.000344	<0.000344	16.9 J	56	72.9 J	22.2 J	95.1	1,110
	3-3.5	01/14/21	<0.000387	<0.000458	<0.000568	<0.000346	<0.000346	<15.0	27.0 J	27.0 J	15.0 J	42.0 J	18.2
DUP	1-2	01/14/21	<0.000386	<0.000457	<0.000566	<0.000345	<0.000345	16.0 J	139	155 J	80.9	236	9.06
	1-2	01/14/21	<0.000389	<0.000460	<0.000570	<0.000348	<0.000348	<15.0	125	125	69.8	195	9.97
	3-4	01/14/21	<0.000383	<0.000453	<0.000561	<0.000342	<0.000342	16.8 J	59.1	75.9 J	39.9 J	116	19.4
SB-5	0-0.5	01/15/21	<0.000389	<0.000460	<0.000570	<0.000348	<0.000348	<15.0	39.9 J	39.9 J	16.9 J	56.8	2,710
SB-6	0-0.5	01/15/21	<0.000383	<0.000453	<0.000561	<0.000342	<0.000342	<15.0	116	116	76.6	193	29.6
	1-2	01/15/21	<0.000385	<0.000456	<0.000565	<0.000344	<0.000344	<14.9	<14.9	<14.9	<14.9	<14.9	9.21
	3-4	01/15/21	<0.000384	<0.000455	<0.000564	<0.000344	<0.000344	16.4 J	<15.0	16.4 J	<15.0	16.4 J	36.5
	5-6	01/15/21	<0.000382	<0.000452	<0.000560	<0.000342	<0.000342	<15.0	<15.0	<15.0	<15.0	<15.0	80.6
SB-7	0-0.5	01/15/21	<0.000381	<0.000451	<0.000559	<0.000341	<0.000341	<15.0	20.5 J	20.5 J	<15.0	20.5 J	37
	1-2	01/15/21	<0.000388	<0.000459	<0.000569	<0.000347	<0.000347	<15.0	<15.0	<15.0	<15.0	<15.0	12.9
	3-4	01/15/21	<0.000383	<0.000453	<0.000561	<0.000342	<0.000342	<15.0	<15.0	<15.0	<15.0	<15.0	300
	5-5.5	01/15/21	<0.000384	<0.000455	<0.000564	<0.000344	<0.000344	<14.9	<14.9	<14.9	<14.9	<14.9	832
SB-8	0-0.5	01/15/21	<0.000382	<0.000452	<0.000560	<0.000342	<0.000342	<15.0	<15.0	<15.0	<15.0	<15.0	69.4
	1-2	01/15/21	<0.000383	<0.000453	<0.000561	<0.000342	<0.000342	<15.0	<15.0	<15.0	<15.0	<15.0	66.4
	3-4	01/15/21	<0.000381	<0.000451	<0.000559	<0.000341	<0.000341	<15.0	17.1 J	17.1 J	<15.0	17.1 J	374
SB-9	0-0.5	03/23/23	<0.000383	<0.000454	<0.000563	<0.000343	<0.000343	17.4 J	<15.0	17.4 J	<15.0	17.4 J	1,200
	2	03/23/23	<0.000383	<0.000453	<0.000562	<0.000342	<0.000342	19.1 J	<15.0	19.1 J	<15.0	19.1 J	979
	0-0.5	03/23/23	<0.000384	<0.000455	<0.000564	<0.000343	<0.000343	16.8 J	<15.0	16.8 J	15.9 J B	32.7 J	461
SB-10	2	03/23/23	<0.000387	<0.000459	<0.000568	<0.000346	<0.000346	16.6 J	<15.0	16.6 J	<15.0	16.6 J	543
	4	03/23/23	<0.000389	<0.000461	<0.000571	<0.000347	<0.000347	19.9 J	<15.0	19.9 J	<15.0	19.9 J	397
	0-0.5	03/23/23	<0.000386	<0.000457	<0.000566	<0.000345	<0.000345	23.6 J	51.6 B	75.2 J B	16.2 J B	91.4	2,990
SB-11	2	03/23/23	<0.000383	<0.000454	<0.000563	<0.000343	<0.000343	<15.0	59.1 B	59.1 B	21.1 J B	80.2	2,490
	4	03/23/23	<0.000383	<0.000453	<0.000562	<0.000342	<0.000342	17.1 J	49.7 J B	66.8 J B	18.6 J B	85.4	2,770
	0-0.5	03/23/23	<0.000383	<0.000453	<0.000562	<0.000342	<0.000342	18.1 J	20.2 J B	38.3 J B	<15.0	38.3 J	203
SB-12	2	03/23/23	<0.000384	<0.000455	<0.000564	0.00106 J	0.00106 J	21.9 J	60.6 B	82.5 J B	31.5 J B	114	176
	4	03/23/23	<0.000387	<0.000459	<0.000568	<0.000346	<0.000346	19.8 J	17.5 J B	37.3 J B	17.4 J B	54.7	172
	1	01/19/24	--	--	--	--	--	--	--	--	--	--	1,190
SB-13	2	01/19/24	<0.000383	0.00111 J	<0.000563	0.00212 J	0.00323 J	16.7 J *1	32.6 J B	49.3 J B *1	<15.0	49.3 J B *1	224
	4	01/19/24	--	--	--	--	--	--	--	--	--	--	366
	1	01/19/24	--	--	--	--	--	--	--	--	--	--	43.8
SB-14	2	01/19/24	<0.000384	<0.000455	<0.000564	<0.000343	<0.00101	30.5 J *1	38.3 J B	68.8 J B *1	<15.1	68.8 J B *1	46.7
	4	01/19/24	--	--	--	--	--	--	--	--	--	--	607
	1	01/19/24	--	--	--	--	--	--	--	--	--	--	122
SB-15	2	01/19/24	<0.000383	<0.000454	<0.000563	0.00101	0.00101	29.0 J *1	35.9 J B	64.9 J B *1	<15.0	64.9 J B *1	1,300
	4	01/19/24	--	--	--	--	--	--	--	--	--	--	1,250
	1	01/22/24	--	--	--	--	--	--	--	--	--	--	12.6
SB-16	2	01/22/24	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	<25.0	<25.0	<25.0	<25.0	<25.0	801
	1	01/22/24	--	--	--	--	--	--	--	--	--	--	7.91
SB-17	2	01/22/24	<0.000384	<0.000455	<0.000564	<0.00101	<0.00101	<25.1	<25.1	<25.1	<25.1	<25.1	28.9

Table 1
Soil Analytical Results
Chevron Environmental Management Company
WLU 41



Sample I.D.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	TPH-GRO	TPH-DRO	TPH GRO + DRO	TPH MRO	Total TPH	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMAC Standard (> 4 feet)			10	--	--	--	50	--	--	1,000	--	2,500	10,000
Restoration Requirements < 4 ft)			10	--	--	--	50	--	--	--	--	100	600
SB-18	1	01/22/24	--	--	--	--	--	--	--	--	--	--	3.39 J
	2	01/22/24	<0.000387	<0.000458	<0.000567	<0.00101	<0.00101	<25.2	<25.2	<25.2	<25.2	<25.2	465
	4	01/22/24	--	--	--	--	--	--	--	--	--	--	794
SB-19	1	01/22/24	--	--	--	--	--	--	--	--	--	--	19.7
	2	01/22/24	<0.000383	0.000577 J	<0.000563	<0.00101	0.00129 J	<25.0	118	118	75.5	194	8.79
	3	01/22/24	--	--	--	--	--	--	--	--	--	--	11.9
SB-20	1	01/22/24	--	--	--	--	--	--	--	--	--	--	5.04
	2	01/22/24	<0.000383	<0.000454	<0.000563	<0.00101	<0.00101	<24.9	25.4 J	25.4 J	<24.9	25.4 J	1,120
	4	01/22/24	--	--	--	--	--	--	--	--	--	--	1,100
SB-21	1	01/22/24	--	--	--	--	--	--	--	--	--	--	2,540
	2	01/22/24	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	<25.0	<25.0	<25.0	<25.0	<25.0	1,290
	4	01/22/24	--	--	--	--	--	--	--	--	--	--	1,000
SB-22	1	01/24/24	--	--	--	--	--	--	--	--	--	--	5.13
	2	01/24/24	<0.000386	<0.000457	<0.000566	<0.00101	<0.00101	<24.9	<24.9	<24.9	<24.9	<24.9	68.1
SB-23	1	02/02/24	--	--	--	--	--	--	--	--	--	--	168
	2	02/02/24	<0.000383	<0.000453	0.00360	0.0217	0.0253	41.7 J B	28.9 J	70.6 J B	<15.0	70.6	146
SB-24	1	01/24/24	--	--	--	--	--	--	--	--	--	--	13.3
	2	01/24/24	<0.000383	<0.000453	<0.000562	<0.00100	<0.00100	<24.9	<24.9	<24.9	<24.9	<24.9	17.5

Legend:

BOLD = Analytes exceeding NMAC standards / Restoration Requirement

J: Result is less than the Reporting Limit but greater than or equal to the MDL and the concentration is an approximate value

B: Compound was found in the blank and sample.

*1: LCS/LCSD RPD exceeds control limits.

'<' indicates the analyte was not detected at or above the Method Detection Limit (MDL)

mg/kg: Milligram per Kilogram

BTEX : Benzene, Toluene, Ethylbenzene, and Total Xylenes

NMAC : New Mexico Administration Code. Criteria based off of groundwater depth of less than 50 feet.

TPH GRO: Total Petroleum Hydrocarbons Gasoline Range Organics

TPH MRO: Total Petroleum Hydrocarbons Motor Oil Range Organics

TPH DRO: Total Petroleum Hydrocarbon Diesel Range Organics

Total TPH: GRO + DRO + MRO

*Revised screening limit and restoration criteria within the first 4 feet below ground surface per Rule 19.15.29 effective August 14, 2018

DUP: Duplicate sample

Notes:

1. Chloride analyzed by United States Environmental Protection Agency Method 300

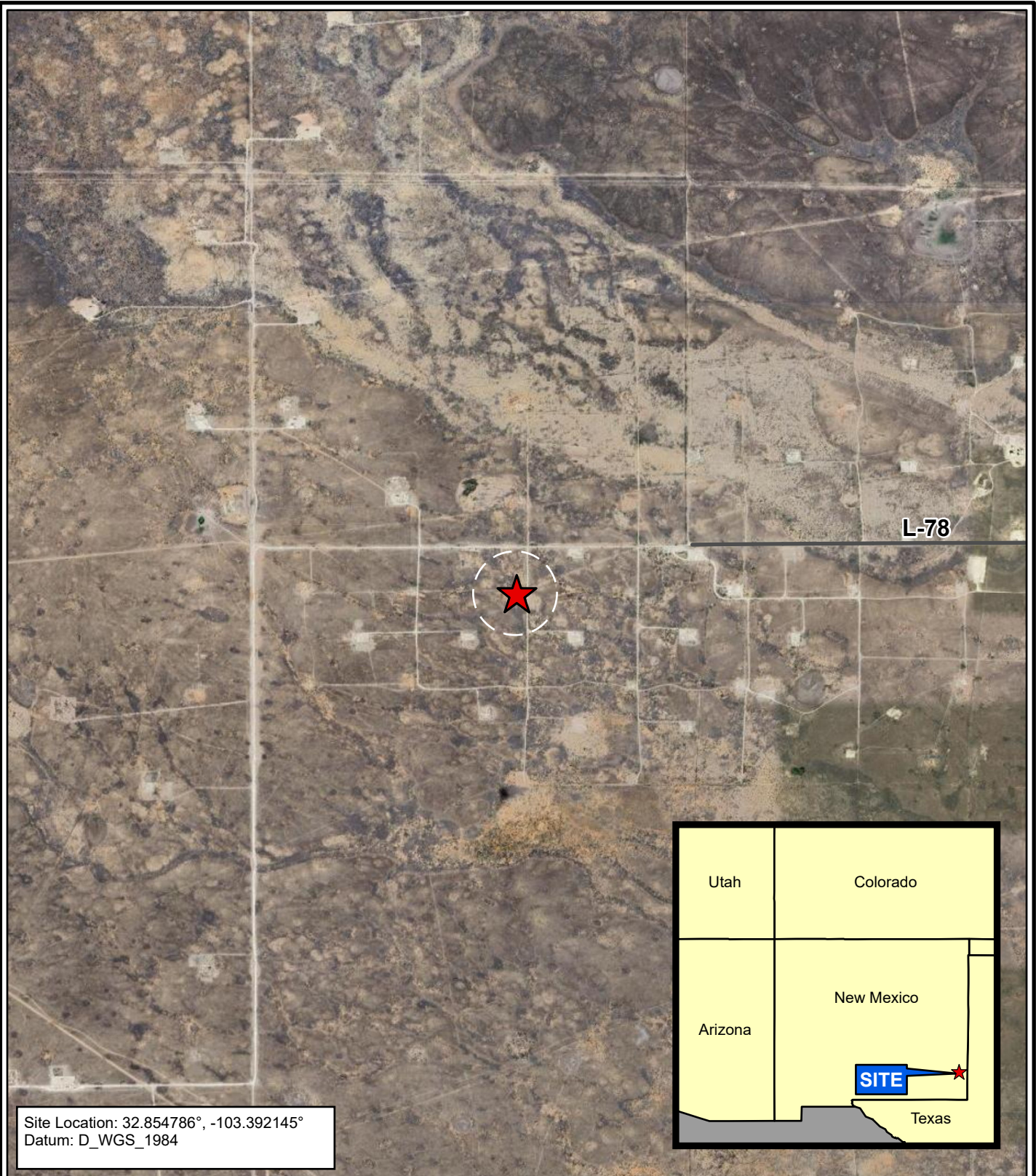
2. TPH analyzed by TPH by SW8015 Mod DRO/ORO Method

3. BTEX analyzed by USEPA Method 8021B

4. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2)

Figures

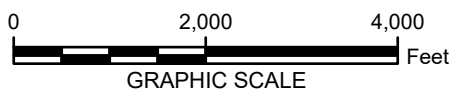
City: Houston Div/Group: Remediation West -Air Group Created By: W Berry Last Saved By: vmm1306 ; Client (Project #)
T:\ENVUpstream\WLU 41\Pro\WLU 41.aprx 6/4/2024 9:36 AM



Legend



Credits: ESRI Online, Google Earth



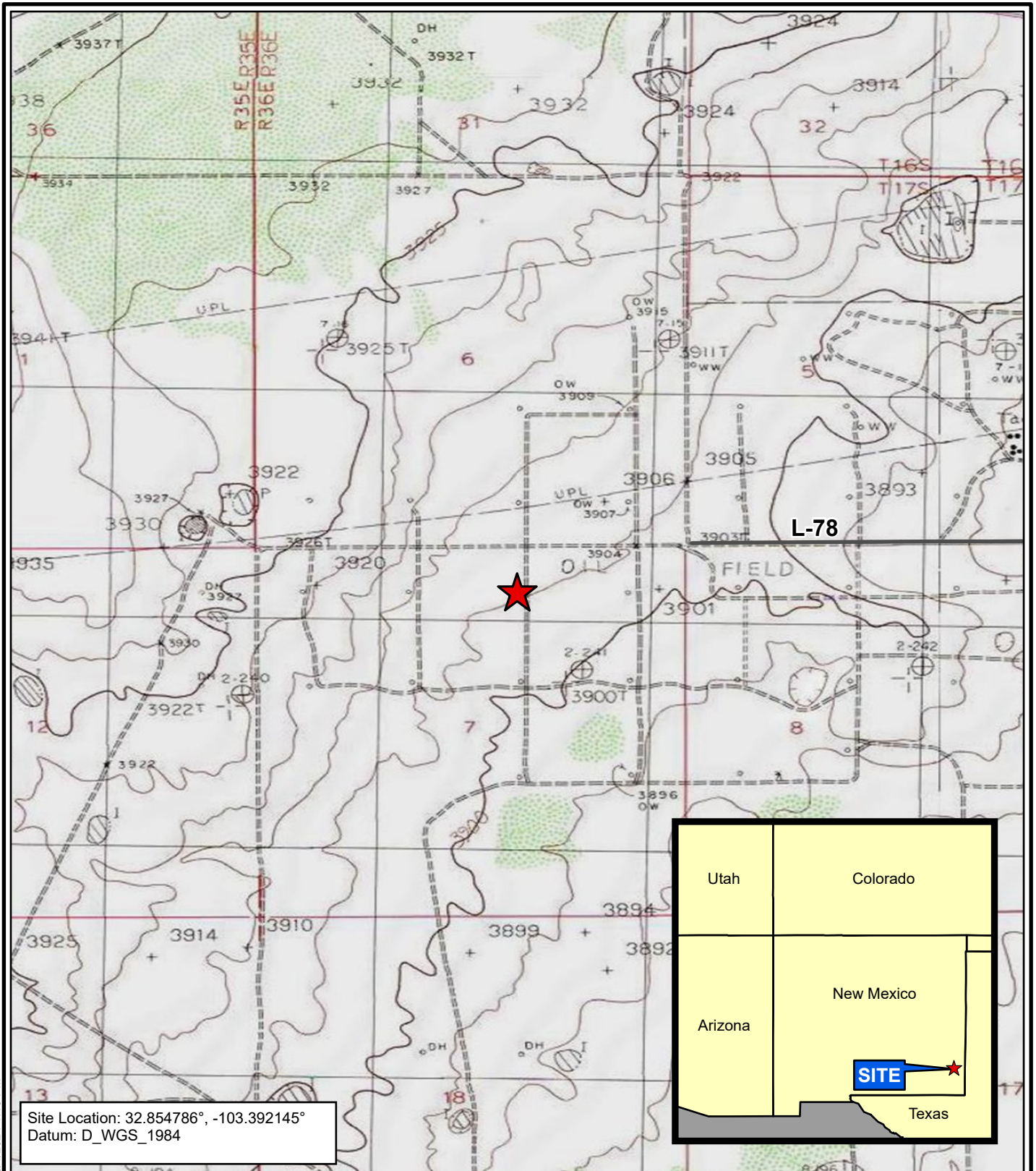
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
WEST LOVINGTON UNIT #041
LEA COUNTY, NEW MEXICO

SITE LOCATION MAP



FIGURE
1

City: Houston Div/Group: Remediation West -Air Group Created By: W Berry Last Saved By: vmm1306 ; Client (Project #)
T:\ENVUpstream\WLU 41\Pro\WLU 41.aprx 6/4/2024 1:49 PM

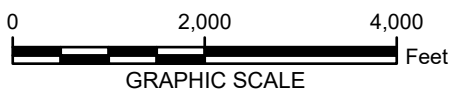


Legend



Site Location

Credits: ESRI Online, USGS 24,000 K
Topo (Map Service)
Red Lake, New Mexico Quadrangle



GRAPHIC SCALE

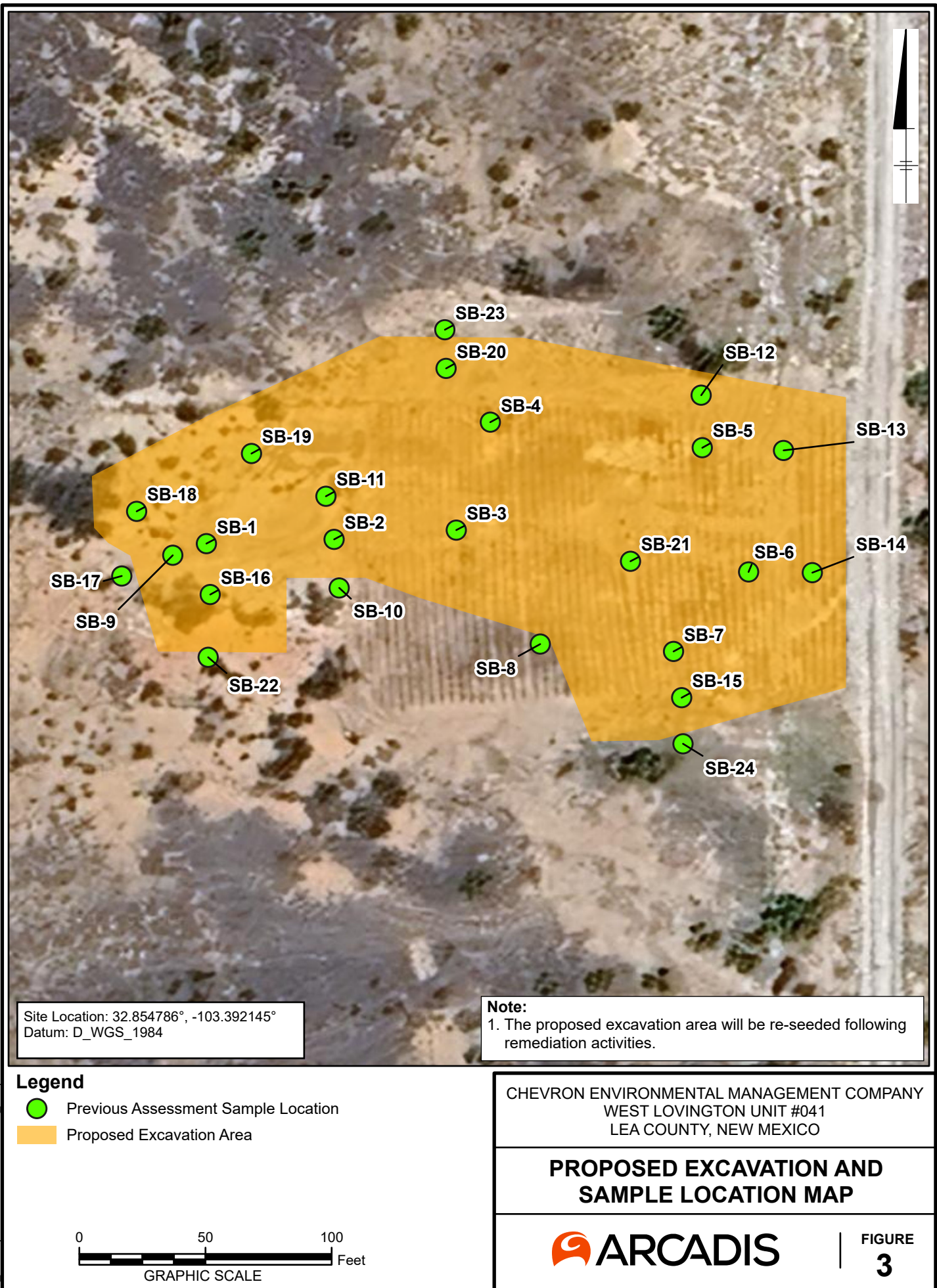
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
WEST LOVINGTON UNIT #041
LEA COUNTY, NEW MEXICO

TOPOGRAPHIC MAP



FIGURE
2

City: Houston Div/Group: Remediation West -Air Group Created By: W Berry Last Saved By: vmm1306 ; Client (Project #)
T:\ENVUpstream\WLU 41\ProWLU 41.aprx 6/4/2024 9:36 AM



Appendix A

Initial C-141 Form Incident # nGRL1006731469

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003
Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Chevron Mid-Continent LP	Contact	Kim Klahsen
Address	HCR 60 Box 423 Lovington, NM 88260	Telephone No.	575-396-4414 X 128 432-894-3298 (Cell)
Facility Name	West Lovington Well # 41	Facility Type	Injection Well
Surface Owner	Chevron	Mineral Owner	State of NM
		Lease No.	B-4120-1

LOCATION OF RELEASE

API# 30-025-03901-00-00

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	07	17 S	36 E	660	FNL	1980	FEL	Lea

Latitude N 32degree.51minutes 17.2seconds Longitude W 103degrees 23minutes 31seconds

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	20 bbl	Volume Recovered	14 bbl
Source of Release	injection line	Date and Hour of Occurrence	3/27/09	Date and Hour of Discovery	3/27/09 7:30 AM
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	If YES, To Whom?			
		OCD-			
By Whom?	Larry Ridenour	Date and Hour 3/27/09 10:41 AM			
Was a Watercourse Reached?	☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.			
If a Watercourse was Impacted, Describe Fully.* No Impact to watercourse.					
Describe Cause of Problem and Remedial Action Taken.* An injection line leaked below ground. Water pooled on the surface and a vacuum truck was immediately dispatched to recover the pooled water. A work order was completed to remove several inches of contaminated soil.					
Describe Area Affected and Cleanup Action Taken.* The Vacuum truck recovered 14 bbls of produced water. Surface soil will be removed with a backhoe. A plan will be developed and submitted for approval.					
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOC marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOC acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.					
Signature:		OIL CONSERVATION DIVISION			
Printed Name: Kim Klahsen		Approved by ENV. ENGINEER: District Supervisor: <i>Jeffrey J. Leasing</i>			
Title: HES Specialist		Approval Date: 03/08/10		Expiration Date: 05/10/10	
E-mail Address: KDKL@chevron.com		Conditions of Approval: DELINQUENT TO CLEAN			
Date: 4/2/09		Phone: 575-396-4414		+1. SUBMIT FINAL C-141 BY ☐ Attached ☐	
				IRP-10-3-2446	

FGRL1006730948

Appendix B

Photo Log

		PHOTOGRAPHIC LOG	
Property Name: West Lovington Unit #041		Location: Lea County, TX	Incident No. nGRL1006731469
Photo No. 1	Date: 5/02/2024		
Direction Photo Taken: Facing West			
Description: USGS well 325108103233801 located approximately 0.29 miles northwest of the Site was gauged with a water meter by Arcadis on May 2, 2024, and well was verified as dry at 52.14 ft below ground surface (bgs).			

		PHOTOGRAPHIC LOG	
Property Name: West Lovington Unit #041		Location: Lea County, TX	
Incident No. nGRL1006731469			
Photo No. 2	Date: 5/02/2024		
Direction Photo Taken: Facing West			
Description: USGS well 325108103233801 being gauged by Arcadis on May 2, 2024, and well was verified as dry at 52.14 ft below ground surface (bgs).			

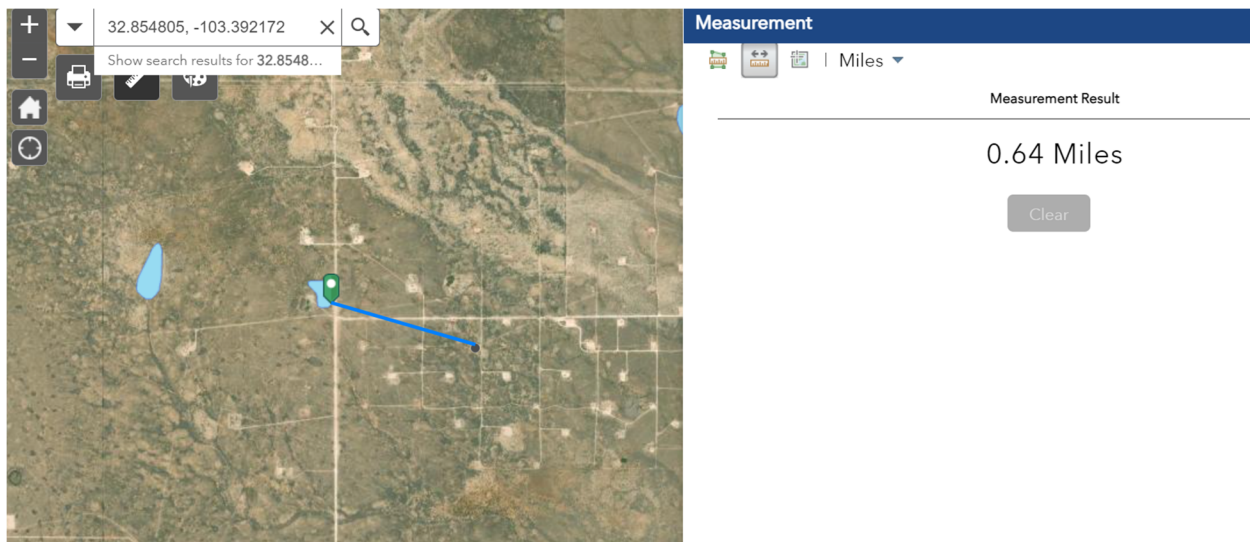
Appendix C

Boring Logs

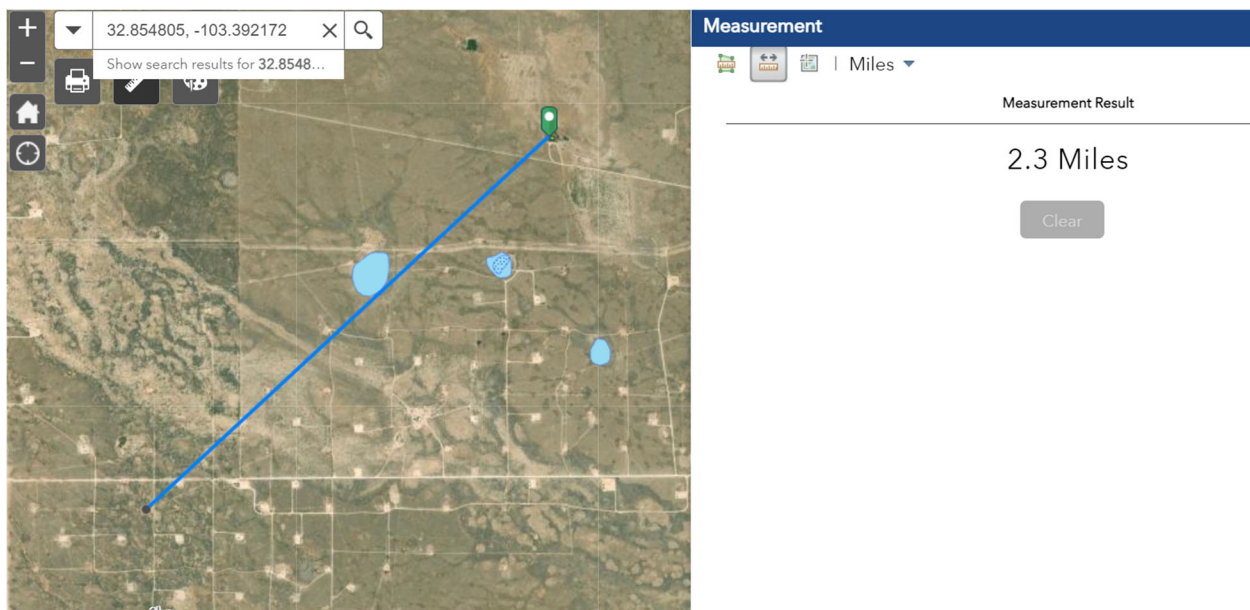
Appendix D

Site Characterization Data

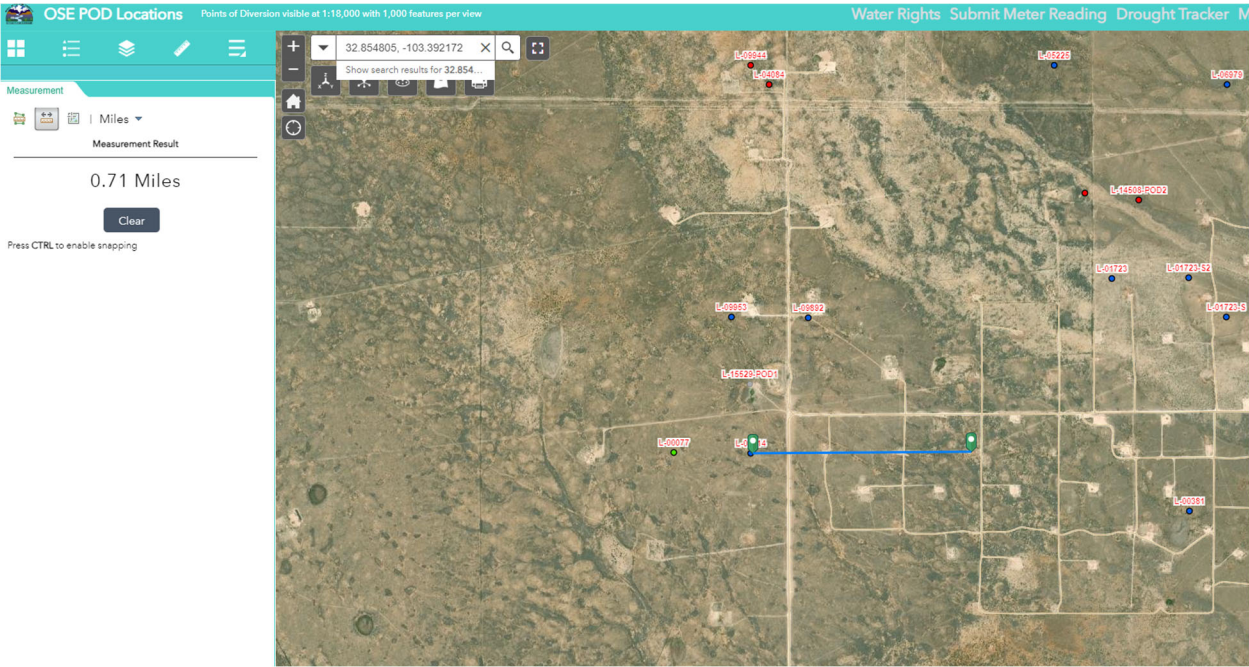
Distance to lakebed, sinkhole, or playa lake.



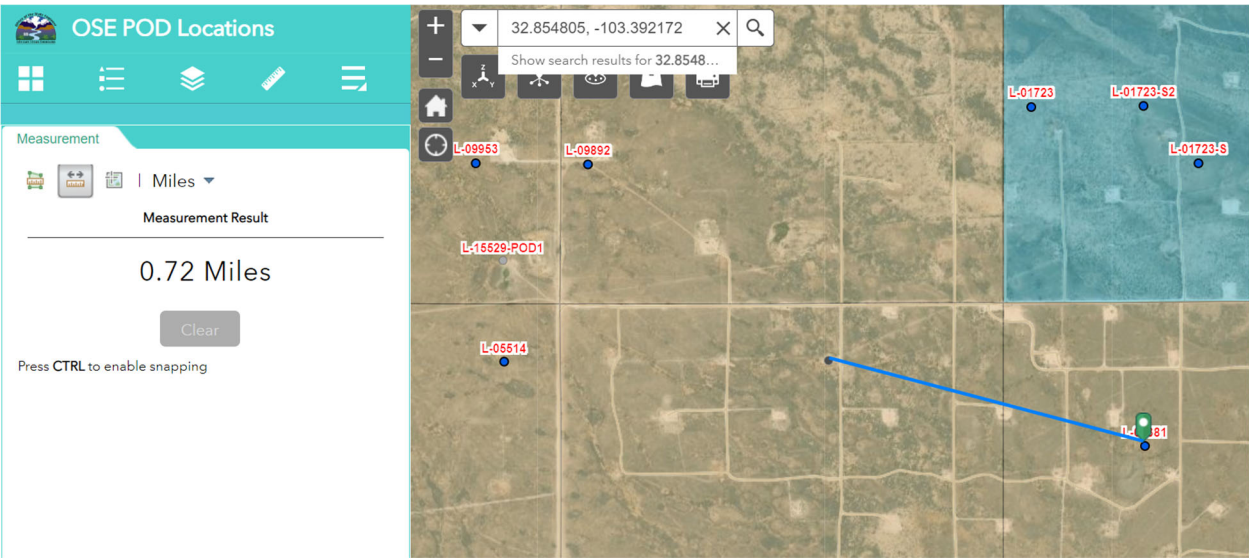
Distance to occupied permanent residence, school, hospital, institution, or church.



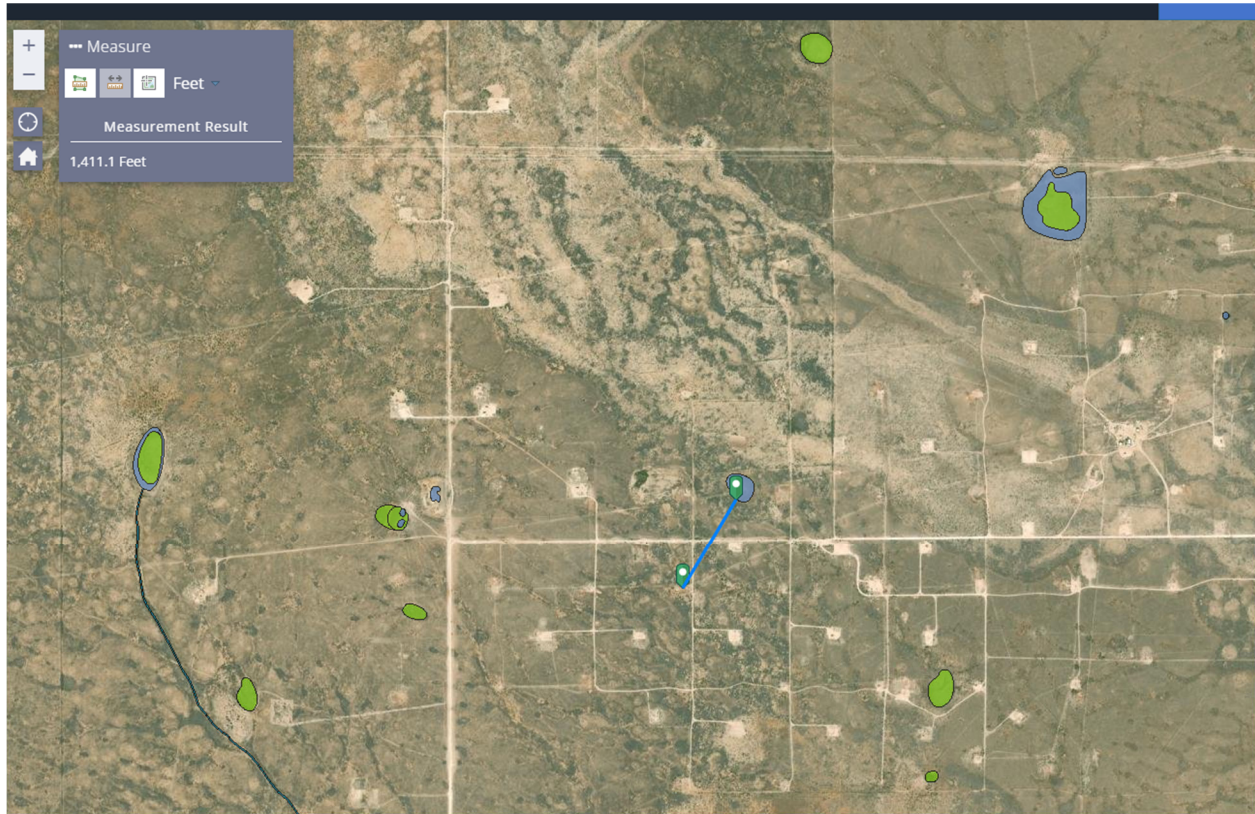
Distance to spring or private domestic fresh water well used by less than five households for domestic or stock watering purposes (L-05514).



Distance to any other fresh water well or spring (L-00381).



Distance to a wetland.



Appendix E

Laboratory Analytical Reports

Analytical Report 684988

for

Arcadis U.S., Inc

Project Manager: Morgan Jordan

WL Well 41

03064856-0002B

02.22.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNi02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



02.22.2021

Project Manager: **Morgan Jordan**

Arcadis U.S., Inc

1717 W 6th Street, Suite 210

Austin, TX 78703

Reference: Eurofins Xenco, LLC Report No(s): **684988**

WL Well 41

Project Address:

Morgan Jordan:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 684988. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 684988 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink, appearing to read "Sachin Kudchadkar", written over a horizontal line.

Sachin Kudchadkar

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 684988****Arcadis U.S., Inc, Austin, TX**

WL Well 41

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1-S-0-.5-210114	S	01.14.2021 11:26		684988-001
SB-1-S-1-2-210114	S	01.14.2021 11:34		684988-002
SB-1-S-3-3.5-210114	S	01.14.2021 11:45		684988-003
SB-2-S-0-.5-210114	S	01.14.2021 12:03		684988-004
SB-2-S-1-2-210114	S	01.14.2021 12:14		684988-005
SB-2-S-3-3.5-210114	S	01.14.2021 12:22		684988-006
SB-3-S-0-.5-210114	S	01.14.2021 13:07		684988-007
SB-3-S-1-2-210114	S	01.14.2021 13:15		684988-008
SB-4-S-0-.5-210114	S	01.14.2021 14:27		684988-009
SB-4-S-1-2-210114	S	01.14.2021 15:00		684988-010
SB-4-SD-1-2-210114	S	01.14.2021 00:00		684988-011
SB-4-S-3-4-210114	S	01.14.2021 15:23		684988-012

**CASE NARRATIVE****Client Name: Arcadis U.S., Inc****Project Name: WL Well 41**

Project ID: 03064856-0002B
Work Order Number(s): 684988

Report Date: 02.22.2021
Date Received: 01.15.2021

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-1-S-0-.5-210114**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684988-001

Date Collected: 01.14.2021 11:26

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.18.2021 16:30

% Moisture:

Seq Number: 3148186

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1090	25.1	4.31	mg/kg	01.18.2021 23:49		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 16:00

% Moisture:

Seq Number: 3148362

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.19.2021 15:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.19.2021 15:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.19.2021 15:24	U	1
Total TPH	PHC635	<15.0	50.0	15.0	mg/kg	01.19.2021 15:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-130	01.19.2021 15:24	
o-Terphenyl	84-15-1	82	%	70-130	01.19.2021 15:24	



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-1-S-0-.5-210114**

Lab Sample Id: 684988-001

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3148435

Matrix: Soil

Date Collected: 01.14.2021 11:26

Date Prep: 01.20.2021 10:00

Date Received:01.15.2021 16:58

Prep Method: SW5035A

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	01.20.2021 17:57	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	01.20.2021 17:57	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	01.20.2021 17:57	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	01.20.2021 17:57	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.20.2021 17:57	U	1
Total Xylenes	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	01.20.2021 17:57	U	1
Total BTEX		<0.000344	0.00200	0.000344	mg/kg	01.20.2021 17:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.20.2021 17:57	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.20.2021 17:57	



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-1-S-1-2-210114**

Lab Sample Id: 684988-002

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3148186

Matrix: Soil

Date Collected: 01.14.2021 11:34

Date Prep: 01.18.2021 16:30

% Moisture:

Basis: Wet Weight

Date Received:01.15.2021 16:58

Prep Method: E300P

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2140	25.0	4.29	mg/kg	01.18.2021 23:54		5

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3148362

Date Prep: 01.19.2021 16:00

% Moisture:

Basis: Wet Weight

Prep Method: SW8015P

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.19.2021 16:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.19.2021 16:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.19.2021 16:19	U	1
Total TPH	PHC635	<15.0	50.0	15.0	mg/kg	01.19.2021 16:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-130	01.19.2021 16:19	
o-Terphenyl	84-15-1	83	%	70-130	01.19.2021 16:19	



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-1-S-1-2-210114**

Lab Sample Id: 684988-002

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3148435

Matrix: Soil

Date Collected: 01.14.2021 11:34

Date Prep: 01.20.2021 10:00

Date Received:01.15.2021 16:58

Prep Method: SW5035A

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	01.20.2021 18:17	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	01.20.2021 18:17	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	01.20.2021 18:17	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	01.20.2021 18:17	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	01.20.2021 18:17	U	1
Total Xylenes	1330-20-7	<0.000345	0.00200	0.000345	mg/kg	01.20.2021 18:17	U	1
Total BTEX		<0.000345	0.00200	0.000345	mg/kg	01.20.2021 18:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.20.2021 18:17	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.20.2021 18:17	



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-1-S-3-3.5-210114**

Lab Sample Id: 684988-003

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3148186

Matrix: Soil

Date Collected: 01.14.2021 11:45

Date Prep: 01.18.2021 16:30

Date Received:01.15.2021 16:58

Prep Method: E300P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1230	24.8	4.26	mg/kg	01.19.2021 00:00		5

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3148362

Date Prep: 01.19.2021 16:00

Prep Method: SW8015P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	01.19.2021 16:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	49.9	15.0	mg/kg	01.19.2021 16:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.19.2021 16:38	U	1
Total TPH	PHC635	<15.0	49.9	15.0	mg/kg	01.19.2021 16:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-130	01.19.2021 16:38	
o-Terphenyl	84-15-1	80	%	70-130	01.19.2021 16:38	



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-1-S-3-3.5-210114**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684988-003

Date Collected: 01.14.2021 11:45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 10:00

% Moisture:

Seq Number: 3148435

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	01.20.2021 18:38	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	01.20.2021 18:38	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	01.20.2021 18:38	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	01.20.2021 18:38	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.20.2021 18:38	U	1
Total Xylenes	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	01.20.2021 18:38	U	1
Total BTEX		<0.000344	0.00200	0.000344	mg/kg	01.20.2021 18:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.20.2021 18:38	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.20.2021 18:38	



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-2-S-0-.5-210114**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684988-004

Date Collected: 01.14.2021 12:03

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.18.2021 16:30

% Moisture:

Seq Number: 3148186

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6150	101	17.3	mg/kg	01.19.2021 00:05		20

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 16:00

% Moisture:

Seq Number: 3148362

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.19.2021 16:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	38.8	50.0	15.0	mg/kg	01.19.2021 16:56	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.19.2021 16:56	U	1
Total TPH	PHC635	38.8	50.0	15.0	mg/kg	01.19.2021 16:56	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-130	01.19.2021 16:56	
o-Terphenyl	84-15-1	81	%	70-130	01.19.2021 16:56	



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-2-S-0-.5-210114**

Lab Sample Id: 684988-004

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3148435

Matrix: Soil

Date Collected: 01.14.2021 12:03

Date Prep: 01.20.2021 10:00

Date Received:01.15.2021 16:58

Prep Method: SW5035A

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000386	0.00201	0.000386	mg/kg	01.20.2021 18:58	U	1
Toluene	108-88-3	<0.000457	0.00201	0.000457	mg/kg	01.20.2021 18:58	U	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	01.20.2021 18:58	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	01.20.2021 18:58	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	01.20.2021 18:58	U	1
Total Xylenes	1330-20-7	<0.000346	0.00201	0.000346	mg/kg	01.20.2021 18:58	U	1
Total BTEX		<0.000346	0.00201	0.000346	mg/kg	01.20.2021 18:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.20.2021 18:58	
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.20.2021 18:58	



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-2-S-1-2-210114**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684988-005

Date Collected: 01.14.2021 12:14

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.18.2021 16:30

% Moisture:

Seq Number: 3148186

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4220	50.0	8.58	mg/kg	01.19.2021 00:21		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 16:00

% Moisture:

Seq Number: 3148362

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.19.2021 17:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	59.8	50.0	15.0	mg/kg	01.19.2021 17:15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	21.8	50.0	15.0	mg/kg	01.19.2021 17:15	J	1
Total TPH	PHC635	81.6	50.0	15.0	mg/kg	01.19.2021 17:15		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	73		%	70-130	01.19.2021 17:15		
o-Terphenyl	84-15-1	84		%	70-130	01.19.2021 17:15		



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-2-S-1-2-210114**

Lab Sample Id: 684988-005

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3148435

Matrix: Soil

Date Collected: 01.14.2021 12:14

Date Prep: 01.20.2021 10:00

Date Received:01.15.2021 16:58

Prep Method: SW5035A

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000381	0.00198	0.000381	mg/kg	01.20.2021 20:22	U	1
Toluene	108-88-3	<0.000451	0.00198	0.000451	mg/kg	01.20.2021 20:22	U	1
Ethylbenzene	100-41-4	<0.000559	0.00198	0.000559	mg/kg	01.20.2021 20:22	U	1
m,p-Xylenes	179601-23-1	<0.00100	0.00396	0.00100	mg/kg	01.20.2021 20:22	U	1
o-Xylene	95-47-6	<0.000341	0.00198	0.000341	mg/kg	01.20.2021 20:22	U	1
Total Xylenes	1330-20-7	<0.000341	0.00198	0.000341	mg/kg	01.20.2021 20:22	U	1
Total BTEX		<0.000341	0.00198	0.000341	mg/kg	01.20.2021 20:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.20.2021 20:22	
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.20.2021 20:22	



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-2-S-3-3.5-210114**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684988-006

Date Collected: 01.14.2021 12:22

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.18.2021 16:30

% Moisture:

Seq Number: 3148186

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3790	50.4	8.65	mg/kg	01.19.2021 00:26		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 16:00

% Moisture:

Seq Number: 3148362

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	01.19.2021 17:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	30.3	49.9	15.0	mg/kg	01.19.2021 17:33	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.19.2021 17:33	U	1
Total TPH	PHC635	30.3	49.9	15.0	mg/kg	01.19.2021 17:33	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-130	01.19.2021 17:33	
o-Terphenyl	84-15-1	82	%	70-130	01.19.2021 17:33	



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-2-S-3-3.5-210114**

Lab Sample Id: 684988-006

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3148435

Matrix: Soil

Date Collected: 01.14.2021 12:22

Date Prep: 01.20.2021 10:00

Date Received:01.15.2021 16:58

Prep Method: SW5035A

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	01.20.2021 20:42	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	01.20.2021 20:42	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	01.20.2021 20:42	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	01.20.2021 20:42	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	01.20.2021 20:42	U	1
Total Xylenes	1330-20-7	<0.000343	0.00199	0.000343	mg/kg	01.20.2021 20:42	U	1
Total BTEX		<0.000343	0.00199	0.000343	mg/kg	01.20.2021 20:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.20.2021 20:42	
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.20.2021 20:42	



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Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-3-S-0-.5-210114**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684988-007

Date Collected: 01.14.2021 13:07

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.18.2021 16:30

% Moisture:

Seq Number: 3148186

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4610	49.5	8.50	mg/kg	01.19.2021 00:42		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 16:00

% Moisture:

Seq Number: 3148362

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	17.9	50.0	15.0	mg/kg	01.19.2021 17:52	J	1
Diesel Range Organics (DRO)	C10C28DRO	26.9	50.0	15.0	mg/kg	01.19.2021 17:52	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.19.2021 17:52	U	1
Total TPH	PHC635	44.8	50.0	15.0	mg/kg	01.19.2021 17:52	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-130	01.19.2021 17:52	
o-Terphenyl	84-15-1	78	%	70-130	01.19.2021 17:52	



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Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-3-S-0-.5-210114**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684988-007

Date Collected: 01.14.2021 13:07

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 10:00

% Moisture:

Seq Number: 3148435

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	01.20.2021 21:03	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	01.20.2021 21:03	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	01.20.2021 21:03	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	01.20.2021 21:03	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	01.20.2021 21:03	U	1
Total Xylenes	1330-20-7	<0.000343	0.00199	0.000343	mg/kg	01.20.2021 21:03	U	1
Total BTEX		<0.000343	0.00199	0.000343	mg/kg	01.20.2021 21:03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.20.2021 21:03			
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.20.2021 21:03			



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Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-3-S-1-2-210114**

Lab Sample Id: 684988-008

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3148186

Matrix: Soil

Date Collected: 01.14.2021 13:15

Date Prep: 01.18.2021 16:30

% Moisture:

Basis: Wet Weight

Date Received:01.15.2021 16:58

Prep Method: E300P

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1110	24.9	4.27	mg/kg	01.19.2021 00:48		5

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3148362

Date Prep: 01.19.2021 16:00

% Moisture:

Basis: Wet Weight

Prep Method: SW8015P

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	16.9	49.9	15.0	mg/kg	01.19.2021 18:10	J	1
Diesel Range Organics (DRO)	C10C28DRO	56.0	49.9	15.0	mg/kg	01.19.2021 18:10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	22.2	49.9	15.0	mg/kg	01.19.2021 18:10	J	1
Total TPH	PHC635	95.1	49.9	15.0	mg/kg	01.19.2021 18:10		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1-Chlorooctane	111-85-3	70	%	70-130	01.19.2021 18:10			
o-Terphenyl	84-15-1	78	%	70-130	01.19.2021 18:10			



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Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-3-S-1-2-210114**

Lab Sample Id: 684988-008

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3148435

Matrix: Soil

Date Collected: 01.14.2021 13:15

Date Prep: 01.20.2021 10:00

Date Received:01.15.2021 16:58

Prep Method: SW5035A

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	01.20.2021 21:23	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	01.20.2021 21:23	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	01.20.2021 21:23	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	01.20.2021 21:23	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.20.2021 21:23	U	1
Total Xylenes	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	01.20.2021 21:23	U	1
Total BTEX		<0.000344	0.00200	0.000344	mg/kg	01.20.2021 21:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.20.2021 21:23	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.20.2021 21:23	



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Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-4-S-0-.5-210114**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684988-009

Date Collected: 01.14.2021 14:27

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.18.2021 16:30

% Moisture:

Seq Number: 3148186

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.2	5.04	0.865	mg/kg	01.19.2021 00:53		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 16:00

% Moisture:

Seq Number: 3148362

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	01.19.2021 18:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	27.0	49.9	15.0	mg/kg	01.19.2021 18:29	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	15.0	49.9	15.0	mg/kg	01.19.2021 18:29	J	1
Total TPH	PHC635	42.0	49.9	15.0	mg/kg	01.19.2021 18:29	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-130	01.19.2021 18:29	
o-Terphenyl	84-15-1	78	%	70-130	01.19.2021 18:29	



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Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-4-S-0-.5-210114**

Lab Sample Id: 684988-009

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3148435

Matrix: Soil

Date Collected: 01.14.2021 14:27

Date Prep: 01.20.2021 10:00

Date Received:01.15.2021 16:58

Prep Method: SW5035A

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000387	0.00201	0.000387	mg/kg	01.20.2021 21:44	U	1
Toluene	108-88-3	<0.000458	0.00201	0.000458	mg/kg	01.20.2021 21:44	U	1
Ethylbenzene	100-41-4	<0.000568	0.00201	0.000568	mg/kg	01.20.2021 21:44	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	01.20.2021 21:44	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	01.20.2021 21:44	U	1
Total Xylenes	1330-20-7	<0.000346	0.00201	0.000346	mg/kg	01.20.2021 21:44	U	1
Total BTEX		<0.000346	0.00201	0.000346	mg/kg	01.20.2021 21:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.20.2021 21:44	
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.20.2021 21:44	



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Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-4-S-1-2-210114**

Lab Sample Id: 684988-010

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3148186

Matrix: Soil

Date Collected: 01.14.2021 15:00

Date Prep: 01.18.2021 16:30

Date Received:01.15.2021 16:58

Prep Method: E300P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.06	5.00	0.858	mg/kg	01.19.2021 00:58		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3148362

Date Prep: 01.19.2021 16:00

Prep Method: SW8015P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	16.0	50.0	15.0	mg/kg	01.19.2021 18:48	J	1
Diesel Range Organics (DRO)	C10C28DRO	139	50.0	15.0	mg/kg	01.19.2021 18:48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	80.9	50.0	15.0	mg/kg	01.19.2021 18:48		1
Total TPH	PHC635	236	50.0	15.0	mg/kg	01.19.2021 18:48		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1-Chlorooctane	111-85-3	70	%	70-130	01.19.2021 18:48			
o-Terphenyl	84-15-1	75	%	70-130	01.19.2021 18:48			



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Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-4-S-1-2-210114**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684988-010

Date Collected: 01.14.2021 15:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 10:00

% Moisture:
Basis: Wet Weight

Seq Number: 3148435

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	01.20.2021 22:04	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	01.20.2021 22:04	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	01.20.2021 22:04	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	01.20.2021 22:04	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	01.20.2021 22:04	U	1
Total Xylenes	1330-20-7	<0.000345	0.00200	0.000345	mg/kg	01.20.2021 22:04	U	1
Total BTEX		<0.000345	0.00200	0.000345	mg/kg	01.20.2021 22:04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1,4-Difluorobenzene	540-36-3	97	%	70-130	01.20.2021 22:04			
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.20.2021 22:04			



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Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-4-SD-1-2-210114**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684988-011

Date Collected: 01.14.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.18.2021 16:30

% Moisture:

Seq Number: 3148186

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.97	4.99	0.857	mg/kg	01.19.2021 01:04		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 16:00

% Moisture:

Seq Number: 3148362

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.19.2021 19:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	125	50.0	15.0	mg/kg	01.19.2021 19:26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	69.8	50.0	15.0	mg/kg	01.19.2021 19:26		1
Total TPH	PHC635	195	50.0	15.0	mg/kg	01.19.2021 19:26		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	72		%	70-130	01.19.2021 19:26		
o-Terphenyl	84-15-1	78		%	70-130	01.19.2021 19:26		



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-4-SD-1-2-210114**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684988-011

Date Collected: 01.14.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 10:00

% Moisture:

Seq Number: 3148435

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000389	0.00202	0.000389	mg/kg	01.20.2021 22:25	U	1
Toluene	108-88-3	<0.000460	0.00202	0.000460	mg/kg	01.20.2021 22:25	U	1
Ethylbenzene	100-41-4	<0.000570	0.00202	0.000570	mg/kg	01.20.2021 22:25	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00404	0.00102	mg/kg	01.20.2021 22:25	U	1
o-Xylene	95-47-6	<0.000348	0.00202	0.000348	mg/kg	01.20.2021 22:25	U	1
Total Xylenes	1330-20-7	<0.000348	0.00202	0.000348	mg/kg	01.20.2021 22:25	U	1
Total BTEX		<0.000348	0.00202	0.000348	mg/kg	01.20.2021 22:25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	95	%	70-130	01.20.2021 22:25			
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.20.2021 22:25			



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-4-S-3-4-210114**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684988-012

Date Collected: 01.14.2021 15:23

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.18.2021 16:30

% Moisture:

Seq Number: 3148186

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.4	4.95	0.850	mg/kg	01.19.2021 01:09		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 16:00

% Moisture:

Seq Number: 3148362

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	16.8	50.0	15.0	mg/kg	01.19.2021 19:45	J	1
Diesel Range Organics (DRO)	C10C28DRO	59.1	50.0	15.0	mg/kg	01.19.2021 19:45		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	39.9	50.0	15.0	mg/kg	01.19.2021 19:45	J	1
Total TPH	PHC635	116	50.0	15.0	mg/kg	01.19.2021 19:45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-130	01.19.2021 19:45	
o-Terphenyl	84-15-1	77	%	70-130	01.19.2021 19:45	



Certificate of Analytical Results 684988

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-4-S-3-4-210114**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684988-012

Date Collected: 01.14.2021 15:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 10:00

% Moisture:

Seq Number: 3148435

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	01.20.2021 22:45	U	1
Toluene	108-88-3	<0.000453	0.00199	0.000453	mg/kg	01.20.2021 22:45	U	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	01.20.2021 22:45	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	01.20.2021 22:45	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	01.20.2021 22:45	U	1
Total Xylenes	1330-20-7	<0.000342	0.00199	0.000342	mg/kg	01.20.2021 22:45	U	1
Total BTEX		<0.000342	0.00199	0.000342	mg/kg	01.20.2021 22:45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	97	%	70-130	01.20.2021 22:45			
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.20.2021 22:45			



Blank Summary 684988

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: 7719449-1-BLK

Matrix: SOLID

Lab Sample Id: **7719449-1-BLK**

Analytical Method: **Chloride by EPA 300**

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.18.2021 16:30

Seq Number: 3148186

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	01.18.2021 22:35	U	1



Blank Summary 684988

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: 7719549-1-BLK

Matrix: SOLID

Lab Sample Id: **7719549-1-BLK**

Analytical Method: **TPH By SW8015 Mod**

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 16:00

Seq Number: 3148362

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.19.2021 14:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.19.2021 14:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.19.2021 14:28	U	1



Blank Summary 684988

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: 7719646-1-BLK

Matrix: SOLID

Lab Sample Id: **7719646-1-BLK**

Analytical Method: **BTEX by EPA 8021B**

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 10:00

Seq Number: 3148435

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	01.20.2021 15:32	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	01.20.2021 15:32	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	01.20.2021 15:32	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	01.20.2021 15:32	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.20.2021 15:32	U	1



Form 2 - Surrogate Recoveries

Project Name: WL Well 41

Report Date: 02222021

Work Orders : 684988

Project ID: 03064856-0002B

Lab Batch #: 3148435

Sample: 7719646-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01.20.2021 12:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0316	0.0300	105	70-130	
4-Bromofluorobenzene	0.0279	0.0300	93	70-130	

Lab Batch #: 3148435

Sample: 7719646-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01.20.2021 12:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	70-130	
4-Bromofluorobenzene	0.0283	0.0300	94	70-130	

Lab Batch #: 3148435

Sample: 684987-013 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01.20.2021 14:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	70-130	
4-Bromofluorobenzene	0.0296	0.0300	99	70-130	

Lab Batch #: 3148435

Sample: 684987-013 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01.20.2021 14:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0316	0.0300	105	70-130	
4-Bromofluorobenzene	0.0286	0.0300	95	70-130	

Lab Batch #: 3148435

Sample: 7719646-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01.20.2021 15:32

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	70-130	
4-Bromofluorobenzene	0.0302	0.0300	101	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries**Project Name: WL Well 41****Report Date:** 02222021**Work Orders :** 684988**Project ID:** 03064856-0002B**Lab Batch #:** 3148362**Sample:** 7719549-1-BLK / BLK**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.19.2021 14:28**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	70.1	100	70	70-130	
o-Terphenyl	40.4	50.0	81	70-130	

Lab Batch #: 3148362**Sample:** 7719549-1-BKS / BKS**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.19.2021 14:47**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.4	100	80	70-130	
o-Terphenyl	38.9	50.0	78	70-130	

Lab Batch #: 3148362**Sample:** 7719549-1-BSD / BSD**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.19.2021 15:05**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.6	100	85	70-130	
o-Terphenyl	40.9	50.0	82	70-130	

Lab Batch #: 3148362**Sample:** 684988-001 S / MS**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 01.19.2021 15:42**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.7	99.7	87	70-130	
o-Terphenyl	40.8	49.9	82	70-130	

Lab Batch #: 3148362**Sample:** 684988-001 SD / MSD**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 01.19.2021 16:01**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.1	99.6	85	70-130	
o-Terphenyl	41.5	49.8	83	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Arcadis U.S., Inc WL Well 41

Analytical Method: Chloride by EPA 300

Seq Number: 3148186

MB Sample Id: 7719449-1-BLK

Matrix: Solid

LCS Sample Id: 7719449-1-BKS

Prep Method: E300P

Date Prep: 01.18.2021

LCSD Sample Id: 7719449-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	256	102	258	103	90-110	1	20	mg/kg	01.18.2021 22:40	

Analytical Method: Chloride by EPA 300

Seq Number: 3148186

Parent Sample Id: 684987-012

Matrix: Soil

MS Sample Id: 684987-012 S

Prep Method: E300P

Date Prep: 01.18.2021

MSD Sample Id: 684987-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	481	249	713	93	712	93	90-110	0	20	mg/kg	01.18.2021 22:56	

Analytical Method: Chloride by EPA 300

Seq Number: 3148186

Parent Sample Id: 684988-004

Matrix: Soil

MS Sample Id: 684988-004 S

Prep Method: E300P

Date Prep: 01.18.2021

MSD Sample Id: 684988-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6150	5050	11300	102	11300	102	90-110	0	20	mg/kg	01.19.2021 00:10	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148362

MB Sample Id: 7719549-1-BLK

Matrix: Solid

LCS Sample Id: 7719549-1-BKS

Prep Method: SW8015P

Date Prep: 01.19.2021

LCSD Sample Id: 7719549-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	854	85	871	87	70-130	2	20	mg/kg	01.19.2021 14:47	
Diesel Range Organics (DRO)	<15.0	1000	863	86	880	88	70-130	2	20	mg/kg	01.19.2021 14:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	70		80		85		70-130	%	01.19.2021 14:47
o-Terphenyl	81		78		82		70-130	%	01.19.2021 14:47

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148362

Matrix: Solid

MB Sample Id: 7719549-1-BLK

Prep Method: SW8015P

Date Prep: 01.19.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<15.0	mg/kg	01.19.2021 14:28	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Arcadis U.S., Inc WL Well 41

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148362

Parent Sample Id: 684988-001

Matrix: Soil

MS Sample Id: 684988-001 S

Prep Method: SW8015P

Date Prep: 01.19.2021

MSD Sample Id: 684988-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	803	81	809	81	70-130	1	20	mg/kg	01.19.2021 15:42	
Diesel Range Organics (DRO)	<15.0	997	885	89	891	89	70-130	1	20	mg/kg	01.19.2021 15:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	87		85		70-130	%	01.19.2021 15:42
o-Terphenyl	82		83		70-130	%	01.19.2021 15:42

Analytical Method: BTEX by EPA 8021B

Seq Number: 3148435

MB Sample Id: 7719646-1-BLK

Matrix: Solid

LCS Sample Id: 7719646-1-BKS

Prep Method: SW5035A

Date Prep: 01.20.2021

LCSD Sample Id: 7719646-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.128	128	0.128	128	70-130	0	35	mg/kg	01.20.2021 12:38	
Toluene	<0.000456	0.100	0.116	116	0.117	117	70-130	1	35	mg/kg	01.20.2021 12:38	
Ethylbenzene	<0.000565	0.100	0.118	118	0.119	119	70-130	1	35	mg/kg	01.20.2021 12:38	
m,p-Xylenes	<0.00101	0.200	0.234	117	0.237	119	70-130	1	35	mg/kg	01.20.2021 12:38	
o-Xylene	<0.000344	0.100	0.111	111	0.113	113	70-130	2	35	mg/kg	01.20.2021 12:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		105		104		70-130	%	01.20.2021 12:38
4-Bromofluorobenzene	101		93		94		70-130	%	01.20.2021 12:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3148435

Parent Sample Id: 684987-013

Matrix: Soil

MS Sample Id: 684987-013 S

Prep Method: SW5035A

Date Prep: 01.20.2021

MSD Sample Id: 684987-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.111	111	0.116	116	70-130	4	35	mg/kg	01.20.2021 14:13	
Toluene	<0.000456	0.100	0.0996	100	0.103	103	70-130	3	35	mg/kg	01.20.2021 14:13	
Ethylbenzene	<0.000565	0.100	0.101	101	0.105	105	70-130	4	35	mg/kg	01.20.2021 14:13	
m,p-Xylenes	<0.00101	0.200	0.201	101	0.206	103	70-130	2	35	mg/kg	01.20.2021 14:13	
o-Xylene	<0.000344	0.100	0.0949	95	0.0975	98	70-130	3	35	mg/kg	01.20.2021 14:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	01.20.2021 14:13
4-Bromofluorobenzene	99		95		70-130	%	01.20.2021 14:13

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Eurofins Xenco

1211 W Florida Ave
Midland TX 79701
Phone 432-704-5440

Chain of Custody Record

1084988

Client Information		Sample #	J. Skirvin		Lab File:	Kudchadkar, Sachin G	Carrier Tracking No(s):	COC No:	600-23595-8666.1				
Client Contact:		Phone:	619 851 8172		E-Mail:	sachin.kudchadkar@testamericainc.com		Page:	1 of 2				
Company:		ARCADIS U.S., Inc.											
Address:		1717 W 6th Street, Suite 210		Due Date Requested:									
City:		Austin		TAT Requested (days):		Std							
State, Zip:		TX, 78703		PO #:									
Phone:		281 694 9137		WO #:									
Email:		douglas.jordan@arcadis.com		Project #:		30064862-0002B							
Project Name:		30064862-0002B		SSOW#:									
Site:		WL Well 41		Sample Identification									
		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)					
SB-1-S-O-S-210114		1/14/21	1126	G	Solid								
SB-1-S-1-2-210114			1134		Solid								
SB-1-S-3-3-25-210114			1145		Solid								
SB-2-S-O-S-210114			1203		Solid								
SB-2-S-1-2-210114			1214		Solid								
SB-2-S-3-3-25-210114			1222		Solid								
SB-3-S-O-S-210114			1307		Solid								
SB-3-S-1-2-210114			1315		Solid								
SB-4-S-O-S-210114			1427		Solid								
SB-4-S-1-2-210114			1500		Solid								
SB-4-SD-1-2-210114					Solid								
Possible Hazard Identification		☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological											
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:											
Empty Kit Relinquished by:		Date:	Time:										
Relinquished by:		Date/Time:	1/14/21	1600	Company:	ARCADIS	Received by:	Charles Crayada	Date/Time:	1-14-21	1600	Company:	ARCADIS
Relinquished by:		Date/Time:	1-15-21	1658	Company:	ARCADIS	Received by:		Date/Time:	1-15-21	1658	Company:	
Custody Seals Intact:		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		-4/-9							

Eurofins Xenco

1211 W Florida Ave
Midland TX 79701

Phone 432-704-5440

Chain of Custody Record

084988

[illegible]

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Arcadis U.S., Inc

Date/ Time Received: 01.15.2021 04:58.00 PM

Work Order #: 684988

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by:



Brianna Teel

Date: 01.18.2021

Checklist reviewed by:



John Builes

Date: 01.21.2021

Analytical Report 684989

for

Arcadis U.S., Inc

Project Manager: Morgan Jordan

WL Well 41

30064856-0002B

01.21.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNi02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.21.2021

Project Manager: **Morgan Jordan**

Arcadis U.S., Inc

1717 W 6th Street, Suite 210

Austin, TX 78703

Reference: Eurofins Xenco, LLC Report No(s): **684989**

WL Well 41

Project Address:

Morgan Jordan:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 684989. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 684989 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink, appearing to read "Sachin Kudchadkar", written over a horizontal line.

Sachin Kudchadkar

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 684989****Arcadis U.S., Inc, Austin, TX**

WL Well 41

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-7-S-0-.5-210115	S	01.15.2021 12:00		684989-001
SB-7-S-1-2-210115	S	01.15.2021 12:08		684989-002
SB-7-S-3-4-210115	S	01.15.2021 12:14		684989-003
SB-7-S-5-5.5-210115	S	01.15.2021 12:24		684989-004
SB-8-S-0-.5-210115	S	01.15.2021 12:23		684989-005
SB-8-S-1-2-210115	S	01.15.2021 12:37		684989-006
SB-8-S-3-4-210115	S	01.15.2021 12:45		684989-007
SB-5-S-0-.5-210115	S	01.15.2021 10:23		684989-008
SB-6-S-0-.5-210115	S	01.15.2021 10:54		684989-009
SB-6-S-1-2-210115	S	01.15.2021 11:05		684989-010
SB-6-S-3-4-210115	S	01.15.2021 11:10		684989-011
SB-6-S-5-6-210115	S	01.15.2021 11:14		684989-012



CASE NARRATIVE

Client Name: Arcadis U.S., Inc**Project Name: WL Well 41**Project ID: 30064856-0002B
Work Order Number(s): 684989Report Date: 01.21.2021
Date Received: 01.15.2021

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3148349 Chloride by EPA 300

Lab Sample ID 685064-004 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 684989-011, -012.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3148362 TPH By SW8015 Mod

Surrogate 1-Chlorooctane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 684989-002,684989-008,684989-006,684989-005.

Batch: LBA-3148475 TPH By SW8015 Mod

Surrogate 1-Chlorooctane recovered below QC limits Data confirmed by re-analysis. Samples affected are: 7719656-1-BLK,684989-011,684989-010.



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-7-S-0-.5-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-001

Date Collected: 01.15.2021 12:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.18.2021 16:30

% Moisture:

Seq Number: 3148186

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	37.0	5.03	0.864	mg/kg	01.19.2021 01:14		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 16:00

% Moisture:

Seq Number: 3148362

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	01.19.2021 20:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	20.5	49.9	15.0	mg/kg	01.19.2021 20:04	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.19.2021 20:04	U	1
Total TPH	PHC635	20.5	49.9	15.0	mg/kg	01.19.2021 20:04	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-130	01.19.2021 20:04	
o-Terphenyl	84-15-1	78	%	70-130	01.19.2021 20:04	



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-7-S-0-.5-210115**

Lab Sample Id: 684989-001

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3148435

Matrix: Soil

Date Collected: 01.15.2021 12:00

Date Prep: 01.20.2021 10:00

Date Received:01.15.2021 16:58

Prep Method: SW5035A

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000381	0.00198	0.000381	mg/kg	01.20.2021 23:06	U	1
Toluene	108-88-3	<0.000451	0.00198	0.000451	mg/kg	01.20.2021 23:06	U	1
Ethylbenzene	100-41-4	<0.000559	0.00198	0.000559	mg/kg	01.20.2021 23:06	U	1
m,p-Xylenes	179601-23-1	<0.00100	0.00396	0.00100	mg/kg	01.20.2021 23:06	U	1
o-Xylene	95-47-6	<0.000341	0.00198	0.000341	mg/kg	01.20.2021 23:06	U	1
Total Xylenes	1330-20-7	<0.000341	0.00198	0.000341	mg/kg	01.20.2021 23:06	U	1
Total BTEX		<0.000341	0.00198	0.000341	mg/kg	01.20.2021 23:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.20.2021 23:06	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.20.2021 23:06	



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-7-S-1-2-210115**

Lab Sample Id: 684989-002

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3148368

Matrix: Soil

Date Collected: 01.15.2021 12:08

Date Prep: 01.19.2021 10:38

Date Received:01.15.2021 16:58

Prep Method: E300P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.9	5.02	0.862	mg/kg	01.19.2021 12:41		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3148362

Date Prep: 01.19.2021 16:00

Prep Method: SW8015P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.19.2021 20:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.19.2021 20:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.19.2021 20:23	U	1
Total TPH	PHC635	<15.0	50.0	15.0	mg/kg	01.19.2021 20:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	67	%	70-130	01.19.2021 20:23	**
o-Terphenyl	84-15-1	72	%	70-130	01.19.2021 20:23	



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-7-S-1-2-210115**

Lab Sample Id: 684989-002

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3148435

Matrix: Soil

Date Collected: 01.15.2021 12:08

Date Prep: 01.20.2021 10:00

Date Received:01.15.2021 16:58

Prep Method: SW5035A

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000388	0.00202	0.000388	mg/kg	01.20.2021 23:26	U	1
Toluene	108-88-3	<0.000459	0.00202	0.000459	mg/kg	01.20.2021 23:26	U	1
Ethylbenzene	100-41-4	<0.000569	0.00202	0.000569	mg/kg	01.20.2021 23:26	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	01.20.2021 23:26	U	1
o-Xylene	95-47-6	<0.000347	0.00202	0.000347	mg/kg	01.20.2021 23:26	U	1
Total Xylenes	1330-20-7	<0.000347	0.00202	0.000347	mg/kg	01.20.2021 23:26	U	1
Total BTEX		<0.000347	0.00202	0.000347	mg/kg	01.20.2021 23:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.20.2021 23:26	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.20.2021 23:26	



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-7-S-3-4-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-003

Date Collected: 01.15.2021 12:14

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: SPC

Date Prep: 01.19.2021 10:38

% Moisture:

Seq Number: 3148368

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	300	5.03	0.864	mg/kg	01.19.2021 12:46		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 16:00

% Moisture:

Seq Number: 3148362

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	01.19.2021 20:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	49.9	15.0	mg/kg	01.19.2021 20:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.19.2021 20:42	U	1
Total TPH	PHC635	<15.0	49.9	15.0	mg/kg	01.19.2021 20:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-130	01.19.2021 20:42	
o-Terphenyl	84-15-1	75	%	70-130	01.19.2021 20:42	



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-7-S-3-4-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-003

Date Collected: 01.15.2021 12:14

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 16:30

% Moisture:

Seq Number: 3148440

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	01.21.2021 02:49	U	1
Toluene	108-88-3	<0.000453	0.00199	0.000453	mg/kg	01.21.2021 02:49	U	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	01.21.2021 02:49	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	01.21.2021 02:49	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	01.21.2021 02:49	U	1
Total Xylenes	1330-20-7	<0.000342	0.00199	0.000342	mg/kg	01.21.2021 02:49	U	1
Total BTEX		<0.000342	0.00199	0.000342	mg/kg	01.21.2021 02:49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1,4-Difluorobenzene	540-36-3	92	%	70-130	01.21.2021 02:49			
4-Bromofluorobenzene	460-00-4	112	%	70-130	01.21.2021 02:49			



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-7-S-5-5.5-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-004

Date Collected: 01.15.2021 12:24

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: SPC

Date Prep: 01.19.2021 10:38

% Moisture:

Seq Number: 3148368

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	832	4.96	0.852	mg/kg	01.19.2021 13:02		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 16:00

% Moisture:

Seq Number: 3148362

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	49.8	14.9	mg/kg	01.19.2021 21:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	49.8	14.9	mg/kg	01.19.2021 21:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	49.8	14.9	mg/kg	01.19.2021 21:01	U	1
Total TPH	PHC635	<14.9	49.8	14.9	mg/kg	01.19.2021 21:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-130	01.19.2021 21:01	
o-Terphenyl	84-15-1	77	%	70-130	01.19.2021 21:01	



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-7-S-5-5.5-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-004

Date Collected: 01.15.2021 12:24

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 16:30

% Moisture:

Seq Number: 3148440

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	01.21.2021 03:10	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	01.21.2021 03:10	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	01.21.2021 03:10	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	01.21.2021 03:10	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.21.2021 03:10	U	1
Total Xylenes	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	01.21.2021 03:10	U	1
Total BTEX		<0.000344	0.00200	0.000344	mg/kg	01.21.2021 03:10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.21.2021 03:10			
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.21.2021 03:10			



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-8-S-0-.5-210115**

Lab Sample Id: 684989-005

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3148368

Matrix: Soil

Date Collected: 01.15.2021 12:23

Date Prep: 01.19.2021 10:38

Date Received:01.15.2021 16:58

Prep Method: E300P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	69.4	4.99	0.857	mg/kg	01.19.2021 13:07		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3148362

Date Prep: 01.19.2021 16:00

Prep Method: SW8015P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.19.2021 21:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.19.2021 21:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.19.2021 21:21	U	1
Total TPH	PHC635	<15.0	50.0	15.0	mg/kg	01.19.2021 21:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	65	%	70-130	01.19.2021 21:21	**
o-Terphenyl	84-15-1	71	%	70-130	01.19.2021 21:21	



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-8-S-0-.5-210115**

Lab Sample Id: 684989-005

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3148440

Matrix: Soil

Date Collected: 01.15.2021 12:23

Date Prep: 01.20.2021 16:30

Date Received:01.15.2021 16:58

Prep Method: SW5035A

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	01.21.2021 03:30	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	01.21.2021 03:30	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	01.21.2021 03:30	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	01.21.2021 03:30	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	01.21.2021 03:30	U	1
Total Xylenes	1330-20-7	<0.000342	0.00198	0.000342	mg/kg	01.21.2021 03:30	U	1
Total BTEX		<0.000342	0.00198	0.000342	mg/kg	01.21.2021 03:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.21.2021 03:30	
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.21.2021 03:30	



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-8-S-1-2-210115**

Lab Sample Id: 684989-006

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3148368

Matrix: Soil

Date Collected: 01.15.2021 12:37

Date Prep: 01.19.2021 10:38

Date Received:01.15.2021 16:58

Prep Method: E300P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	66.4	4.98	0.855	mg/kg	01.19.2021 13:12		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3148362

Date Prep: 01.19.2021 16:00

Prep Method: SW8015P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.19.2021 21:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.19.2021 21:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.19.2021 21:40	U	1
Total TPH	PHC635	<15.0	50.0	15.0	mg/kg	01.19.2021 21:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	68	%	70-130	01.19.2021 21:40	**
o-Terphenyl	84-15-1	73	%	70-130	01.19.2021 21:40	



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-8-S-1-2-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-006

Date Collected: 01.15.2021 12:37

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 16:30

% Moisture:

Seq Number: 3148440

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	01.21.2021 03:51	U	1
Toluene	108-88-3	<0.000453	0.00199	0.000453	mg/kg	01.21.2021 03:51	U	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	01.21.2021 03:51	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	01.21.2021 03:51	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	01.21.2021 03:51	U	1
Total Xylenes	1330-20-7	<0.000342	0.00199	0.000342	mg/kg	01.21.2021 03:51	U	1
Total BTEX		<0.000342	0.00199	0.000342	mg/kg	01.21.2021 03:51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	108	%	70-130	01.21.2021 03:51			
1,4-Difluorobenzene	540-36-3	100	%	70-130	01.21.2021 03:51			



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-8-S-3-4-210115**

Lab Sample Id: 684989-007

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3148368

Matrix: Soil

Date Collected: 01.15.2021 12:45

Date Prep: 01.19.2021 10:38

Date Received:01.15.2021 16:58

Prep Method: E300P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	374	5.01	0.860	mg/kg	01.19.2021 13:18		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3148362

Date Prep: 01.19.2021 16:00

Prep Method: SW8015P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	49.9	15.0	mg/kg	01.19.2021 21:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	17.1	49.9	15.0	mg/kg	01.19.2021 21:59	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	49.9	15.0	mg/kg	01.19.2021 21:59	U	1
Total TPH	PHC635	17.1	49.9	15.0	mg/kg	01.19.2021 21:59	J	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1-Chlorooctane	111-85-3	70	%	70-130	01.19.2021 21:59			
o-Terphenyl	84-15-1	78	%	70-130	01.19.2021 21:59			



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-8-S-3-4-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-007

Date Collected: 01.15.2021 12:45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 16:30

% Moisture:

Seq Number: 3148440

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000381	0.00198	0.000381	mg/kg	01.21.2021 04:11	U	1
Toluene	108-88-3	<0.000451	0.00198	0.000451	mg/kg	01.21.2021 04:11	U	1
Ethylbenzene	100-41-4	<0.000559	0.00198	0.000559	mg/kg	01.21.2021 04:11	U	1
m,p-Xylenes	179601-23-1	<0.00100	0.00396	0.00100	mg/kg	01.21.2021 04:11	U	1
o-Xylene	95-47-6	<0.000341	0.00198	0.000341	mg/kg	01.21.2021 04:11	U	1
Total Xylenes	1330-20-7	<0.000341	0.00198	0.000341	mg/kg	01.21.2021 04:11	U	1
Total BTEX		<0.000341	0.00198	0.000341	mg/kg	01.21.2021 04:11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	102	%	70-130	01.21.2021 04:11			
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.21.2021 04:11			



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-5-S-0-.5-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-008

Date Collected: 01.15.2021 10:23

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: SPC

Date Prep: 01.19.2021 10:38

% Moisture:

Seq Number: 3148368

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2710	24.8	4.26	mg/kg	01.19.2021 13:23		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 16:00

% Moisture:

Seq Number: 3148362

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.19.2021 22:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	39.9	50.0	15.0	mg/kg	01.19.2021 22:18	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	16.9	50.0	15.0	mg/kg	01.19.2021 22:18	J	1
Total TPH	PHC635	56.8	50.0	15.0	mg/kg	01.19.2021 22:18		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	66	%	70-130	01.19.2021 22:18	**
o-Terphenyl	84-15-1	72	%	70-130	01.19.2021 22:18	



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-5-S-0-.5-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-008

Date Collected: 01.15.2021 10:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 16:30

% Moisture:

Seq Number: 3148440

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000389	0.00202	0.000389	mg/kg	01.21.2021 04:32	U	1
Toluene	108-88-3	<0.000460	0.00202	0.000460	mg/kg	01.21.2021 04:32	U	1
Ethylbenzene	100-41-4	<0.000570	0.00202	0.000570	mg/kg	01.21.2021 04:32	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00404	0.00102	mg/kg	01.21.2021 04:32	U	1
o-Xylene	95-47-6	<0.000348	0.00202	0.000348	mg/kg	01.21.2021 04:32	U	1
Total Xylenes	1330-20-7	<0.000348	0.00202	0.000348	mg/kg	01.21.2021 04:32	U	1
Total BTEX		<0.000348	0.00202	0.000348	mg/kg	01.21.2021 04:32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	107	%	70-130	01.21.2021 04:32			
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.21.2021 04:32			



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-6-S-0-.5-210115**

Lab Sample Id: 684989-009

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3148368

Matrix: Soil

Date Collected: 01.15.2021 10:54

Date Prep: 01.19.2021 10:38

Date Received:01.15.2021 16:58

Prep Method: E300P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29.6	5.00	0.858	mg/kg	01.19.2021 13:28		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3148361

Date Prep: 01.19.2021 08:00

Prep Method: SW8015P

% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.19.2021 12:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	116	50.0	15.0	mg/kg	01.19.2021 12:55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	76.6	50.0	15.0	mg/kg	01.19.2021 12:55		1
Total TPH	PHC635	193	50.0	15.0	mg/kg	01.19.2021 12:55		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	72		%	70-130	01.19.2021 12:55		
o-Terphenyl	84-15-1	79		%	70-130	01.19.2021 12:55		



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-6-S-0-.5-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-009

Date Collected: 01.15.2021 10:54

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 16:30

% Moisture:

Basis: Wet Weight

Seq Number: 3148440

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	01.21.2021 04:52	U	1
Toluene	108-88-3	<0.000453	0.00199	0.000453	mg/kg	01.21.2021 04:52	U	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	01.21.2021 04:52	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	01.21.2021 04:52	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	01.21.2021 04:52	U	1
Total Xylenes	1330-20-7	<0.000342	0.00199	0.000342	mg/kg	01.21.2021 04:52	U	1
Total BTEX		<0.000342	0.00199	0.000342	mg/kg	01.21.2021 04:52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1,4-Difluorobenzene	540-36-3	100	%	70-130	01.21.2021 04:52			
4-Bromofluorobenzene	460-00-4	110	%	70-130	01.21.2021 04:52			



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-6-S-1-2-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-010

Date Collected: 01.15.2021 11:05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: SPC

Date Prep: 01.19.2021 10:38

% Moisture:

Seq Number: 3148368

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.21	5.03	0.864	mg/kg	01.19.2021 13:33		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.20.2021 11:00

% Moisture:

Seq Number: 3148475

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	49.8	14.9	mg/kg	01.20.2021 18:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	49.8	14.9	mg/kg	01.20.2021 18:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	49.8	14.9	mg/kg	01.20.2021 18:41	U	1
Total TPH	PHC635	<14.9	49.8	14.9	mg/kg	01.20.2021 18:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	68	%	70-130	01.20.2021 18:41	**
o-Terphenyl	84-15-1	79	%	70-130	01.20.2021 18:41	



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: **SB-6-S-1-2-210115**

Lab Sample Id: 684989-010

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3148440

Matrix: Soil

Date Collected: 01.15.2021 11:05

Date Prep: 01.20.2021 16:30

Date Received:01.15.2021 16:58

Prep Method: SW5035A

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	01.21.2021 05:12	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	01.21.2021 05:12	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	01.21.2021 05:12	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	01.21.2021 05:12	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.21.2021 05:12	U	1
Total Xylenes	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	01.21.2021 05:12	U	1
Total BTEX		<0.000344	0.00200	0.000344	mg/kg	01.21.2021 05:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	01.21.2021 05:12	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.21.2021 05:12	



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-6-S-3-4-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-011

Date Collected: 01.15.2021 11:10

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: SPC

Date Prep: 01.19.2021 11:25

% Moisture:

Seq Number: 3148349

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	36.5	4.96	0.852	mg/kg	01.20.2021 09:56		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.20.2021 11:00

% Moisture:

Seq Number: 3148475

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	16.4	50.0	15.0	mg/kg	01.20.2021 19:00	J	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.20.2021 19:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.20.2021 19:00	U	1
Total TPH	PHC635	16.4	50.0	15.0	mg/kg	01.20.2021 19:00	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	65	%	70-130	01.20.2021 19:00	**
o-Terphenyl	84-15-1	76	%	70-130	01.20.2021 19:00	



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-6-S-3-4-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-011

Date Collected: 01.15.2021 11:10

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 16:30

% Moisture:

Seq Number: 3148440

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	01.21.2021 05:33	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	01.21.2021 05:33	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	01.21.2021 05:33	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	01.21.2021 05:33	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.21.2021 05:33	U	1
Total Xylenes	1330-20-7	<0.000344	0.00200	0.000344	mg/kg	01.21.2021 05:33	U	1
Total BTEX		<0.000344	0.00200	0.000344	mg/kg	01.21.2021 05:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.21.2021 05:33			
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.21.2021 05:33			



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-6-S-5-6-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-012

Date Collected: 01.15.2021 11:14

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: SPC

Date Prep: 01.19.2021 11:25

% Moisture:

Seq Number: 3148349

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	80.6	4.99	0.857	mg/kg	01.20.2021 09:34	X	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.20.2021 11:00

% Moisture:

Seq Number: 3148475

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.20.2021 19:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.20.2021 19:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.20.2021 19:19	U	1
Total TPH	PHC635	<15.0	50.0	15.0	mg/kg	01.20.2021 19:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-130	01.20.2021 19:19	
o-Terphenyl	84-15-1	94	%	70-130	01.20.2021 19:19	



Certificate of Analytical Results 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: **SB-6-S-5-6-210115**

Matrix: Soil

Date Received: 01.15.2021 16:58

Lab Sample Id: 684989-012

Date Collected: 01.15.2021 11:14

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 16:30

% Moisture:

Seq Number: 3148440

Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	01.21.2021 05:53	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	01.21.2021 05:53	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	01.21.2021 05:53	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	01.21.2021 05:53	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	01.21.2021 05:53	U	1
Total Xylenes	1330-20-7	<0.000342	0.00198	0.000342	mg/kg	01.21.2021 05:53	U	1
Total BTEX		<0.000342	0.00198	0.000342	mg/kg	01.21.2021 05:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	104	%	70-130	01.21.2021 05:53			
1,4-Difluorobenzene	540-36-3	100	%	70-130	01.21.2021 05:53			



Blank Summary 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: 7719449-1-BLK

Matrix: SOLID

Lab Sample Id: **7719449-1-BLK**

Analytical Method: **Chloride by EPA 300**

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.18.2021 16:30

Seq Number: 3148186

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	01.18.2021 22:35	U	1



Blank Summary 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: 7719484-1-BLK

Matrix: SOLID

Lab Sample Id: **7719484-1-BLK**

Analytical Method: **Chloride by EPA 300**

Prep Method: E300P

Tech: SPC

Analyst: SPC

Date Prep: 01.19.2021 10:38

Seq Number: 3148368

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	01.19.2021 10:56	U	1



Blank Summary 684989

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: 7719489-1-BLK Matrix: SOLID
Lab Sample Id: 7719489-1-BLK

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: SPC
Analyst: SPC Date Prep: 01.19.2021 11:25
Seq Number: 3148349

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	01.20.2021 09:12	U	1



Blank Summary 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: 7719548-1-BLK

Matrix: SOLID

Lab Sample Id: **7719548-1-BLK**

Analytical Method: **TPH By SW8015 Mod**

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 08:00

Seq Number: 3148361

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.19.2021 08:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.19.2021 08:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.19.2021 08:13	U	1



Blank Summary 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: 7719549-1-BLK

Matrix: SOLID

Lab Sample Id: **7719549-1-BLK**

Analytical Method: **TPH By SW8015 Mod**

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.19.2021 16:00

Seq Number: 3148362

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.19.2021 14:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.19.2021 14:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.19.2021 14:28	U	1



Blank Summary 684989

Arcadis U.S., Inc, Austin, TX
WL Well 41

Sample Id: 7719646-1-BLK Matrix: SOLID
Lab Sample Id: 7719646-1-BLK

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
Tech: KTL
Analyst: KTL Date Prep: 01.20.2021 10:00
Seq Number: 3148435

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	01.20.2021 15:32	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	01.20.2021 15:32	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	01.20.2021 15:32	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	01.20.2021 15:32	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.20.2021 15:32	U	1



Blank Summary 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: 7719647-1-BLK

Matrix: SOLID

Lab Sample Id: **7719647-1-BLK**

Analytical Method: **BTEX by EPA 8021B**

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.20.2021 16:30

Seq Number: 3148440

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	01.21.2021 02:28	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	01.21.2021 02:28	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	01.21.2021 02:28	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	01.21.2021 02:28	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	01.21.2021 02:28	U	1



Blank Summary 684989

Arcadis U.S., Inc, Austin, TX

WL Well 41

Sample Id: 7719656-1-BLK

Matrix: SOLID

Lab Sample Id: **7719656-1-BLK**

Analytical Method: **TPH By SW8015 Mod**

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.20.2021 11:00

Seq Number: 3148475

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	50.0	15.0	mg/kg	01.20.2021 11:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	50.0	15.0	mg/kg	01.20.2021 11:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	50.0	15.0	mg/kg	01.20.2021 11:47	U	1

Form 2 - Surrogate Recoveries**Project Name: WL Well 41****Report Date:** 01212021**Work Orders :** 684989**Project ID:** 30064856-0002B**Lab Batch #:** 3148435**Sample:** 7719646-1-BKS / BKS**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.20.2021 12:38**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0316	0.0300	105	70-130	
4-Bromofluorobenzene	0.0279	0.0300	93	70-130	

Lab Batch #: 3148435**Sample:** 7719646-1-BSD / BSD**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.20.2021 12:59**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0312	0.0300	104	70-130	
4-Bromofluorobenzene	0.0283	0.0300	94	70-130	

Lab Batch #: 3148435**Sample:** 684987-013 S / MS**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 01.20.2021 14:13**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0313	0.0300	104	70-130	
4-Bromofluorobenzene	0.0296	0.0300	99	70-130	

Lab Batch #: 3148435**Sample:** 684987-013 SD / MSD**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 01.20.2021 14:34**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0316	0.0300	105	70-130	
4-Bromofluorobenzene	0.0286	0.0300	95	70-130	

Lab Batch #: 3148435**Sample:** 7719646-1-BLK / BLK**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.20.2021 15:32**SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0282	0.0300	94	70-130	
4-Bromofluorobenzene	0.0302	0.0300	101	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: WL Well 41

Report Date: 01212021

Work Orders : 684989

Project ID: 30064856-0002B

Lab Batch #: 3148440

Sample: 7719647-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01.21.2021 00:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	70-130	
4-Bromofluorobenzene	0.0323	0.0300	108	70-130	

Lab Batch #: 3148440

Sample: 7719647-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01.21.2021 00:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	70-130	
4-Bromofluorobenzene	0.0280	0.0300	93	70-130	

Lab Batch #: 3148440

Sample: 684989-003 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01.21.2021 01:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	70-130	
4-Bromofluorobenzene	0.0295	0.0300	98	70-130	

Lab Batch #: 3148440

Sample: 684989-003 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01.21.2021 01:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	70-130	
4-Bromofluorobenzene	0.0305	0.0300	102	70-130	

Lab Batch #: 3148440

Sample: 7719647-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01.21.2021 02:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	70-130	
4-Bromofluorobenzene	0.0329	0.0300	110	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries**Project Name: WL Well 41****Report Date:** 01212021**Work Orders :** 684989**Project ID:** 30064856-0002B**Lab Batch #:** 3148361**Sample:** 7719548-1-BLK / BLK**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.19.2021 08:13**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	70.3	100	70	70-130	
o-Terphenyl	40.9	50.0	82	70-130	

Lab Batch #: 3148361**Sample:** 7719548-1-BKS / BKS**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.19.2021 08:33**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.9	100	87	70-130	
o-Terphenyl	40.1	50.0	80	70-130	

Lab Batch #: 3148361**Sample:** 7719548-1-BSD / BSD**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.19.2021 08:52**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.1	100	90	70-130	
o-Terphenyl	39.4	50.0	79	70-130	

Lab Batch #: 3148361**Sample:** 684953-041 S / MS**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 01.19.2021 09:30**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.9	99.8	93	70-130	
o-Terphenyl	39.2	49.9	79	70-130	

Lab Batch #: 3148361**Sample:** 684953-041 SD / MSD**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 01.19.2021 09:49**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.8	99.8	86	70-130	
o-Terphenyl	37.5	49.9	75	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries**Project Name: WL Well 41****Report Date:** 01212021**Work Orders :** 684989**Project ID:** 30064856-0002B**Lab Batch #:** 3148362**Sample:** 7719549-1-BLK / BLK**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.19.2021 14:28**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	70.1	100	70	70-130	
o-Terphenyl	40.4	50.0	81	70-130	

Lab Batch #: 3148362**Sample:** 7719549-1-BKS / BKS**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.19.2021 14:47**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.4	100	80	70-130	
o-Terphenyl	38.9	50.0	78	70-130	

Lab Batch #: 3148362**Sample:** 7719549-1-BSD / BSD**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.19.2021 15:05**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.6	100	85	70-130	
o-Terphenyl	40.9	50.0	82	70-130	

Lab Batch #: 3148362**Sample:** 684988-001 S / MS**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 01.19.2021 15:42**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.7	99.7	87	70-130	
o-Terphenyl	40.8	49.9	82	70-130	

Lab Batch #: 3148362**Sample:** 684988-001 SD / MSD**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 01.19.2021 16:01**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.1	99.6	85	70-130	
o-Terphenyl	41.5	49.8	83	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries**Project Name: WL Well 41****Report Date:** 01212021**Work Orders :** 684989**Project ID:** 30064856-0002B**Lab Batch #:** 3148475**Sample:** 7719656-1-BLK / BLK**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.20.2021 11:47**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	60.7	100	61	70-130	**
o-Terphenyl	36.8	50.0	74	70-130	

Lab Batch #: 3148475**Sample:** 7719656-1-BKS / BKS**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.20.2021 12:06**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.4	100	77	70-130	
o-Terphenyl	38.0	50.0	76	70-130	

Lab Batch #: 3148475**Sample:** 7719656-1-BSD / BSD**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 01.20.2021 12:25**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.9	100	76	70-130	
o-Terphenyl	36.4	50.0	73	70-130	

Lab Batch #: 3148475**Sample:** 685285-001 S / MS**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 01.20.2021 13:03**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.3	99.7	91	70-130	
o-Terphenyl	41.4	49.9	83	70-130	

Lab Batch #: 3148475**Sample:** 685285-001 SD / MSD**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 01.20.2021 13:22**SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.8	99.9	78	70-130	
o-Terphenyl	36.5	50.0	73	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Arcadis U.S., Inc WL Well 41

Analytical Method: Chloride by EPA 300

Seq Number: 3148186

MB Sample Id: 7719449-1-BLK

Matrix: Solid

LCS Sample Id: 7719449-1-BKS

Prep Method: E300P

Date Prep: 01.18.2021

LCSD Sample Id: 7719449-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	256	102	258	103	90-110	1	20	mg/kg	01.18.2021 22:40	

Analytical Method: Chloride by EPA 300

Seq Number: 3148368

MB Sample Id: 7719484-1-BLK

Matrix: Solid

LCS Sample Id: 7719484-1-BKS

Prep Method: E300P

Date Prep: 01.19.2021

LCSD Sample Id: 7719484-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	253	101	252	101	90-110	0	20	mg/kg	01.19.2021 11:01	

Analytical Method: Chloride by EPA 300

Seq Number: 3148349

MB Sample Id: 7719489-1-BLK

Matrix: Solid

LCS Sample Id: 7719489-1-BKS

Prep Method: E300P

Date Prep: 01.19.2021

LCSD Sample Id: 7719489-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	258	103	259	104	90-110	0	20	mg/kg	01.20.2021 09:19	

Analytical Method: Chloride by EPA 300

Seq Number: 3148186

Parent Sample Id: 684987-012

Matrix: Soil

MS Sample Id: 684987-012 S

Prep Method: E300P

Date Prep: 01.18.2021

MSD Sample Id: 684987-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	481	249	713	93	712	93	90-110	0	20	mg/kg	01.18.2021 22:56	

Analytical Method: Chloride by EPA 300

Seq Number: 3148186

Parent Sample Id: 684988-004

Matrix: Soil

MS Sample Id: 684988-004 S

Prep Method: E300P

Date Prep: 01.18.2021

MSD Sample Id: 684988-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6150	5050	11300	102	11300	102	90-110	0	20	mg/kg	01.19.2021 00:10	

Analytical Method: Chloride by EPA 300

Seq Number: 3148368

Parent Sample Id: 684953-001

Matrix: Soil

MS Sample Id: 684953-001 S

Prep Method: E300P

Date Prep: 01.19.2021

MSD Sample Id: 684953-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.853	249	248	100	248	100	90-110	0	20	mg/kg	01.19.2021 11:17	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Arcadis U.S., Inc WL Well 41

Analytical Method: Chloride by EPA 300

Seq Number: 3148368

Parent Sample Id: 684953-011

Matrix: Soil

MS Sample Id: 684953-011 S

Prep Method: E300P

Date Prep: 01.19.2021

MSD Sample Id: 684953-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.40	252	246	95	245	95	90-110	0	20	mg/kg	01.19.2021 12:31	

Analytical Method: Chloride by EPA 300

Seq Number: 3148349

Parent Sample Id: 684989-012

Matrix: Soil

MS Sample Id: 684989-012 S

Prep Method: E300P

Date Prep: 01.19.2021

MSD Sample Id: 684989-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	80.6	250	363	113	344	105	90-110	5	20	mg/kg	01.20.2021 09:41	X

Analytical Method: Chloride by EPA 300

Seq Number: 3148349

Parent Sample Id: 685064-004

Matrix: Soil

MS Sample Id: 685064-004 S

Prep Method: E300P

Date Prep: 01.19.2021

MSD Sample Id: 685064-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3050	1260	4450	111	4470	113	90-110	0	20	mg/kg	01.20.2021 11:05	X

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148361

MB Sample Id: 7719548-1-BLK

Matrix: Solid

LCS Sample Id: 7719548-1-BKS

Prep Method: SW8015P

Date Prep: 01.19.2021

LCSD Sample Id: 7719548-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	811	81	893	89	70-130	10	20	mg/kg	01.19.2021 08:33	
Diesel Range Organics (DRO)	<15.0	1000	888	89	907	91	70-130	2	20	mg/kg	01.19.2021 08:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	70		87		90		70-130	%	01.19.2021 08:33
o-Terphenyl	82		80		79		70-130	%	01.19.2021 08:33

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148362

MB Sample Id: 7719549-1-BLK

Matrix: Solid

LCS Sample Id: 7719549-1-BKS

Prep Method: SW8015P

Date Prep: 01.19.2021

LCSD Sample Id: 7719549-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	854	85	871	87	70-130	2	20	mg/kg	01.19.2021 14:47	
Diesel Range Organics (DRO)	<15.0	1000	863	86	880	88	70-130	2	20	mg/kg	01.19.2021 14:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	70		80		85		70-130	%	01.19.2021 14:47
o-Terphenyl	81		78		82		70-130	%	01.19.2021 14:47

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Arcadis U.S., Inc
WL Well 41

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148475

MB Sample Id: 7719656-1-BLK

Matrix: Solid

LCS Sample Id: 7719656-1-BKS

Prep Method: SW8015P

Date Prep: 01.20.2021

LCSD Sample Id: 7719656-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	824	82	861	86	70-130	4	20	mg/kg	01.20.2021 12:06	
Diesel Range Organics (DRO)	<15.0	1000	841	84	836	84	70-130	1	20	mg/kg	01.20.2021 12:06	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag		LCSD %Rec	LCSD Flag		Limits	Units	Analysis Date	
1-Chlorooctane	61	**	77			76			70-130	%	01.20.2021 12:06	
o-Terphenyl	74		76			73			70-130	%	01.20.2021 12:06	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148361

Matrix: Solid

MB Sample Id: 7719548-1-BLK

Prep Method: SW8015P

Date Prep: 01.19.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<15.0	mg/kg	01.19.2021 08:13	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148362

Matrix: Solid

MB Sample Id: 7719549-1-BLK

Prep Method: SW8015P

Date Prep: 01.19.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<15.0	mg/kg	01.19.2021 14:28	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148475

Matrix: Solid

MB Sample Id: 7719656-1-BLK

Prep Method: SW8015P

Date Prep: 01.20.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<15.0	mg/kg	01.20.2021 11:47	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148361

Matrix: Soil

Parent Sample Id: 684953-041

MS Sample Id: 684953-041 S

Prep Method: SW8015P

Date Prep: 01.19.2021

MSD Sample Id: 684953-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	998	844	85	871	87	70-130	3	20	mg/kg	01.19.2021 09:30	
Diesel Range Organics (DRO)	<15.0	998	850	85	841	84	70-130	1	20	mg/kg	01.19.2021 09:30	
Surrogate			MS %Rec	MS Flag		MSD %Rec	MSD Flag		Limits	Units	Analysis Date	
1-Chlorooctane			93			86			70-130	%	01.19.2021 09:30	
o-Terphenyl			79			75			70-130	%	01.19.2021 09:30	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference $[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD ResultMS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Arcadis U.S., Inc WL Well 41

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148362

Parent Sample Id: 684988-001

Matrix: Soil

MS Sample Id: 684988-001 S

Prep Method: SW8015P

Date Prep: 01.19.2021

MSD Sample Id: 684988-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	803	81	809	81	70-130	1	20	mg/kg	01.19.2021 15:42	
Diesel Range Organics (DRO)	<15.0	997	885	89	891	89	70-130	1	20	mg/kg	01.19.2021 15:42	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	87		85		70-130	%	01.19.2021 15:42
o-Terphenyl	82		83		70-130	%	01.19.2021 15:42

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148475

Parent Sample Id: 685285-001

Matrix: Soil

MS Sample Id: 685285-001 S

Prep Method: SW8015P

Date Prep: 01.20.2021

MSD Sample Id: 685285-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	890	89	782	78	70-130	13	20	mg/kg	01.20.2021 13:03	
Diesel Range Organics (DRO)	<15.0	997	902	90	772	77	70-130	16	20	mg/kg	01.20.2021 13:03	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		78		70-130	%	01.20.2021 13:03
o-Terphenyl	83		73		70-130	%	01.20.2021 13:03

Analytical Method: BTEX by EPA 8021B

Seq Number: 3148435

MB Sample Id: 7719646-1-BLK

Matrix: Solid

LCS Sample Id: 7719646-1-BKS

Prep Method: SW5035A

Date Prep: 01.20.2021

LCSD Sample Id: 7719646-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.128	128	0.128	128	70-130	0	35	mg/kg	01.20.2021 12:38	
Toluene	<0.000456	0.100	0.116	116	0.117	117	70-130	1	35	mg/kg	01.20.2021 12:38	
Ethylbenzene	<0.000565	0.100	0.118	118	0.119	119	70-130	1	35	mg/kg	01.20.2021 12:38	
m,p-Xylenes	<0.00101	0.200	0.234	117	0.237	119	70-130	1	35	mg/kg	01.20.2021 12:38	
o-Xylene	<0.000344	0.100	0.111	111	0.113	113	70-130	2	35	mg/kg	01.20.2021 12:38	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		105		104		70-130	%	01.20.2021 12:38
4-Bromofluorobenzene	101		93		94		70-130	%	01.20.2021 12:38

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Arcadis U.S., Inc
WL Well 41

Analytical Method: BTEX by EPA 8021B

Seq Number: 3148440

Matrix: Solid

Prep Method: SW5035A

Date Prep: 01.20.2021

MB Sample Id: 7719647-1-BLK

LCS Sample Id: 7719647-1-BKS

LCSD Sample Id: 7719647-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.117	117	0.126	126	70-130	7	35	mg/kg	01.21.2021 00:28	
Toluene	<0.000456	0.100	0.106	106	0.111	111	70-130	5	35	mg/kg	01.21.2021 00:28	
Ethylbenzene	<0.000565	0.100	0.110	110	0.113	113	70-130	3	35	mg/kg	01.21.2021 00:28	
m,p-Xylenes	<0.00101	0.200	0.220	110	0.222	111	70-130	1	35	mg/kg	01.21.2021 00:28	
o-Xylene	<0.000344	0.100	0.107	107	0.107	107	70-130	0	35	mg/kg	01.21.2021 00:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		105		105		70-130	%	01.21.2021 00:28
4-Bromofluorobenzene	110		108		93		70-130	%	01.21.2021 00:28

Analytical Method: BTEX by EPA 8021B

Seq Number: 3148435

Matrix: Soil

Prep Method: SW5035A

Date Prep: 01.20.2021

Parent Sample Id: 684987-013

MS Sample Id: 684987-013 S

MSD Sample Id: 684987-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.111	111	0.116	116	70-130	4	35	mg/kg	01.20.2021 14:13	
Toluene	<0.000456	0.100	0.0996	100	0.103	103	70-130	3	35	mg/kg	01.20.2021 14:13	
Ethylbenzene	<0.000565	0.100	0.101	101	0.105	105	70-130	4	35	mg/kg	01.20.2021 14:13	
m,p-Xylenes	<0.00101	0.200	0.201	101	0.206	103	70-130	2	35	mg/kg	01.20.2021 14:13	
o-Xylene	<0.000344	0.100	0.0949	95	0.0975	98	70-130	3	35	mg/kg	01.20.2021 14:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	01.20.2021 14:13
4-Bromofluorobenzene	99		95		70-130	%	01.20.2021 14:13

Analytical Method: BTEX by EPA 8021B

Seq Number: 3148440

Matrix: Soil

Prep Method: SW5035A

Date Prep: 01.20.2021

Parent Sample Id: 684989-003

MS Sample Id: 684989-003 S

MSD Sample Id: 684989-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0969	97	0.103	103	70-130	6	35	mg/kg	01.21.2021 01:09	
Toluene	<0.000456	0.100	0.0855	86	0.0915	92	70-130	7	35	mg/kg	01.21.2021 01:09	
Ethylbenzene	<0.000565	0.100	0.0867	87	0.0952	95	70-130	9	35	mg/kg	01.21.2021 01:09	
m,p-Xylenes	<0.00101	0.200	0.171	86	0.190	95	70-130	11	35	mg/kg	01.21.2021 01:09	
o-Xylene	<0.000344	0.100	0.0819	82	0.0905	91	70-130	10	35	mg/kg	01.21.2021 01:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		105		70-130	%	01.21.2021 01:09
4-Bromofluorobenzene	98		102		70-130	%	01.21.2021 01:09

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Phone 432-704-5440

084989

Final 1,000

Eurofins Xenco
1211 W Florida Ave
Midland TX 79701
Phone 432-704-5440

Chain of Custody Record

1084989

[illegible]

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Arcadis U.S., Inc

Date/ Time Received: 01.15.2021 04:58.00 PM

Work Order #: 684989

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	-.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

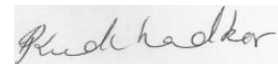
Checklist completed by:



Brianna Teel

Date: 01.18.2021

Checklist reviewed by:



Sachin Kudchadkar

Date: 01.18.2021



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Douglas Jordan
ARCADIS U.S. Inc
10205 Westheimer Rd
Suite 800
Houston, Texas 77042
Generated 4/6/2023 11:02:59 AM

JOB DESCRIPTION

WLU Well 41

JOB NUMBER

880-26346-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

Eurofins Midland

Job Notes

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

Authorization



Generated
4/6/2023 11:02:59 AM

Authorized for release by
John Builes, Project Manager
John.Builes@et.eurofinsus.com
(561)558-4549

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Laboratory Job ID: 880-26346-1

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Definitions/Glossary

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Job ID: 880-26346-1

Laboratory: Eurofins Midland

Narrative

Job Narrative 880-26346-1

Receipt

The samples were received on 3/24/2023 3:09 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-50193/5-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: The method blank for preparation batch 880-49838 and analytical batch 880-49908 contained Diesel Range Organics (Over C10-C28) and Oil Range Organics (Over C28-C36) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-49908/5), (LCS 880-49838/2-A) and (LCSD 880-49838/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-49838 and analytical batch 880-49908 was outside the upper control limits.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-50169 and analytical batch 880-50389 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits. SB-12-S-0-.5'-20230323 (880-26346-1), SB-12-S-2'-20230323 (880-26346-2), SB-12-S-4'-20230323 (880-26346-3), SB-11-S-.5'-20230323 (880-26346-4) and SB-11-S-2'-20230323 (880-26346-5)

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

Client Sample Results

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Client Sample ID: SB-12-S-0-.5'-20230323

Lab Sample ID: 880-26346-1

Date Collected: 03/23/23 11:30

Matrix: Solid

Date Received: 03/24/23 15:09

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		04/03/23 13:16	04/05/23 16:50	1
Toluene	<0.000453	U	0.00199	0.000453	mg/Kg		04/03/23 13:16	04/05/23 16:50	1
Ethylbenzene	<0.000562	U	0.00199	0.000562	mg/Kg		04/03/23 13:16	04/05/23 16:50	1
m-Xylene & p-Xylene	<0.00100	U	0.00398	0.00100	mg/Kg		04/03/23 13:16	04/05/23 16:50	1
o-Xylene	<0.000342	U	0.00199	0.000342	mg/Kg		04/03/23 13:16	04/05/23 16:50	1
Xylenes, Total	<0.00100	U	0.00398	0.00100	mg/Kg		04/03/23 13:16	04/05/23 16:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130	04/03/23 13:16	04/05/23 16:50	1
1,4-Difluorobenzene (Surr)	93		70 - 130	04/03/23 13:16	04/05/23 16:50	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	38.3	J	50.0	15.0	mg/Kg			03/31/23 11:54	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	18.1	J	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 16:47	1
Diesel Range Organics (Over C10-C28)	20.2	J B	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 16:47	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 16:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130	03/29/23 12:35	03/30/23 16:47	1
o-Terphenyl	107		70 - 130	03/29/23 12:35	03/30/23 16:47	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	203		5.05	0.399	mg/Kg			04/04/23 19:48	1

Client Sample ID: SB-12-S-2'-20230323

Lab Sample ID: 880-26346-2

Date Collected: 03/23/23 11:40

Matrix: Solid

Date Received: 03/24/23 15:09

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U	0.00200	0.000384	mg/Kg		04/03/23 13:16	04/05/23 18:36	1
Toluene	<0.000455	U	0.00200	0.000455	mg/Kg		04/03/23 13:16	04/05/23 18:36	1
Ethylbenzene	<0.000564	U	0.00200	0.000564	mg/Kg		04/03/23 13:16	04/05/23 18:36	1
m-Xylene & p-Xylene	0.00106	J	0.00399	0.00101	mg/Kg		04/03/23 13:16	04/05/23 18:36	1
o-Xylene	<0.000343	U	0.00200	0.000343	mg/Kg		04/03/23 13:16	04/05/23 18:36	1
Xylenes, Total	0.00106	J	0.00399	0.00101	mg/Kg		04/03/23 13:16	04/05/23 18:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	04/03/23 13:16	04/05/23 18:36	1
1,4-Difluorobenzene (Surr)	75		70 - 130	04/03/23 13:16	04/05/23 18:36	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	114		49.9	15.0	mg/Kg			03/31/23 11:54	1

Eurofins Midland

Client Sample Results

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Client Sample ID: SB-12-S-2'-20230323

Lab Sample ID: 880-26346-2

Date Collected: 03/23/23 11:40

Matrix: Solid

Date Received: 03/24/23 15:09

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	21.9	J	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 17:09	1
Diesel Range Organics (Over C10-C28)	60.6	B	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 17:09	1
Oil Range Organics (Over C28-C36)	31.5	J B	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 17:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130				03/29/23 12:35	03/30/23 17:09	1
o-Terphenyl	101		70 - 130				03/29/23 12:35	03/30/23 17:09	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	176		5.02	0.397	mg/Kg			04/04/23 19:52	1

Client Sample ID: SB-12-S-4'-20230323

Lab Sample ID: 880-26346-3

Date Collected: 03/23/23 12:30

Matrix: Solid

Date Received: 03/24/23 15:09

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000387	U	0.00201	0.000387	mg/Kg		04/03/23 13:16	04/05/23 19:01	1
Toluene	<0.000459	U	0.00201	0.000459	mg/Kg		04/03/23 13:16	04/05/23 19:01	1
Ethylbenzene	<0.000568	U	0.00201	0.000568	mg/Kg		04/03/23 13:16	04/05/23 19:01	1
m-Xylene & p-Xylene	<0.00102	U	0.00402	0.00102	mg/Kg		04/03/23 13:16	04/05/23 19:01	1
o-Xylene	<0.000346	U	0.00201	0.000346	mg/Kg		04/03/23 13:16	04/05/23 19:01	1
Xylenes, Total	<0.00102	U	0.00402	0.00102	mg/Kg		04/03/23 13:16	04/05/23 19:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130				04/03/23 13:16	04/05/23 19:01	1
1,4-Difluorobenzene (Surr)	89		70 - 130				04/03/23 13:16	04/05/23 19:01	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	54.7		49.9	15.0	mg/Kg			03/31/23 11:54	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	19.8	J	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 17:31	1
Diesel Range Organics (Over C10-C28)	17.5	J B	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 17:31	1
Oil Range Organics (Over C28-C36)	17.4	J B	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 17:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				03/29/23 12:35	03/30/23 17:31	1
o-Terphenyl	106		70 - 130				03/29/23 12:35	03/30/23 17:31	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	172		5.00	0.395	mg/Kg			04/04/23 19:57	1

Eurofins Midland

Client Sample Results

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Client Sample ID: SB-11-S-.5'-20230323

Lab Sample ID: 880-26346-4

Date Collected: 03/23/23 12:35

Matrix: Solid

Date Received: 03/24/23 15:09

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000386	U	0.00200	0.000386	mg/Kg		04/03/23 13:16	04/05/23 19:27	1
Toluene	<0.000457	U	0.00200	0.000457	mg/Kg		04/03/23 13:16	04/05/23 19:27	1
Ethylbenzene	<0.000566	U	0.00200	0.000566	mg/Kg		04/03/23 13:16	04/05/23 19:27	1
m-Xylene & p-Xylene	<0.00101	U	0.00401	0.00101	mg/Kg		04/03/23 13:16	04/05/23 19:27	1
o-Xylene	<0.000345	U	0.00200	0.000345	mg/Kg		04/03/23 13:16	04/05/23 19:27	1
Xylenes, Total	<0.00101	U	0.00401	0.00101	mg/Kg		04/03/23 13:16	04/05/23 19:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130	04/03/23 13:16	04/05/23 19:27	1
1,4-Difluorobenzene (Surr)	96		70 - 130	04/03/23 13:16	04/05/23 19:27	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	91.4		49.9	15.0	mg/Kg			03/31/23 11:54	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	23.6	J	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 17:53	1
Diesel Range Organics (Over C10-C28)	51.6	B	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 17:53	1
Oil Range Organics (Over C28-C36)	16.2	J B	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 17:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	03/29/23 12:35	03/30/23 17:53	1
o-Terphenyl	115		70 - 130	03/29/23 12:35	03/30/23 17:53	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2990		49.7	3.93	mg/Kg			04/04/23 20:01	10

Client Sample ID: SB-11-S-2'-20230323

Lab Sample ID: 880-26346-5

Date Collected: 03/23/23 12:40

Matrix: Solid

Date Received: 03/24/23 15:09

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		04/03/23 13:16	04/05/23 19:53	1
Toluene	<0.000454	U	0.00199	0.000454	mg/Kg		04/03/23 13:16	04/05/23 19:53	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg		04/03/23 13:16	04/05/23 19:53	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		04/03/23 13:16	04/05/23 19:53	1
o-Xylene	<0.000343	U	0.00199	0.000343	mg/Kg		04/03/23 13:16	04/05/23 19:53	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		04/03/23 13:16	04/05/23 19:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130	04/03/23 13:16	04/05/23 19:53	1
1,4-Difluorobenzene (Surr)	87		70 - 130	04/03/23 13:16	04/05/23 19:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	80.2		49.9	15.0	mg/Kg			03/31/23 11:54	1

Eurofins Midland

Client Sample Results

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Client Sample ID: SB-11-S-2'-20230323

Lab Sample ID: 880-26346-5

Date Collected: 03/23/23 12:40

Matrix: Solid

Date Received: 03/24/23 15:09

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 18:38	1
Diesel Range Organics (Over C10-C28)	59.1	B	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 18:38	1
Oil Range Organics (Over C28-C36)	21.1	J B	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 18:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130				03/29/23 12:35	03/30/23 18:38	1
o-Terphenyl	123		70 - 130				03/29/23 12:35	03/30/23 18:38	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2490		25.0	1.97	mg/Kg			04/04/23 20:06	5

Client Sample ID: SB-11-S-4'-20230323

Lab Sample ID: 880-26346-6

Date Collected: 03/23/23 12:45

Matrix: Solid

Date Received: 03/24/23 15:09

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		04/03/23 13:16	04/05/23 20:19	1
Toluene	<0.000453	U	0.00199	0.000453	mg/Kg		04/03/23 13:16	04/05/23 20:19	1
Ethylbenzene	<0.000562	U	0.00199	0.000562	mg/Kg		04/03/23 13:16	04/05/23 20:19	1
m-Xylene & p-Xylene	<0.00100	U	0.00398	0.00100	mg/Kg		04/03/23 13:16	04/05/23 20:19	1
o-Xylene	<0.000342	U	0.00199	0.000342	mg/Kg		04/03/23 13:16	04/05/23 20:19	1
Xylenes, Total	<0.00100	U	0.00398	0.00100	mg/Kg		04/03/23 13:16	04/05/23 20:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130				04/03/23 13:16	04/05/23 20:19	1
1,4-Difluorobenzene (Surr)	90		70 - 130				04/03/23 13:16	04/05/23 20:19	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	85.4		50.0	15.0	mg/Kg			03/31/23 11:54	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	17.1	J	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 19:00	1
Diesel Range Organics (Over C10-C28)	49.7	J B	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 19:00	1
Oil Range Organics (Over C28-C36)	18.6	J B	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 19:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130				03/29/23 12:35	03/30/23 19:00	1
o-Terphenyl	105		70 - 130				03/29/23 12:35	03/30/23 19:00	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2770		50.3	3.97	mg/Kg			04/04/23 20:10	10

Eurofins Midland

Client Sample Results

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Client Sample ID: SB-10-S-.5'-20230323

Lab Sample ID: 880-26346-7

Date Collected: 03/23/23 12:50

Matrix: Solid

Date Received: 03/24/23 15:09

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U	0.00200	0.000384	mg/Kg		04/03/23 13:16	04/05/23 20:45	1
Toluene	<0.000455	U	0.00200	0.000455	mg/Kg		04/03/23 13:16	04/05/23 20:45	1
Ethylbenzene	<0.000564	U	0.00200	0.000564	mg/Kg		04/03/23 13:16	04/05/23 20:45	1
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg		04/03/23 13:16	04/05/23 20:45	1
o-Xylene	<0.000343	U	0.00200	0.000343	mg/Kg		04/03/23 13:16	04/05/23 20:45	1
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg		04/03/23 13:16	04/05/23 20:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	04/03/23 13:16	04/05/23 20:45	1
1,4-Difluorobenzene (Surr)	89		70 - 130	04/03/23 13:16	04/05/23 20:45	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	32.7	J	50.0	15.0	mg/Kg			03/31/23 11:54	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	16.8	J	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 19:22	1
Diesel Range Organics (Over C10-C28)	<15.0	U	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 19:22	1
Oil Range Organics (Over C28-C36)	15.9	J B	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 19:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130	03/29/23 12:35	03/30/23 19:22	1
o-Terphenyl	96		70 - 130	03/29/23 12:35	03/30/23 19:22	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	461		24.9	1.97	mg/Kg			04/04/23 20:24	5

Client Sample ID: SB-10-S-2'-20230323

Lab Sample ID: 880-26346-8

Date Collected: 03/23/23 12:55

Matrix: Solid

Date Received: 03/24/23 15:09

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000387	U	0.00201	0.000387	mg/Kg		04/03/23 13:16	04/05/23 21:11	1
Toluene	<0.000459	U	0.00201	0.000459	mg/Kg		04/03/23 13:16	04/05/23 21:11	1
Ethylbenzene	<0.000568	U	0.00201	0.000568	mg/Kg		04/03/23 13:16	04/05/23 21:11	1
m-Xylene & p-Xylene	<0.00102	U	0.00402	0.00102	mg/Kg		04/03/23 13:16	04/05/23 21:11	1
o-Xylene	<0.000346	U	0.00201	0.000346	mg/Kg		04/03/23 13:16	04/05/23 21:11	1
Xylenes, Total	<0.00102	U	0.00402	0.00102	mg/Kg		04/03/23 13:16	04/05/23 21:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130	04/03/23 13:16	04/05/23 21:11	1
1,4-Difluorobenzene (Surr)	91		70 - 130	04/03/23 13:16	04/05/23 21:11	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	16.6	J	49.9	15.0	mg/Kg			03/31/23 11:54	1

Eurofins Midland

Client Sample Results

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Client Sample ID: SB-10-S-2'-20230323

Lab Sample ID: 880-26346-8

Date Collected: 03/23/23 12:55

Matrix: Solid

Date Received: 03/24/23 15:09

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	16.6	J	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 19:44	1
Diesel Range Organics (Over C10-C28)	<15.0	U	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 19:44	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 19:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130				03/29/23 12:35	03/30/23 19:44	1
o-Terphenyl	110		70 - 130				03/29/23 12:35	03/30/23 19:44	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	543		25.2	1.99	mg/Kg			04/04/23 20:29	5

Client Sample ID: SB-10-S-4'-20230323

Lab Sample ID: 880-26346-9

Date Collected: 03/23/23 13:10

Matrix: Solid

Date Received: 03/24/23 15:09

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000389	U	0.00202	0.000389	mg/Kg		04/03/23 13:16	04/05/23 21:37	1
Toluene	<0.000461	U	0.00202	0.000461	mg/Kg		04/03/23 13:16	04/05/23 21:37	1
Ethylbenzene	<0.000571	U	0.00202	0.000571	mg/Kg		04/03/23 13:16	04/05/23 21:37	1
m-Xylene & p-Xylene	<0.00102	U	0.00404	0.00102	mg/Kg		04/03/23 13:16	04/05/23 21:37	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg		04/03/23 13:16	04/05/23 21:37	1
Xylenes, Total	<0.00102	U	0.00404	0.00102	mg/Kg		04/03/23 13:16	04/05/23 21:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130				04/03/23 13:16	04/05/23 21:37	1
1,4-Difluorobenzene (Surr)	87		70 - 130				04/03/23 13:16	04/05/23 21:37	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	19.9	J	49.9	15.0	mg/Kg			03/31/23 11:54	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	19.9	J	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 20:06	1
Diesel Range Organics (Over C10-C28)	<15.0	U	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 20:06	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 20:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130				03/29/23 12:35	03/30/23 20:06	1
o-Terphenyl	105		70 - 130				03/29/23 12:35	03/30/23 20:06	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	397		5.00	0.395	mg/Kg			04/04/23 20:42	1

Eurofins Midland

Client Sample Results

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Client Sample ID: SB-9-S-.5'-20230323

Lab Sample ID: 880-26346-10

Date Collected: 03/23/23 14:00

Matrix: Solid

Date Received: 03/24/23 15:09

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		04/03/23 13:16	04/05/23 22:04	1
Toluene	<0.000454	U	0.00199	0.000454	mg/Kg		04/03/23 13:16	04/05/23 22:04	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg		04/03/23 13:16	04/05/23 22:04	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		04/03/23 13:16	04/05/23 22:04	1
o-Xylene	<0.000343	U	0.00199	0.000343	mg/Kg		04/03/23 13:16	04/05/23 22:04	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		04/03/23 13:16	04/05/23 22:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	04/03/23 13:16	04/05/23 22:04	1
1,4-Difluorobenzene (Surr)	94		70 - 130	04/03/23 13:16	04/05/23 22:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	17.4	J	50.0	15.0	mg/Kg			03/31/23 11:54	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	17.4	J	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 20:27	1
Diesel Range Organics (Over C10-C28)	<15.0	U	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 20:27	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 20:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130	03/29/23 12:35	03/30/23 20:27	1
o-Terphenyl	108		70 - 130	03/29/23 12:35	03/30/23 20:27	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1200		25.0	1.98	mg/Kg			04/04/23 20:47	5

Client Sample ID: SB-9-S-2'-20230323

Lab Sample ID: 880-26346-11

Date Collected: 03/23/23 14:10

Matrix: Solid

Date Received: 03/24/23 15:09

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		04/03/23 13:16	04/05/23 22:30	1
Toluene	<0.000453	U	0.00199	0.000453	mg/Kg		04/03/23 13:16	04/05/23 22:30	1
Ethylbenzene	<0.000562	U	0.00199	0.000562	mg/Kg		04/03/23 13:16	04/05/23 22:30	1
m-Xylene & p-Xylene	<0.00100	U	0.00398	0.00100	mg/Kg		04/03/23 13:16	04/05/23 22:30	1
o-Xylene	<0.000342	U	0.00199	0.000342	mg/Kg		04/03/23 13:16	04/05/23 22:30	1
Xylenes, Total	<0.00100	U	0.00398	0.00100	mg/Kg		04/03/23 13:16	04/05/23 22:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	04/03/23 13:16	04/05/23 22:30	1
1,4-Difluorobenzene (Surr)	80		70 - 130	04/03/23 13:16	04/05/23 22:30	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	19.1	J	49.9	15.0	mg/Kg			03/31/23 11:54	1

Eurofins Midland

Client Sample Results

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Client Sample ID: SB-9-S-2'-20230323
Date Collected: 03/23/23 14:10
Date Received: 03/24/23 15:09

Lab Sample ID: 880-26346-11
Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	19.1	J	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 20:49	1	
Diesel Range Organics (Over C10-C28)	<15.0	U	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 20:49	1	
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		03/29/23 12:35	03/30/23 20:49	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1-Chlorooctane	103		70 - 130				03/29/23 12:35	03/30/23 20:49	1	
o-Terphenyl	122		70 - 130				03/29/23 12:35	03/30/23 20:49	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	979		24.9	1.96	mg/Kg			04/04/23 20:51	5	

Surrogate Summary

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-26346-1	SB-12-S-0-.5'-20230323	118	93
880-26346-2	SB-12-S-2'-20230323	103	75
880-26346-3	SB-12-S-4'-20230323	114	89
880-26346-4	SB-11-S-.5'-20230323	121	96
880-26346-5	SB-11-S-2'-20230323	108	87
880-26346-6	SB-11-S-4'-20230323	121	90
880-26346-7	SB-10-S-.5'-20230323	104	89
880-26346-8	SB-10-S-2'-20230323	114	91
880-26346-9	SB-10-S-4'-20230323	104	87
880-26346-10	SB-9-S-.5'-20230323	112	94
880-26346-11	SB-9-S-2'-20230323	109	80
LCS 880-50193/1-A	Lab Control Sample	101	78
LCSD 880-50193/2-A	Lab Control Sample Dup	102	97
MB 880-50193/5-A	Method Blank	63 S1-	85
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-26346-1	SB-12-S-0-.5'-20230323	92	107
880-26346-2	SB-12-S-2'-20230323	87	101
880-26346-3	SB-12-S-4'-20230323	89	106
880-26346-4	SB-11-S-.5'-20230323	101	115
880-26346-5	SB-11-S-2'-20230323	105	123
880-26346-6	SB-11-S-4'-20230323	88	105
880-26346-7	SB-10-S-.5'-20230323	83	96
880-26346-8	SB-10-S-2'-20230323	96	110
880-26346-9	SB-10-S-4'-20230323	87	105
880-26346-10	SB-9-S-.5'-20230323	89	108
880-26346-11	SB-9-S-2'-20230323	103	122
LCS 880-49838/2-A	Lab Control Sample	122	149 S1+
LCSD 880-49838/3-A	Lab Control Sample Dup	120	143 S1+
MB 880-49838/1-A	Method Blank	120	141 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-50193/5-A							Client Sample ID: Method Blank		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 50361							Prep Batch: 50193		
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		04/03/23 13:16	04/05/23 12:26	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		04/03/23 13:16	04/05/23 12:26	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		04/03/23 13:16	04/05/23 12:26	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		04/03/23 13:16	04/05/23 12:26	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		04/03/23 13:16	04/05/23 12:26	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		04/03/23 13:16	04/05/23 12:26	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	63	S1-	70 - 130				04/03/23 13:16	04/05/23 12:26	1
1,4-Difluorobenzene (Surr)	85		70 - 130				04/03/23 13:16	04/05/23 12:26	1

Lab Sample ID: LCS 880-50193/1-A							Client Sample ID: Lab Control Sample		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 50361							Prep Batch: 50193		
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	0.100	0.08752		mg/Kg		88	70 - 130		
Toluene	0.100	0.09671		mg/Kg		97	70 - 130		
Ethylbenzene	0.100	0.09057		mg/Kg		91	70 - 130		
m-Xylene & p-Xylene	0.200	0.1752		mg/Kg		88	70 - 130		
o-Xylene	0.100	0.08957		mg/Kg		90	70 - 130		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	101		70 - 130						
1,4-Difluorobenzene (Surr)	78		70 - 130						

Lab Sample ID: LCSD 880-50193/2-A					Client Sample ID: Lab Control Sample Dup						
Matrix: Solid					Prep Type: Total/NA						
Analysis Batch: 50361					Prep Batch: 50193						
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec	RPD			
							Limits	RPD	Limit		
Benzene	0.100	0.1092		mg/Kg		109	70 - 130	22	35		
Toluene	0.100	0.1119		mg/Kg		112	70 - 130	15	35		
Ethylbenzene	0.100	0.1031		mg/Kg		103	70 - 130	13	35		
m-Xylene & p-Xylene	0.200	0.1996		mg/Kg		100	70 - 130	13	35		
o-Xylene	0.100	0.1044		mg/Kg		104	70 - 130	15	35		
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	102		70 - 130								
1,4-Difluorobenzene (Surr)	97		70 - 130								

QC Sample Results

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-49838/1-A							Client Sample ID: Method Blank			
Matrix: Solid							Prep Type: Total/NA			
Analysis Batch: 49908							Prep Batch: 49838			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 08:23	1	
Diesel Range Organics (Over C10-C28)	22.09	J	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 08:23	1	
Oil Range Organics (Over C28-C36)	20.40	J	50.0	15.0	mg/Kg		03/29/23 12:35	03/30/23 08:23	1	
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1-Chlorooctane	120		70 - 130				03/29/23 12:35	03/30/23 08:23	1	
o-Terphenyl	141	S1+	70 - 130				03/29/23 12:35	03/30/23 08:23	1	

Lab Sample ID: LCS 880-49838/2-A							Client Sample ID: Lab Control Sample			
Matrix: Solid							Prep Type: Total/NA			
Analysis Batch: 49908							Prep Batch: 49838			
Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10		1000	856.5		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)		1000	885.5		mg/Kg		89	70 - 130		
Surrogate	LCS %Recovery	LCS Qualifier	Limits							
1-Chlorooctane	122		70 - 130							
o-Terphenyl	149	S1+	70 - 130							

Lab Sample ID: LCSD 880-49838/3-A							Client Sample ID: Lab Control Sample Dup			
Matrix: Solid							Prep Type: Total/NA			
Analysis Batch: 49908							Prep Batch: 49838			
Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10		1000	870.2		mg/Kg		87	70 - 130	2	20
Diesel Range Organics (Over C10-C28)		1000	886.2		mg/Kg		89	70 - 130	0	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits							
1-Chlorooctane	120		70 - 130							
o-Terphenyl	143	S1+	70 - 130							

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-50169/1-A							Client Sample ID: Method Blank			
Matrix: Solid							Prep Type: Soluble			
Analysis Batch: 50389										
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	<0.395	U	5.00	0.395	mg/Kg			04/04/23 18:53	1	

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QC Sample Results

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-50169/2-A				Client Sample ID: Lab Control Sample						
Matrix: Solid				Prep Type: Soluble						
Analysis Batch: 50389										
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Chloride			250	252.0		mg/Kg		101	90 - 110	

Lab Sample ID: LCSD 880-50169/3-A				Client Sample ID: Lab Control Sample Dup						
Matrix: Solid				Prep Type: Soluble						
Analysis Batch: 50389										
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD Limit
Chloride			250	246.6		mg/Kg		99	90 - 110	2 20

Lab Sample ID: 880-26346-6 MS				Client Sample ID: SB-11-S-4'-20230323						
Matrix: Solid				Prep Type: Soluble						
Analysis Batch: 50389										
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
Chloride	2770		2520	5170		mg/Kg		95	90 - 110	

Lab Sample ID: 880-26346-6 MSD				Client Sample ID: SB-11-S-4'-20230323						
Matrix: Solid				Prep Type: Soluble						
Analysis Batch: 50389										
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD Limit
Chloride	2770		2520	5114		mg/Kg		93	90 - 110	1 20

QC Association Summary

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

GC VOA

Prep Batch: 50193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26346-1	SB-12-S-0-.5'-20230323	Total/NA	Solid	5030B	
880-26346-2	SB-12-S-2'-20230323	Total/NA	Solid	5030B	
880-26346-3	SB-12-S-4'-20230323	Total/NA	Solid	5030B	
880-26346-4	SB-11-S-.5'-20230323	Total/NA	Solid	5030B	
880-26346-5	SB-11-S-2'-20230323	Total/NA	Solid	5030B	
880-26346-6	SB-11-S-4'-20230323	Total/NA	Solid	5030B	
880-26346-7	SB-10-S-.5'-20230323	Total/NA	Solid	5030B	
880-26346-8	SB-10-S-2'-20230323	Total/NA	Solid	5030B	
880-26346-9	SB-10-S-4'-20230323	Total/NA	Solid	5030B	
880-26346-10	SB-9-S-.5'-20230323	Total/NA	Solid	5030B	
880-26346-11	SB-9-S-2'-20230323	Total/NA	Solid	5030B	
MB 880-50193/5-A	Method Blank	Total/NA	Solid	5030B	
LCS 880-50193/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 880-50193/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	

Analysis Batch: 50361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26346-1	SB-12-S-0-.5'-20230323	Total/NA	Solid	8021B	50193
880-26346-2	SB-12-S-2'-20230323	Total/NA	Solid	8021B	50193
880-26346-3	SB-12-S-4'-20230323	Total/NA	Solid	8021B	50193
880-26346-4	SB-11-S-.5'-20230323	Total/NA	Solid	8021B	50193
880-26346-5	SB-11-S-2'-20230323	Total/NA	Solid	8021B	50193
880-26346-6	SB-11-S-4'-20230323	Total/NA	Solid	8021B	50193
880-26346-7	SB-10-S-.5'-20230323	Total/NA	Solid	8021B	50193
880-26346-8	SB-10-S-2'-20230323	Total/NA	Solid	8021B	50193
880-26346-9	SB-10-S-4'-20230323	Total/NA	Solid	8021B	50193
880-26346-10	SB-9-S-.5'-20230323	Total/NA	Solid	8021B	50193
880-26346-11	SB-9-S-2'-20230323	Total/NA	Solid	8021B	50193
MB 880-50193/5-A	Method Blank	Total/NA	Solid	8021B	50193
LCS 880-50193/1-A	Lab Control Sample	Total/NA	Solid	8021B	50193
LCSD 880-50193/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	50193

GC Semi VOA

Prep Batch: 49838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26346-1	SB-12-S-0-.5'-20230323	Total/NA	Solid	8015NM Prep	
880-26346-2	SB-12-S-2'-20230323	Total/NA	Solid	8015NM Prep	
880-26346-3	SB-12-S-4'-20230323	Total/NA	Solid	8015NM Prep	
880-26346-4	SB-11-S-.5'-20230323	Total/NA	Solid	8015NM Prep	
880-26346-5	SB-11-S-2'-20230323	Total/NA	Solid	8015NM Prep	
880-26346-6	SB-11-S-4'-20230323	Total/NA	Solid	8015NM Prep	
880-26346-7	SB-10-S-.5'-20230323	Total/NA	Solid	8015NM Prep	
880-26346-8	SB-10-S-2'-20230323	Total/NA	Solid	8015NM Prep	
880-26346-9	SB-10-S-4'-20230323	Total/NA	Solid	8015NM Prep	
880-26346-10	SB-9-S-.5'-20230323	Total/NA	Solid	8015NM Prep	
880-26346-11	SB-9-S-2'-20230323	Total/NA	Solid	8015NM Prep	
MB 880-49838/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-49838/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-49838/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Eurofins Midland

QC Association Summary

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

GC Semi VOA

Analysis Batch: 49908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26346-1	SB-12-S-0-.5'-20230323	Total/NA	Solid	8015B NM	49838
880-26346-2	SB-12-S-2'-20230323	Total/NA	Solid	8015B NM	49838
880-26346-3	SB-12-S-4'-20230323	Total/NA	Solid	8015B NM	49838
880-26346-4	SB-11-S-.5'-20230323	Total/NA	Solid	8015B NM	49838
880-26346-5	SB-11-S-2'-20230323	Total/NA	Solid	8015B NM	49838
880-26346-6	SB-11-S-4'-20230323	Total/NA	Solid	8015B NM	49838
880-26346-7	SB-10-S-.5'-20230323	Total/NA	Solid	8015B NM	49838
880-26346-8	SB-10-S-2'-20230323	Total/NA	Solid	8015B NM	49838
880-26346-9	SB-10-S-4'-20230323	Total/NA	Solid	8015B NM	49838
880-26346-10	SB-9-S-.5'-20230323	Total/NA	Solid	8015B NM	49838
880-26346-11	SB-9-S-2'-20230323	Total/NA	Solid	8015B NM	49838
MB 880-49838/1-A	Method Blank	Total/NA	Solid	8015B NM	49838
LCS 880-49838/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	49838
LCSD 880-49838/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	49838

Analysis Batch: 50031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26346-1	SB-12-S-0-.5'-20230323	Total/NA	Solid	8015 NM	
880-26346-2	SB-12-S-2'-20230323	Total/NA	Solid	8015 NM	
880-26346-3	SB-12-S-4'-20230323	Total/NA	Solid	8015 NM	
880-26346-4	SB-11-S-.5'-20230323	Total/NA	Solid	8015 NM	
880-26346-5	SB-11-S-2'-20230323	Total/NA	Solid	8015 NM	
880-26346-6	SB-11-S-4'-20230323	Total/NA	Solid	8015 NM	
880-26346-7	SB-10-S-.5'-20230323	Total/NA	Solid	8015 NM	
880-26346-8	SB-10-S-2'-20230323	Total/NA	Solid	8015 NM	
880-26346-9	SB-10-S-4'-20230323	Total/NA	Solid	8015 NM	
880-26346-10	SB-9-S-.5'-20230323	Total/NA	Solid	8015 NM	
880-26346-11	SB-9-S-2'-20230323	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 50169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26346-1	SB-12-S-0-.5'-20230323	Soluble	Solid	DI Leach	
880-26346-2	SB-12-S-2'-20230323	Soluble	Solid	DI Leach	
880-26346-3	SB-12-S-4'-20230323	Soluble	Solid	DI Leach	
880-26346-4	SB-11-S-.5'-20230323	Soluble	Solid	DI Leach	
880-26346-5	SB-11-S-2'-20230323	Soluble	Solid	DI Leach	
880-26346-6	SB-11-S-4'-20230323	Soluble	Solid	DI Leach	
880-26346-7	SB-10-S-.5'-20230323	Soluble	Solid	DI Leach	
880-26346-8	SB-10-S-2'-20230323	Soluble	Solid	DI Leach	
880-26346-9	SB-10-S-4'-20230323	Soluble	Solid	DI Leach	
880-26346-10	SB-9-S-.5'-20230323	Soluble	Solid	DI Leach	
880-26346-11	SB-9-S-2'-20230323	Soluble	Solid	DI Leach	
MB 880-50169/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-50169/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-50169/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-26346-6 MS	SB-11-S-4'-20230323	Soluble	Solid	DI Leach	
880-26346-6 MSD	SB-11-S-4'-20230323	Soluble	Solid	DI Leach	

Eurofins Midland

QC Association Summary

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

HPLC/IC

Analysis Batch: 50389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26346-1	SB-12-S-0-.5'-20230323	Soluble	Solid	300.0	50169
880-26346-2	SB-12-S-2'-20230323	Soluble	Solid	300.0	50169
880-26346-3	SB-12-S-4'-20230323	Soluble	Solid	300.0	50169
880-26346-4	SB-11-S-.5'-20230323	Soluble	Solid	300.0	50169
880-26346-5	SB-11-S-2'-20230323	Soluble	Solid	300.0	50169
880-26346-6	SB-11-S-4'-20230323	Soluble	Solid	300.0	50169
880-26346-7	SB-10-S-.5'-20230323	Soluble	Solid	300.0	50169
880-26346-8	SB-10-S-2'-20230323	Soluble	Solid	300.0	50169
880-26346-9	SB-10-S-4'-20230323	Soluble	Solid	300.0	50169
880-26346-10	SB-9-S-.5'-20230323	Soluble	Solid	300.0	50169
880-26346-11	SB-9-S-2'-20230323	Soluble	Solid	300.0	50169
MB 880-50169/1-A	Method Blank	Soluble	Solid	300.0	50169
LCS 880-50169/2-A	Lab Control Sample	Soluble	Solid	300.0	50169
LCSD 880-50169/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	50169
880-26346-6 MS	SB-11-S-4'-20230323	Soluble	Solid	300.0	50169
880-26346-6 MSD	SB-11-S-4'-20230323	Soluble	Solid	300.0	50169

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Client Sample ID: SB-12-S-0-.5'-20230323
Date Collected: 03/23/23 11:30
Date Received: 03/24/23 15:09

Lab Sample ID: 880-26346-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5 mL	50193	04/03/23 13:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50361	04/05/23 16:50	MNR	EET MID
Total/NA	Analysis	8015 NM		1			50031	03/31/23 11:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	49838	03/29/23 12:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49908	03/30/23 16:47	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	50169	04/03/23 11:15	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50389	04/04/23 19:48	SMC	EET MID

Client Sample ID: SB-12-S-2'-20230323
Date Collected: 03/23/23 11:40
Date Received: 03/24/23 15:09

Lab Sample ID: 880-26346-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.01 g	5 mL	50193	04/03/23 13:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50361	04/05/23 18:36	MNR	EET MID
Total/NA	Analysis	8015 NM		1			50031	03/31/23 11:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49838	03/29/23 12:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49908	03/30/23 17:09	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	50169	04/03/23 11:15	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50389	04/04/23 19:52	SMC	EET MID

Client Sample ID: SB-12-S-4'-20230323
Date Collected: 03/23/23 12:30
Date Received: 03/24/23 15:09

Lab Sample ID: 880-26346-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.97 g	5 mL	50193	04/03/23 13:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50361	04/05/23 19:01	MNR	EET MID
Total/NA	Analysis	8015 NM		1			50031	03/31/23 11:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49838	03/29/23 12:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49908	03/30/23 17:31	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	50169	04/03/23 11:15	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50389	04/04/23 19:57	SMC	EET MID

Client Sample ID: SB-11-S-.5'-20230323
Date Collected: 03/23/23 12:35
Date Received: 03/24/23 15:09

Lab Sample ID: 880-26346-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.99 g	5 mL	50193	04/03/23 13:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50361	04/05/23 19:27	MNR	EET MID
Total/NA	Analysis	8015 NM		1			50031	03/31/23 11:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	49838	03/29/23 12:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49908	03/30/23 17:53	SM	EET MID

Eurofins Midland

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Client Sample ID: SB-11-S-.5'-20230323
Date Collected: 03/23/23 12:35
Date Received: 03/24/23 15:09

Lab Sample ID: 880-26346-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	50169	04/03/23 11:15	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	50389	04/04/23 20:01	SMC	EET MID

Client Sample ID: SB-11-S-2'-20230323
Date Collected: 03/23/23 12:40
Date Received: 03/24/23 15:09

Lab Sample ID: 880-26346-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.02 g	5 mL	50193	04/03/23 13:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50361	04/05/23 19:53	MNR	EET MID
Total/NA	Analysis	8015 NM		1			50031	03/31/23 11:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49838	03/29/23 12:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49908	03/30/23 18:38	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	50169	04/03/23 11:15	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	50389	04/04/23 20:06	SMC	EET MID

Client Sample ID: SB-11-S-4'-20230323
Date Collected: 03/23/23 12:45
Date Received: 03/24/23 15:09

Lab Sample ID: 880-26346-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5 mL	50193	04/03/23 13:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50361	04/05/23 20:19	MNR	EET MID
Total/NA	Analysis	8015 NM		1			50031	03/31/23 11:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	49838	03/29/23 12:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49908	03/30/23 19:00	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	50169	04/03/23 11:15	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	50389	04/04/23 20:10	SMC	EET MID

Client Sample ID: SB-10-S-.5'-20230323
Date Collected: 03/23/23 12:50
Date Received: 03/24/23 15:09

Lab Sample ID: 880-26346-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.01 g	5 mL	50193	04/03/23 13:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50361	04/05/23 20:45	MNR	EET MID
Total/NA	Analysis	8015 NM		1			50031	03/31/23 11:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	49838	03/29/23 12:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49908	03/30/23 19:22	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	50169	04/03/23 11:15	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	50389	04/04/23 20:24	SMC	EET MID

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Client Sample ID: SB-10-S-2'-20230323
Date Collected: 03/23/23 12:55
Date Received: 03/24/23 15:09

Lab Sample ID: 880-26346-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.97 g	5 mL	50193	04/03/23 13:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50361	04/05/23 21:11	MNR	EET MID
Total/NA	Analysis	8015 NM		1			50031	03/31/23 11:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49838	03/29/23 12:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49908	03/30/23 19:44	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	50169	04/03/23 11:15	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	50389	04/04/23 20:29	SMC	EET MID

Client Sample ID: SB-10-S-4'-20230323
Date Collected: 03/23/23 13:10
Date Received: 03/24/23 15:09

Lab Sample ID: 880-26346-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.95 g	5 mL	50193	04/03/23 13:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50361	04/05/23 21:37	MNR	EET MID
Total/NA	Analysis	8015 NM		1			50031	03/31/23 11:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	49838	03/29/23 12:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49908	03/30/23 20:06	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	50169	04/03/23 11:15	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50389	04/04/23 20:42	SMC	EET MID

Client Sample ID: SB-9-S-.5'-20230323
Date Collected: 03/23/23 14:00
Date Received: 03/24/23 15:09

Lab Sample ID: 880-26346-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.02 g	5 mL	50193	04/03/23 13:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50361	04/05/23 22:04	MNR	EET MID
Total/NA	Analysis	8015 NM		1			50031	03/31/23 11:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	49838	03/29/23 12:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49908	03/30/23 20:27	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	50169	04/03/23 11:15	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	50389	04/04/23 20:47	SMC	EET MID

Client Sample ID: SB-9-S-2'-20230323
Date Collected: 03/23/23 14:10
Date Received: 03/24/23 15:09

Lab Sample ID: 880-26346-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5 mL	50193	04/03/23 13:16	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	50361	04/05/23 22:30	MNR	EET MID
Total/NA	Analysis	8015 NM		1			50031	03/31/23 11:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49838	03/29/23 12:35	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49908	03/30/23 20:49	SM	EET MID

Eurofins Midland

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Client Sample ID: SB-9-S-2'-20230323
Date Collected: 03/23/23 14:10
Date Received: 03/24/23 15:09

Lab Sample ID: 880-26346-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	50169	04/03/23 11:15	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	50389	04/04/23 20:51	SMC	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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- 2
- 3
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Accreditation/Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH

1
2
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14

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5030B	Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

- EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: WLU Well 41

Job ID: 880-26346-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-26346-1	SB-12-S-0-.5'-20230323	Solid	03/23/23 11:30	03/24/23 15:09
880-26346-2	SB-12-S-2'-20230323	Solid	03/23/23 11:40	03/24/23 15:09
880-26346-3	SB-12-S-4'-20230323	Solid	03/23/23 12:30	03/24/23 15:09
880-26346-4	SB-11-S-.5'-20230323	Solid	03/23/23 12:35	03/24/23 15:09
880-26346-5	SB-11-S-2'-20230323	Solid	03/23/23 12:40	03/24/23 15:09
880-26346-6	SB-11-S-4'-20230323	Solid	03/23/23 12:45	03/24/23 15:09
880-26346-7	SB-10-S-.5'-20230323	Solid	03/23/23 12:50	03/24/23 15:09
880-26346-8	SB-10-S-2'-20230323	Solid	03/23/23 12:55	03/24/23 15:09
880-26346-9	SB-10-S-4'-20230323	Solid	03/23/23 13:10	03/24/23 15:09
880-26346-10	SB-9-S-.5'-20230323	Solid	03/23/23 14:00	03/24/23 15:09
880-26346-11	SB-9-S-2'-20230323	Solid	03/23/23 14:10	03/24/23 15:09

Eurofins Midland
1211 W Florida Ave
Midland TX 79701
Phone (432) 704-5440

Chain of Custody Record

eurofins
Environment Testing

Client Information		Sampler: <u>Daniel McNeal</u>		Lab PM: Builes John	Carrier Tracking No(s): 880-5491-724 1				
Client Contact: Douglas Jordan		Phone: <u>432-999-2980</u>		E-Mail: John.Builes@eurofins.com	State of Origin: <u>TX</u>				
Company: ARCADIS U S Inc		PWSID:		Job #:					
Address: 10205 Westheimer Rd Suite 800		Due Date Requested:		Analysis Requested:					
City: Houston		TAT Requested (days): <u>standard</u>		Preservation Codes:					
State, Zip: TX, 77042		Compliance Project: <u>Δ Yes Δ No</u>		A HCL M Hexane B NaOH N None C-Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W- pH 4-5 L EDA Y Trizma Z other (specify)					
Phone: 713-953-4739(Tel)		PO #: PN 30172230 - 0002C		Other:					
Email: douglas.jordan@arcadis.com		WO #:							
Project Name: <u>Wilmington WLU Well 41</u>		Project #: 88001697 - 0002C							
Site:		SSOW#:							
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=water, S=solid, O=oil, BT=BT, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300-ORGM-28D, 8015MOD, NM, 8021B	Total Number of Containers	Special Instructions/Note
S13-12-5-0-5'-20230323	3-23-23	1130	G	Solid	X	X	X	1	962
S13-12-5-2'-20230323		1140		Solid	X	X	X	1	
S13-12-5-4'-20230323		1230		Solid	X	X	X	1	
S13-11-0-5'-20230323		1235		Solid	X	X	X	1	
S13-11-5-2'-20230323		1240		Solid	X	X	X	1	
S13-11-5-4'-20230323		1245		Solid	X	X	X	1	
S13-10-5-0-5'-20230323		1250		Solid	X	X	X	1	
S13-10-5-2'-20230323		1255		Solid	X	X	X	1	
S13-10-5-4'-20230323		1310		Solid	X	X	X	1	
S13-9-5-0-5'-20230323		1400		Solid	X	X	X	1	
S13-9-5-2'-20230323	3-23-23	1410	G	Solid	X	X	X	1	
 880-26346 Chain of Custody									
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested I II III IV Other (specify)									
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months									
Special Instructions/QC Requirements									
Empty Kit Relinquished by _____ Date _____									
Relinquished by _____ Date/Time _____ Company _____									
Relinquished by _____ Date/Time _____ Company _____									
Relinquished by _____ Date/Time _____ Company _____									
Custody Seals Intact. Δ Yes Δ No									
Cooler Temperature(s) °C and Other Remarks: 1.3110									

Ver: 01/16/2019

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Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 880-26346-1

Login Number: 26346

List Source: Eurofins Midland

List Number: 1

Creator: Rodriguez, Leticia

Question	Answer	Comment
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.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Morgan Jordan
ARCADIS US Inc
1004 North Big Spring
Suite 300
Midland, Texas 79701

Generated 2/5/2024 2:32:51 PM

JOB DESCRIPTION

WLU 41
Lovington, NM

JOB NUMBER

880-38323-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701



Eurofins Midland

Job Notes

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

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

Authorization



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2/5/2024 2:32:51 PM

Authorized for release by
John Builes, Project Manager
John.Builes@et.eurofinsus.com
(561)558-4549

Client: ARCADIS US Inc
Project/Site: WLU 41

Laboratory Job ID: 880-38323-1
SDG: Lovington, NM

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Definitions/Glossary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38323-1
SDG: Lovington, NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Eurofins Midland

Case Narrative

Client: ARCADIS US Inc
Project: WLU 41

Job ID: 880-38323-1

Job ID: 880-38323-1

Eurofins Midland

Job Narrative 880-38323-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/23/2024 1:01 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.5°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SB-13-S-1'-240119 (880-38323-1), SB-13-S-2'-240119 (880-38323-2), SB-13-S-4'-240119 (880-38323-3), SB-14-S-1'-240119 (880-38323-4), SB-14-S-2'-240119 (880-38323-5), SB-14-S-4'-240119 (880-38323-6), SB-15-S-1'-240119 (880-38323-7), SB-15-S-2'-240119 (880-38323-8) and SB-15-S-4'-240119 (880-38323-9).

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: SB-13-S-2'-240119 (880-38323-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-71570 and analytical batch 880-71727 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SB-13-S-2'-240119 (880-38323-2), SB-14-S-2'-240119 (880-38323-5) and SB-15-S-2'-240119 (880-38323-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-71570 and analytical batch 880-71727 contained Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-71570 and analytical batch 880-71727 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

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

HPLC/IC

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

Eurofins Midland

Client Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38323-1
SDG: Lovington, NM

Client Sample ID: SB-13-S-1'-240119

Lab Sample ID: 880-38323-1

Date Collected: 01/19/24 12:40

Matrix: Solid

Date Received: 01/23/24 13:01

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1190		25.0	1.97	mg/Kg			01/24/24 10:19	5

Client Sample ID: SB-13-S-2'-240119

Lab Sample ID: 880-38323-2

Date Collected: 01/19/24 12:50

Matrix: Solid

Date Received: 01/23/24 13:01

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		01/29/24 13:34	02/01/24 16:03	1
Toluene	0.00111	J	0.00199	0.000454	mg/Kg		01/29/24 13:34	02/01/24 16:03	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg		01/29/24 13:34	02/01/24 16:03	1
m-Xylene & p-Xylene	0.00128	J	0.00398	0.00101	mg/Kg		01/29/24 13:34	02/01/24 16:03	1
o-Xylene	0.000836	J	0.00199	0.000343	mg/Kg		01/29/24 13:34	02/01/24 16:03	1
Xylenes, Total	0.00212	J	0.00398	0.00101	mg/Kg		01/29/24 13:34	02/01/24 16:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	66	S1-	70 - 130	01/29/24 13:34	02/01/24 16:03	1
1,4-Difluorobenzene (Surr)	101		70 - 130	01/29/24 13:34	02/01/24 16:03	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00323	J	0.00398	0.00101	mg/Kg			02/01/24 16:03	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	49.3	J	49.9	15.0	mg/Kg			01/27/24 11:04	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	16.7	J *1	49.9	15.0	mg/Kg		01/25/24 09:22	01/27/24 11:04	1
Diesel Range Organics (Over C10-C28)	32.6	J B	49.9	15.0	mg/Kg		01/25/24 09:22	01/27/24 11:04	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		01/25/24 09:22	01/27/24 11:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	184	S1+	70 - 130	01/25/24 09:22	01/27/24 11:04	1
o-Terphenyl	147	S1+	70 - 130	01/25/24 09:22	01/27/24 11:04	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	224		5.02	0.397	mg/Kg			01/23/24 23:33	1

Client Sample ID: SB-13-S-4'-240119

Lab Sample ID: 880-38323-3

Date Collected: 01/19/24 13:00

Matrix: Solid

Date Received: 01/23/24 13:01

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	366		4.95	0.391	mg/Kg			01/23/24 23:40	1

Eurofins Midland

Client Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38323-1
SDG: Lovington, NM

Client Sample ID: SB-14-S-1'-240119

Lab Sample ID: 880-38323-4

Date Collected: 01/19/24 13:10

Matrix: Solid

Date Received: 01/23/24 13:01

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	43.8		4.98	0.393	mg/Kg			01/23/24 23:47	1

Client Sample ID: SB-14-S-2'-240119

Lab Sample ID: 880-38323-5

Date Collected: 01/19/24 13:20

Matrix: Solid

Date Received: 01/23/24 13:01

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U	0.00200	0.000384	mg/Kg		01/29/24 13:34	02/01/24 16:24	1
Toluene	<0.000455	U	0.00200	0.000455	mg/Kg		01/29/24 13:34	02/01/24 16:24	1
Ethylbenzene	<0.000564	U	0.00200	0.000564	mg/Kg		01/29/24 13:34	02/01/24 16:24	1
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg		01/29/24 13:34	02/01/24 16:24	1
o-Xylene	<0.000343	U	0.00200	0.000343	mg/Kg		01/29/24 13:34	02/01/24 16:24	1
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg		01/29/24 13:34	02/01/24 16:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130	01/29/24 13:34	02/01/24 16:24	1
1,4-Difluorobenzene (Surr)	72		70 - 130	01/29/24 13:34	02/01/24 16:24	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00399	0.00101	mg/Kg			02/01/24 16:24	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	68.8		50.3	15.1	mg/Kg			01/27/24 12:08	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	30.5	J *1	50.3	15.1	mg/Kg		01/25/24 09:22	01/27/24 12:08	1
Diesel Range Organics (Over C10-C28)	38.3	J B	50.3	15.1	mg/Kg		01/25/24 09:22	01/27/24 12:08	1
Oil Range Organics (Over C28-C36)	<15.1	U	50.3	15.1	mg/Kg		01/25/24 09:22	01/27/24 12:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	148	S1+	70 - 130	01/25/24 09:22	01/27/24 12:08	1
o-Terphenyl	117		70 - 130	01/25/24 09:22	01/27/24 12:08	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	46.7		5.04	0.398	mg/Kg			01/23/24 23:54	1

Client Sample ID: SB-14-S-4'-240119

Lab Sample ID: 880-38323-6

Date Collected: 01/19/24 13:30

Matrix: Solid

Date Received: 01/23/24 13:01

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	607		5.03	0.397	mg/Kg			01/24/24 00:14	1

Eurofins Midland

Client Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38323-1
SDG: Lovington, NM

Client Sample ID: SB-15-S-1'-240119

Lab Sample ID: 880-38323-7

Date Collected: 01/19/24 13:50

Matrix: Solid

Date Received: 01/23/24 13:01

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	122		5.00	0.395	mg/Kg			01/24/24 00:21	1

Client Sample ID: SB-15-S-2'-240119

Lab Sample ID: 880-38323-8

Date Collected: 01/19/24 14:00

Matrix: Solid

Date Received: 01/23/24 13:01

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		01/26/24 11:33	01/31/24 14:21	1
Toluene	<0.000454	U	0.00199	0.000454	mg/Kg		01/26/24 11:33	01/31/24 14:21	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg		01/26/24 11:33	01/31/24 14:21	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		01/26/24 11:33	01/31/24 14:21	1
o-Xylene	<0.000343	U	0.00199	0.000343	mg/Kg		01/26/24 11:33	01/31/24 14:21	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		01/26/24 11:33	01/31/24 14:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130	01/26/24 11:33	01/31/24 14:21	1
1,4-Difluorobenzene (Surr)	81		70 - 130	01/26/24 11:33	01/31/24 14:21	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00398	0.00101	mg/Kg			01/31/24 14:21	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	64.9		50.1	15.0	mg/Kg			01/27/24 12:30	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	29.0	J *1	50.1	15.0	mg/Kg		01/25/24 09:22	01/27/24 12:30	1
Diesel Range Organics (Over C10-C28)	35.9	J B	50.1	15.0	mg/Kg		01/25/24 09:22	01/27/24 12:30	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.1	15.0	mg/Kg		01/25/24 09:22	01/27/24 12:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	154	S1+	70 - 130	01/25/24 09:22	01/27/24 12:30	1
o-Terphenyl	123		70 - 130	01/25/24 09:22	01/27/24 12:30	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1300		24.9	1.96	mg/Kg			01/24/24 00:28	5

Client Sample ID: SB-15-S-4'-240119

Lab Sample ID: 880-38323-9

Date Collected: 01/19/24 14:10

Matrix: Solid

Date Received: 01/23/24 13:01

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1250		24.9	1.96	mg/Kg			01/24/24 00:35	5

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Surrogate Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38323-1
SDG: Lovington, NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1	DFBZ1
		(70-130)	(70-130)
880-38323-2	SB-13-S-2'-240119	66 S1-	101
880-38323-5	SB-14-S-2'-240119	89	72
880-38323-8	SB-15-S-2'-240119	79	81
LCS 880-71692/1-A	Lab Control Sample	112	102
LCS 880-71830/1-A	Lab Control Sample	119	101
LCSD 880-71692/2-A	Lab Control Sample Dup	104	94
LCSD 880-71830/2-A	Lab Control Sample Dup	118	103
MB 880-71692/5-A	Method Blank	79	79
MB 880-71830/5-A	Method Blank	72	86

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
880-38323-2	SB-13-S-2'-240119	184 S1+	147 S1+
880-38323-2 MS	SB-13-S-2'-240119	129	91
880-38323-2 MSD	SB-13-S-2'-240119	130	89
880-38323-5	SB-14-S-2'-240119	148 S1+	117
880-38323-8	SB-15-S-2'-240119	154 S1+	123
LCS 880-71570/2-A	Lab Control Sample	86	76
LCSD 880-71570/3-A	Lab Control Sample Dup	95	90
MB 880-71570/1-A	Method Blank	167 S1+	139 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41Job ID: 880-38323-1
SDG: Lovington, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-71692/5-A

Matrix: Solid

Analysis Batch: 72000

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 71692

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		01/26/24 11:33	01/31/24 11:14	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		01/26/24 11:33	01/31/24 11:14	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		01/26/24 11:33	01/31/24 11:14	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		01/26/24 11:33	01/31/24 11:14	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		01/26/24 11:33	01/31/24 11:14	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		01/26/24 11:33	01/31/24 11:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130	01/26/24 11:33	01/31/24 11:14	1
1,4-Difluorobenzene (Surr)	79		70 - 130	01/26/24 11:33	01/31/24 11:14	1

Lab Sample ID: LCS 880-71692/1-A

Matrix: Solid

Analysis Batch: 72000

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 71692

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1010		mg/Kg		101	70 - 130
Toluene	0.100	0.09485		mg/Kg		95	70 - 130
Ethylbenzene	0.100	0.09005		mg/Kg		90	70 - 130
m-Xylene & p-Xylene	0.200	0.1985		mg/Kg		99	70 - 130
o-Xylene	0.100	0.1164		mg/Kg		116	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: LCSD 880-71692/2-A

Matrix: Solid

Analysis Batch: 72000

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 71692

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.09042		mg/Kg		90	70 - 130	11	35
Toluene	0.100	0.09201		mg/Kg		92	70 - 130	3	35
Ethylbenzene	0.100	0.09967		mg/Kg		100	70 - 130	10	35
m-Xylene & p-Xylene	0.200	0.2074		mg/Kg		104	70 - 130	4	35
o-Xylene	0.100	0.09905		mg/Kg		99	70 - 130	16	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: MB 880-71830/5-A

Matrix: Solid

Analysis Batch: 72093

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 71830

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		01/29/24 13:34	02/01/24 10:52	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		01/29/24 13:34	02/01/24 10:52	1

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QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41Job ID: 880-38323-1
SDG: Lovington, NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-71830/5-A

Matrix: Solid

Analysis Batch: 72093

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 71830

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		01/29/24 13:34	02/01/24 10:52	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		01/29/24 13:34	02/01/24 10:52	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		01/29/24 13:34	02/01/24 10:52	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		01/29/24 13:34	02/01/24 10:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130	01/29/24 13:34	02/01/24 10:52	1
1,4-Difluorobenzene (Surr)	86		70 - 130	01/29/24 13:34	02/01/24 10:52	1

Lab Sample ID: LCS 880-71830/1-A

Matrix: Solid

Analysis Batch: 72093

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 71830

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09795		mg/Kg		98	70 - 130
Toluene	0.100	0.1028		mg/Kg		103	70 - 130
Ethylbenzene	0.100	0.1207		mg/Kg		121	70 - 130
m-Xylene & p-Xylene	0.200	0.2505		mg/Kg		125	70 - 130
o-Xylene	0.100	0.1200		mg/Kg		120	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	119		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: LCSD 880-71830/2-A

Matrix: Solid

Analysis Batch: 72093

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 71830

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09384		mg/Kg		94	70 - 130	4	35
Toluene	0.100	0.09496		mg/Kg		95	70 - 130	8	35
Ethylbenzene	0.100	0.1144		mg/Kg		114	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.2345		mg/Kg		117	70 - 130	7	35
o-Xylene	0.100	0.1120		mg/Kg		112	70 - 130	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	118		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-71570/1-A

Matrix: Solid

Analysis Batch: 71727

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 71570

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		01/25/24 09:22	01/27/24 08:06	1

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QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41Job ID: 880-38323-1
SDG: Lovington, NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-71570/1-A

Matrix: Solid

Analysis Batch: 71727

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 71570

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	21.62	J	50.0	15.0	mg/Kg		01/25/24 09:22	01/27/24 08:06	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		01/25/24 09:22	01/27/24 08:06	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	167	S1+	70 - 130				01/25/24 09:22	01/27/24 08:06	1
o-Terphenyl	139	S1+	70 - 130				01/25/24 09:22	01/27/24 08:06	1

Lab Sample ID: LCS 880-71570/2-A

Matrix: Solid

Analysis Batch: 71727

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 71570

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	921.3		mg/Kg		92	70 - 130
Diesel Range Organics (Over C10-C28)	1000	916.2		mg/Kg		92	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	86		70 - 130				
o-Terphenyl	76		70 - 130				

Lab Sample ID: LCSD 880-71570/3-A

Matrix: Solid

Analysis Batch: 71727

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 71570

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1162	*1	mg/Kg		116	70 - 130	23	20
Diesel Range Organics (Over C10-C28)	1000	920.9		mg/Kg		92	70 - 130	1	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	95		70 - 130						
o-Terphenyl	90		70 - 130						

Lab Sample ID: 880-38323-2 MS

Matrix: Solid

Analysis Batch: 71727

Client Sample ID: SB-13-S-2'-240119

Prep Type: Total/NA

Prep Batch: 71570

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	16.7	J *1	992	895.0		mg/Kg		89	70 - 130
Diesel Range Organics (Over C10-C28)	32.6	J B	992	1189		mg/Kg		117	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	129		70 - 130						
o-Terphenyl	91		70 - 130						

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QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41Job ID: 880-38323-1
SDG: Lovington, NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-38323-2 MSD

Matrix: Solid

Analysis Batch: 71727

Client Sample ID: SB-13-S-2'-240119

Prep Type: Total/NA

Prep Batch: 71570

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	16.7	J *1	992	918.0		mg/Kg		91	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	32.6	J B	992	1187		mg/Kg		116	70 - 130	0	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	130		70 - 130								
o-Terphenyl	89		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-71460/1-A

Matrix: Solid

Analysis Batch: 71463

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.395	U	5.00	0.395	mg/Kg			01/23/24 22:52	1

Lab Sample ID: LCS 880-71460/2-A

Matrix: Solid

Analysis Batch: 71463

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	258.4		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-71460/3-A

Matrix: Solid

Analysis Batch: 71463

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	254.8		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 880-38323-1 MS

Matrix: Solid

Analysis Batch: 71463

Client Sample ID: SB-13-S-1'-240119

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1190		1250	2495		mg/Kg		105	90 - 110

Lab Sample ID: 880-38323-1 MSD

Matrix: Solid

Analysis Batch: 71463

Client Sample ID: SB-13-S-1'-240119

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1190		1250	2483		mg/Kg		103	90 - 110	1	20

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QC Association Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38323-1
SDG: Lovington, NM

GC VOA

Prep Batch: 71692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38323-8	SB-15-S-2'-240119	Total/NA	Solid	5030B	
MB 880-71692/5-A	Method Blank	Total/NA	Solid	5030B	
LCS 880-71692/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 880-71692/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	

Prep Batch: 71830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38323-2	SB-13-S-2'-240119	Total/NA	Solid	5030B	
880-38323-5	SB-14-S-2'-240119	Total/NA	Solid	5030B	
MB 880-71830/5-A	Method Blank	Total/NA	Solid	5030B	
LCS 880-71830/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 880-71830/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	

Analysis Batch: 72000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38323-8	SB-15-S-2'-240119	Total/NA	Solid	8021B	71692
MB 880-71692/5-A	Method Blank	Total/NA	Solid	8021B	71692
LCS 880-71692/1-A	Lab Control Sample	Total/NA	Solid	8021B	71692
LCSD 880-71692/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	71692

Analysis Batch: 72064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38323-2	SB-13-S-2'-240119	Total/NA	Solid	Total BTEX	
880-38323-5	SB-14-S-2'-240119	Total/NA	Solid	Total BTEX	
880-38323-8	SB-15-S-2'-240119	Total/NA	Solid	Total BTEX	

Analysis Batch: 72093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38323-2	SB-13-S-2'-240119	Total/NA	Solid	8021B	71830
880-38323-5	SB-14-S-2'-240119	Total/NA	Solid	8021B	71830
MB 880-71830/5-A	Method Blank	Total/NA	Solid	8021B	71830
LCS 880-71830/1-A	Lab Control Sample	Total/NA	Solid	8021B	71830
LCSD 880-71830/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	71830

GC Semi VOA

Prep Batch: 71570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38323-2	SB-13-S-2'-240119	Total/NA	Solid	8015NM Prep	
880-38323-5	SB-14-S-2'-240119	Total/NA	Solid	8015NM Prep	
880-38323-8	SB-15-S-2'-240119	Total/NA	Solid	8015NM Prep	
MB 880-71570/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-71570/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-71570/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-38323-2 MS	SB-13-S-2'-240119	Total/NA	Solid	8015NM Prep	
880-38323-2 MSD	SB-13-S-2'-240119	Total/NA	Solid	8015NM Prep	

Analysis Batch: 71727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38323-2	SB-13-S-2'-240119	Total/NA	Solid	8015B NM	71570
880-38323-5	SB-14-S-2'-240119	Total/NA	Solid	8015B NM	71570

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QC Association Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38323-1
SDG: Lovington, NM

GC Semi VOA (Continued)

Analysis Batch: 71727 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38323-8	SB-15-S-2'-240119	Total/NA	Solid	8015B NM	71570
MB 880-71570/1-A	Method Blank	Total/NA	Solid	8015B NM	71570
LCS 880-71570/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	71570
LCSD 880-71570/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	71570
880-38323-2 MS	SB-13-S-2'-240119	Total/NA	Solid	8015B NM	71570
880-38323-2 MSD	SB-13-S-2'-240119	Total/NA	Solid	8015B NM	71570

Analysis Batch: 71918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38323-2	SB-13-S-2'-240119	Total/NA	Solid	8015 NM	
880-38323-5	SB-14-S-2'-240119	Total/NA	Solid	8015 NM	
880-38323-8	SB-15-S-2'-240119	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 71460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38323-1	SB-13-S-1'-240119	Soluble	Solid	DI Leach	
880-38323-2	SB-13-S-2'-240119	Soluble	Solid	DI Leach	
880-38323-3	SB-13-S-4'-240119	Soluble	Solid	DI Leach	
880-38323-4	SB-14-S-1'-240119	Soluble	Solid	DI Leach	
880-38323-5	SB-14-S-2'-240119	Soluble	Solid	DI Leach	
880-38323-6	SB-14-S-4'-240119	Soluble	Solid	DI Leach	
880-38323-7	SB-15-S-1'-240119	Soluble	Solid	DI Leach	
880-38323-8	SB-15-S-2'-240119	Soluble	Solid	DI Leach	
880-38323-9	SB-15-S-4'-240119	Soluble	Solid	DI Leach	
MB 880-71460/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71460/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71460/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-38323-1 MS	SB-13-S-1'-240119	Soluble	Solid	DI Leach	
880-38323-1 MSD	SB-13-S-1'-240119	Soluble	Solid	DI Leach	

Analysis Batch: 71463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38323-1	SB-13-S-1'-240119	Soluble	Solid	300.0	71460
880-38323-2	SB-13-S-2'-240119	Soluble	Solid	300.0	71460
880-38323-3	SB-13-S-4'-240119	Soluble	Solid	300.0	71460
880-38323-4	SB-14-S-1'-240119	Soluble	Solid	300.0	71460
880-38323-5	SB-14-S-2'-240119	Soluble	Solid	300.0	71460
880-38323-6	SB-14-S-4'-240119	Soluble	Solid	300.0	71460
880-38323-7	SB-15-S-1'-240119	Soluble	Solid	300.0	71460
880-38323-8	SB-15-S-2'-240119	Soluble	Solid	300.0	71460
880-38323-9	SB-15-S-4'-240119	Soluble	Solid	300.0	71460
MB 880-71460/1-A	Method Blank	Soluble	Solid	300.0	71460
LCS 880-71460/2-A	Lab Control Sample	Soluble	Solid	300.0	71460
LCSD 880-71460/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71460
880-38323-1 MS	SB-13-S-1'-240119	Soluble	Solid	300.0	71460
880-38323-1 MSD	SB-13-S-1'-240119	Soluble	Solid	300.0	71460

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Lab Chronicle

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38323-1
SDG: Lovington, NM

Client Sample ID: SB-13-S-1'-240119**Lab Sample ID: 880-38323-1****Date Collected: 01/19/24 12:40****Matrix: Solid****Date Received: 01/23/24 13:01**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	71460	01/23/24 14:15	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71463	01/24/24 10:19	SMC	EET MID

Client Sample ID: SB-13-S-2'-240119**Lab Sample ID: 880-38323-2****Date Collected: 01/19/24 12:50****Matrix: Solid****Date Received: 01/23/24 13:01**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.02 g	5 mL	71830	01/29/24 13:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72093	02/01/24 16:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72064	02/01/24 16:03	SM	EET MID
Total/NA	Analysis	8015 NM		1			71918	01/27/24 11:04	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	71570	01/25/24 09:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71727	01/27/24 11:04	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	71460	01/23/24 14:15	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71463	01/23/24 23:33	SMC	EET MID

Client Sample ID: SB-13-S-4'-240119**Lab Sample ID: 880-38323-3****Date Collected: 01/19/24 13:00****Matrix: Solid****Date Received: 01/23/24 13:01**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	71460	01/23/24 14:15	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71463	01/23/24 23:40	SMC	EET MID

Client Sample ID: SB-14-S-1'-240119**Lab Sample ID: 880-38323-4****Date Collected: 01/19/24 13:10****Matrix: Solid****Date Received: 01/23/24 13:01**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	71460	01/23/24 14:15	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71463	01/23/24 23:47	SMC	EET MID

Client Sample ID: SB-14-S-2'-240119**Lab Sample ID: 880-38323-5****Date Collected: 01/19/24 13:20****Matrix: Solid****Date Received: 01/23/24 13:01**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.01 g	5 mL	71830	01/29/24 13:34	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72093	02/01/24 16:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72064	02/01/24 16:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			71918	01/27/24 12:08	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	71570	01/25/24 09:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71727	01/27/24 12:08	SM	EET MID

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Lab Chronicle

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38323-1
SDG: Lovington, NM

Client Sample ID: SB-14-S-2'-240119**Lab Sample ID: 880-38323-5****Date Collected: 01/19/24 13:20****Matrix: Solid****Date Received: 01/23/24 13:01**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	71460	01/23/24 14:15	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71463	01/23/24 23:54	SMC	EET MID

Client Sample ID: SB-14-S-4'-240119**Lab Sample ID: 880-38323-6****Date Collected: 01/19/24 13:30****Matrix: Solid****Date Received: 01/23/24 13:01**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.97 g	50 mL	71460	01/23/24 14:15	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71463	01/24/24 00:14	SMC	EET MID

Client Sample ID: SB-15-S-1'-240119**Lab Sample ID: 880-38323-7****Date Collected: 01/19/24 13:50****Matrix: Solid****Date Received: 01/23/24 13:01**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.00 g	50 mL	71460	01/23/24 14:15	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71463	01/24/24 00:21	SMC	EET MID

Client Sample ID: SB-15-S-2'-240119**Lab Sample ID: 880-38323-8****Date Collected: 01/19/24 14:00****Matrix: Solid****Date Received: 01/23/24 13:01**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.02 g	5 mL	71692	01/26/24 11:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72000	01/31/24 14:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72064	01/31/24 14:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			71918	01/27/24 12:30	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	71570	01/25/24 09:22	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71727	01/27/24 12:30	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	71460	01/23/24 14:15	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71463	01/24/24 00:28	SMC	EET MID

Client Sample ID: SB-15-S-4'-240119**Lab Sample ID: 880-38323-9****Date Collected: 01/19/24 14:10****Matrix: Solid****Date Received: 01/23/24 13:01**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	71460	01/23/24 14:15	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71463	01/24/24 00:35	SMC	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Midland

Accreditation/Certification Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38323-1
SDG: Lovington, NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38323-1
SDG: Lovington, NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5030B	Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

- EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38323-1
SDG: Lovington, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-38323-1	SB-13-S-1'-240119	Solid	01/19/24 12:40	01/23/24 13:01
880-38323-2	SB-13-S-2'-240119	Solid	01/19/24 12:50	01/23/24 13:01
880-38323-3	SB-13-S-4'-240119	Solid	01/19/24 13:00	01/23/24 13:01
880-38323-4	SB-14-S-1'-240119	Solid	01/19/24 13:10	01/23/24 13:01
880-38323-5	SB-14-S-2'-240119	Solid	01/19/24 13:20	01/23/24 13:01
880-38323-6	SB-14-S-4'-240119	Solid	01/19/24 13:30	01/23/24 13:01
880-38323-7	SB-15-S-1'-240119	Solid	01/19/24 13:50	01/23/24 13:01
880-38323-8	SB-15-S-2'-240119	Solid	01/19/24 14:00	01/23/24 13:01
880-38323-9	SB-15-S-4'-240119	Solid	01/19/24 14:10	01/23/24 13:01

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Eurofins Midland

1211 W Florida Ave
Midland TX 79701
Phone (432) 704-5440

Chain of Custody Record



880-38323 Chain of Custody

Client Information		Sampler: <i>Heath Boyd</i>		Lab PM: <i>Builes John</i>	Carrier Tracking No(s):
Client Contact: <i>Mr Morgan Jordan</i>		Phone: <i>575-390-4618</i>		E-Mail: <i>John Builes@eurofins.com</i>	State of Origin: <i>NM</i>
Company: <i>ARCADIS US Inc</i>		PWSID			
Address: <i>1004 North Big Spring Suite 300</i>		Due Date Requested		Analysis Requested	
City: <i>Midland</i>		TAT Requested (days)			
State Zip: <i>TX 79701</i>		Compliance Project: ☐ Yes ☒ No			
Phone: <i>281-644-9437 (Tel)</i>		PO #: <i>30209657</i>			
Email: <i>douglas.jordan@arcadis.com</i>		Purchase Order Requested			
Project Name: <i>WLN 41</i>		Project #: <i>8807020</i>			
Site: <i>Livingston, NM</i>		SSOW#			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastefall, BT=tissue, Ash)	Field Filtered Sample (Yes or No)	Form MS/MSD (Yes or No)	300-OR-GFM-28D	300-OR-GFM-28D	Analysis Requested	Job #	Preservation Codes	Special Instructions/Note
SB-13-S-1'-240119	1/19/24	1240	G	Solid	X	X	X	X			A HOL B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Anchlor H Ascorbic Acid I Ice J DI Water K - EDTA L - EDA M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2SO3 S H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 Y Trizma Z other (specify)	
SB-13-S-2'-240119		1250		Solid			X	X				
SB-13-S-4'-240119		1300		Solid			X	X				
SB-14-S-1'-240119		1310		Solid			X	X				
SB-14-S-2'-240119		1320		Solid			X	X				
SB-14-S-4'-240119		1330		Solid			X	X				
SB-15-S-1'-240119		1350		Solid			X	X				
SB-15-S-2'-240119		1400		Solid			X	X				
SB-15-S-4'-240119	X	1410	X	Solid			X	X				
				Solid								
				Solid								
				Solid								

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
☐ Non-Hazard	☐ Flammable	☐ Return To Client	☐ Disposal By Lab
☐ Skin Irritant	☐ Poison B	☐ Archive For	Months
Deliverable Requested I II III IV Other (specify)		Special Instructions/QC Requirements	
Empty Kit Relinquished by		Method of Shipment:	
Relinquished by: <i>[Signature]</i>	Date: <i>1/22/24 1555</i>	Received by: <i>Morgan Jordan</i>	Date/Time: <i>1-22-24 3:55</i>
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:
Custody Seals Intact. ☐ Yes ☒ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: <i>1-23/24 1301</i>	1-23/24 1301

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: ARCADIS US Inc

Job Number: 880-38323-1
SDG Number: Lovington, NM

Login Number: 38323
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
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.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Morgan Jordan
ARCADIS US Inc
1004 North Big Spring
Suite 300
Midland, Texas 79701

Generated 2/12/2024 10:49:31 AM

JOB DESCRIPTION

WLU 41
Lovington, NM

JOB NUMBER

880-38486-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

Eurofins Midland

Job Notes

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

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

Authorization



Generated
2/12/2024 10:49:31 AM

Authorized for release by
John Builes, Project Manager
John.Builes@et.eurofinsus.com
(561)558-4549

Client: ARCADIS US Inc
Project/Site: WLU 41

Laboratory Job ID: 880-38486-1
SDG: Lovington, NM

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Definitions/Glossary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Definitions/Glossary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TNTC	Too Numerous To Count

- 1
- 2
- 3
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Case Narrative

Client: ARCADIS US Inc
Project: WLU 41

Job ID: 880-38486-1

Job ID: 880-38486-1

Eurofins Midland

Job Narrative
880-38486-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/25/2024 2:56 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SB-16-S-1'-240122 (880-38486-1), SB-16-S-2'-240122 (880-38486-2), SB-17-S-1'-240122 (880-38486-3), SB-17-S-2'-240122 (880-38486-4), SB-18-S-1'-240122 (880-38486-5), SB-18-S-2'-240122 (880-38486-6), SB-18-S-4'-240122 (880-38486-7), SB-19-S-1'-240122 (880-38486-8), SB-19-S-2'-240122 (880-38486-9), SB-19-S-3'-240122 (880-38486-10), SB-20-S-1'-240122 (880-38486-11), SB-20-S-2'-240122 (880-38486-12), SB-20-S-4'-240122 (880-38486-13), SB-21-S-1'-240122 (880-38486-14), SB-21-S-2'-240122 (880-38486-15) and SB-21-S-4'-240122 (880-38486-16).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-72060 and analytical batch 880-72197 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-72197 recovered under the lower control limit for Benzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SB-21-S-2'-240122 (880-38486-15). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-38486-A-2-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-71863 and analytical batch 880-72288 was outside the control limits.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-71866 and analytical batch 880-72288 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following samples were outside the upper control limit: SB-16-S-2'-240122 (880-38486-2), SB-17-S-2'-240122 (880-38486-4), SB-18-S-2'-240122 (880-38486-6) and SB-21-S-2'-240122 (880-38486-15). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SB-19-S-2'-240122 (880-38486-9) and SB-20-S-2'-240122 (880-38486-12). Evidence of matrix interference is present; therefore, re-extraction and/or

Eurofins Midland

Case Narrative

Client: ARCADIS US Inc
Project: WLU 41

Job ID: 880-38486-1

Job ID: 880-38486-1 (Continued) **Eurofins Midland**

re-analysis was not performed.

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

HPLC/IC

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

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Client Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Client Sample ID: SB-16-S-1'-240122

Lab Sample ID: 880-38486-1

Date Collected: 01/22/24 08:30

Matrix: Solid

Date Received: 01/25/24 14:56

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.6		5.01	0.396	mg/Kg			01/26/24 16:34	1

Client Sample ID: SB-16-S-2'-240122

Lab Sample ID: 880-38486-2

Date Collected: 01/22/24 08:40

Matrix: Solid

Date Received: 01/25/24 14:56

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U F1 F2	0.00199	0.000383	mg/Kg		01/31/24 14:09	02/02/24 17:08	1
Toluene	<0.000453	U F1	0.00199	0.000453	mg/Kg		01/31/24 14:09	02/02/24 17:08	1
Ethylbenzene	<0.000562	U	0.00199	0.000562	mg/Kg		01/31/24 14:09	02/02/24 17:08	1
m-Xylene & p-Xylene	<0.00100	U F1 F2	0.00398	0.00100	mg/Kg		01/31/24 14:09	02/02/24 17:08	1
o-Xylene	<0.000342	U F1 F2	0.00199	0.000342	mg/Kg		01/31/24 14:09	02/02/24 17:08	1
Xylenes, Total	<0.00100	U F1 F2	0.00398	0.00100	mg/Kg		01/31/24 14:09	02/02/24 17:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130	01/31/24 14:09	02/02/24 17:08	1
1,4-Difluorobenzene (Surr)	92		70 - 130	01/31/24 14:09	02/02/24 17:08	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00398	0.00100	mg/Kg			02/02/24 17:08	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<25.0	U	50.0	25.0	mg/Kg			02/05/24 03:21	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<25.0	U	50.0	25.0	mg/Kg		01/29/24 11:31	02/05/24 03:21	1
Diesel Range Organics (Over C10-C28)	<25.0	U	50.0	25.0	mg/Kg		01/29/24 11:31	02/05/24 03:21	1
Oil Range Organics (Over C28-C36)	<25.0	U	50.0	25.0	mg/Kg		01/29/24 11:31	02/05/24 03:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130	01/29/24 11:31	02/05/24 03:21	1
o-Terphenyl	132	S1+	70 - 130	01/29/24 11:31	02/05/24 03:21	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	801		4.96	0.392	mg/Kg			01/26/24 13:41	1

Client Sample ID: SB-17-S-1'-240122

Lab Sample ID: 880-38486-3

Date Collected: 01/22/24 09:00

Matrix: Solid

Date Received: 01/25/24 14:56

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.91		4.95	0.391	mg/Kg			01/26/24 14:02	1

Eurofins Midland

Client Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Client Sample ID: SB-17-S-2'-240122

Lab Sample ID: 880-38486-4

Date Collected: 01/22/24 09:10

Matrix: Solid

Date Received: 01/25/24 14:56

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000384	U	0.00200	0.000384	mg/Kg		01/31/24 14:09	02/02/24 22:02	1
Toluene	<0.000455	U	0.00200	0.000455	mg/Kg		01/31/24 14:09	02/02/24 22:02	1
Ethylbenzene	<0.000564	U	0.00200	0.000564	mg/Kg		01/31/24 14:09	02/02/24 22:02	1
m-Xylene & p-Xylene	<0.00101	U	0.00399	0.00101	mg/Kg		01/31/24 14:09	02/02/24 22:02	1
o-Xylene	0.000463	J	0.00200	0.000343	mg/Kg		01/31/24 14:09	02/02/24 22:02	1
Xylenes, Total	<0.00101	U	0.00399	0.00101	mg/Kg		01/31/24 14:09	02/02/24 22:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130	01/31/24 14:09	02/02/24 22:02	1
1,4-Difluorobenzene (Surr)	99		70 - 130	01/31/24 14:09	02/02/24 22:02	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00399	0.00101	mg/Kg			02/02/24 22:02	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<25.1	U	50.1	25.1	mg/Kg			02/05/24 03:42	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<25.1	U	50.1	25.1	mg/Kg		01/29/24 11:31	02/05/24 03:42	1
Diesel Range Organics (Over C10-C28)	<25.1	U	50.1	25.1	mg/Kg		01/29/24 11:31	02/05/24 03:42	1
Oil Range Organics (Over C28-C36)	<25.1	U	50.1	25.1	mg/Kg		01/29/24 11:31	02/05/24 03:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	149	S1+	70 - 130	01/29/24 11:31	02/05/24 03:42	1
o-Terphenyl	170	S1+	70 - 130	01/29/24 11:31	02/05/24 03:42	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28.9		4.95	0.391	mg/Kg			01/26/24 14:09	1

Client Sample ID: SB-18-S-1'-240122

Lab Sample ID: 880-38486-5

Date Collected: 01/22/24 09:40

Matrix: Solid

Date Received: 01/25/24 14:56

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.39	J	4.99	0.394	mg/Kg			01/26/24 14:16	1

Client Sample ID: SB-18-S-2'-240122

Lab Sample ID: 880-38486-6

Date Collected: 01/22/24 09:50

Matrix: Solid

Date Received: 01/25/24 14:56

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000387	U	0.00201	0.000387	mg/Kg		01/31/24 14:09	02/02/24 22:23	1
Toluene	<0.000458	U	0.00201	0.000458	mg/Kg		01/31/24 14:09	02/02/24 22:23	1
Ethylbenzene	<0.000567	U	0.00201	0.000567	mg/Kg		01/31/24 14:09	02/02/24 22:23	1

Eurofins Midland

Client Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Client Sample ID: SB-18-S-2'-240122

Lab Sample ID: 880-38486-6

Date Collected: 01/22/24 09:50

Matrix: Solid

Date Received: 01/25/24 14:56

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	<0.00101	U	0.00402	0.00101	mg/Kg		01/31/24 14:09	02/02/24 22:23	1
o-Xylene	<0.000345	U	0.00201	0.000345	mg/Kg		01/31/24 14:09	02/02/24 22:23	1
Xylenes, Total	<0.00101	U	0.00402	0.00101	mg/Kg		01/31/24 14:09	02/02/24 22:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130				01/31/24 14:09	02/02/24 22:23	1
1,4-Difluorobenzene (Surr)	96		70 - 130				01/31/24 14:09	02/02/24 22:23	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00402	0.00101	mg/Kg			02/02/24 22:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<25.2	U	50.4	25.2	mg/Kg			02/05/24 04:02	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<25.2	U	50.4	25.2	mg/Kg		01/29/24 11:31	02/05/24 04:02	1
Diesel Range Organics (Over C10-C28)	<25.2	U	50.4	25.2	mg/Kg		01/29/24 11:31	02/05/24 04:02	1
Oil Range Organics (Over C28-C36)	<25.2	U	50.4	25.2	mg/Kg		01/29/24 11:31	02/05/24 04:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	131	S1+	70 - 130				01/29/24 11:31	02/05/24 04:02	1
o-Terphenyl	149	S1+	70 - 130				01/29/24 11:31	02/05/24 04:02	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	465		5.00	0.395	mg/Kg			01/26/24 14:22	1

Client Sample ID: SB-18-S-4'-240122

Lab Sample ID: 880-38486-7

Date Collected: 01/22/24 10:00

Matrix: Solid

Date Received: 01/25/24 14:56

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	794		24.9	1.97	mg/Kg			01/26/24 14:29	5

Client Sample ID: SB-19-S-1'-240122

Lab Sample ID: 880-38486-8

Date Collected: 01/22/24 10:30

Matrix: Solid

Date Received: 01/25/24 14:56

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.7		5.03	0.397	mg/Kg			01/26/24 14:37	1

Eurofins Midland

Client Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Client Sample ID: SB-19-S-2'-240122

Lab Sample ID: 880-38486-9

Date Collected: 01/22/24 10:40

Matrix: Solid

Date Received: 01/25/24 14:56

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		01/31/24 14:09	02/02/24 22:43	1
Toluene	0.000577	J	0.00199	0.000454	mg/Kg		01/31/24 14:09	02/02/24 22:43	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg		01/31/24 14:09	02/02/24 22:43	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		01/31/24 14:09	02/02/24 22:43	1
o-Xylene	0.000714	J	0.00199	0.000343	mg/Kg		01/31/24 14:09	02/02/24 22:43	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		01/31/24 14:09	02/02/24 22:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130	01/31/24 14:09	02/02/24 22:43	1
1,4-Difluorobenzene (Surr)	101		70 - 130	01/31/24 14:09	02/02/24 22:43	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.00129	J	0.00398	0.00101	mg/Kg			02/02/24 22:43	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	194		50.1	25.0	mg/Kg			02/05/24 04:23	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<25.0	U	50.1	25.0	mg/Kg		01/29/24 11:31	02/05/24 04:23	1
Diesel Range Organics (Over C10-C28)	118		50.1	25.0	mg/Kg		01/29/24 11:31	02/05/24 04:23	1
Oil Range Organics (Over C28-C36)	75.5		50.1	25.0	mg/Kg		01/29/24 11:31	02/05/24 04:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	122		70 - 130	01/29/24 11:31	02/05/24 04:23	1
o-Terphenyl	139	S1+	70 - 130	01/29/24 11:31	02/05/24 04:23	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.79		5.05	0.399	mg/Kg			01/26/24 15:00	1

Client Sample ID: SB-19-S-3'-240122

Lab Sample ID: 880-38486-10

Date Collected: 01/22/24 10:50

Matrix: Solid

Date Received: 01/25/24 14:56

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.9		5.04	0.398	mg/Kg			01/26/24 15:08	1

Client Sample ID: SB-20-S-1'-240122

Lab Sample ID: 880-38486-11

Date Collected: 01/22/24 11:10

Matrix: Solid

Date Received: 01/25/24 14:56

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.04		4.99	0.394	mg/Kg			01/26/24 15:31	1

Eurofins Midland

Client Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Client Sample ID: SB-20-S-2'-240122

Lab Sample ID: 880-38486-12

Date Collected: 01/22/24 11:20

Matrix: Solid

Date Received: 01/25/24 14:56

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		01/31/24 14:09	02/03/24 01:06	1
Toluene	<0.000454	U	0.00199	0.000454	mg/Kg		01/31/24 14:09	02/03/24 01:06	1
Ethylbenzene	<0.000563	U	0.00199	0.000563	mg/Kg		01/31/24 14:09	02/03/24 01:06	1
m-Xylene & p-Xylene	<0.00101	U	0.00398	0.00101	mg/Kg		01/31/24 14:09	02/03/24 01:06	1
o-Xylene	0.000372	J	0.00199	0.000343	mg/Kg		01/31/24 14:09	02/03/24 01:06	1
Xylenes, Total	<0.00101	U	0.00398	0.00101	mg/Kg		01/31/24 14:09	02/03/24 01:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130	01/31/24 14:09	02/03/24 01:06	1
1,4-Difluorobenzene (Surr)	96		70 - 130	01/31/24 14:09	02/03/24 01:06	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00398	0.00101	mg/Kg			02/03/24 01:06	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	25.4	J	49.7	24.9	mg/Kg			02/05/24 04:44	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<24.9	U	49.7	24.9	mg/Kg		01/29/24 11:31	02/05/24 04:44	1
Diesel Range Organics (Over C10-C28)	25.4	J	49.7	24.9	mg/Kg		01/29/24 11:31	02/05/24 04:44	1
Oil Range Organics (Over C28-C36)	<24.9	U	49.7	24.9	mg/Kg		01/29/24 11:31	02/05/24 04:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	120		70 - 130	01/29/24 11:31	02/05/24 04:44	1
o-Terphenyl	136	S1+	70 - 130	01/29/24 11:31	02/05/24 04:44	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1120		24.9	1.96	mg/Kg			01/26/24 15:39	5

Client Sample ID: SB-20-S-4'-240122

Lab Sample ID: 880-38486-13

Date Collected: 01/22/24 11:30

Matrix: Solid

Date Received: 01/25/24 14:56

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1100		49.6	3.92	mg/Kg			01/26/24 15:47	10

Client Sample ID: SB-21-S-1'-240122

Lab Sample ID: 880-38486-14

Date Collected: 01/22/24 11:50

Matrix: Solid

Date Received: 01/25/24 14:56

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2540		25.1	1.98	mg/Kg			01/26/24 15:55	5

Eurofins Midland

Client Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Client Sample ID: SB-21-S-2'-240122

Lab Sample ID: 880-38486-15

Date Collected: 01/22/24 12:00

Matrix: Solid

Date Received: 01/25/24 14:56

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		02/02/24 14:51	02/04/24 13:43	1
Toluene	<0.000453	U	0.00199	0.000453	mg/Kg		02/02/24 14:51	02/04/24 13:43	1
Ethylbenzene	<0.000562	U **	0.00199	0.000562	mg/Kg		02/02/24 14:51	02/04/24 13:43	1
m-Xylene & p-Xylene	<0.00100	U **	0.00398	0.00100	mg/Kg		02/02/24 14:51	02/04/24 13:43	1
o-Xylene	<0.000342	U **	0.00199	0.000342	mg/Kg		02/02/24 14:51	02/04/24 13:43	1
Xylenes, Total	<0.00100	U **	0.00398	0.00100	mg/Kg		02/02/24 14:51	02/04/24 13:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130	02/02/24 14:51	02/04/24 13:43	1
1,4-Difluorobenzene (Surr)	65	S1-	70 - 130	02/02/24 14:51	02/04/24 13:43	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00398	0.00100	mg/Kg			02/04/24 13:43	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<25.0	U	50.0	25.0	mg/Kg			02/05/24 05:04	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<25.0	U	50.0	25.0	mg/Kg		01/29/24 11:31	02/05/24 05:04	1
Diesel Range Organics (Over C10-C28)	<25.0	U	50.0	25.0	mg/Kg		01/29/24 11:31	02/05/24 05:04	1
Oil Range Organics (Over C28-C36)	<25.0	U	50.0	25.0	mg/Kg		01/29/24 11:31	02/05/24 05:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130	01/29/24 11:31	02/05/24 05:04	1
o-Terphenyl	139	S1+	70 - 130	01/29/24 11:31	02/05/24 05:04	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1290		25.2	1.99	mg/Kg			01/26/24 16:03	5

Client Sample ID: SB-21-S-4'-240122

Lab Sample ID: 880-38486-16

Date Collected: 01/22/24 12:10

Matrix: Solid

Date Received: 01/25/24 14:56

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1000		25.2	1.99	mg/Kg			01/26/24 16:10	5

Surrogate Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Method: 8021B - Volatile Organic Compounds (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	BFB1	DFBZ1				
		(70-130)	(70-130)				
880-38486-2	SB-16-S-2'-240122	93	92				
880-38486-2 MS	SB-16-S-2'-240122	115	93				
880-38486-2 MSD	SB-16-S-2'-240122	233 S1+	129				
880-38486-4	SB-17-S-2'-240122	91	99				
880-38486-6	SB-18-S-2'-240122	107	96				
880-38486-9	SB-19-S-2'-240122	115	101				
880-38486-12	SB-20-S-2'-240122	110	96				
880-38486-15	SB-21-S-2'-240122	86	65 S1-				
LCS 880-71866/1-A	Lab Control Sample	119	87				
LCS 880-72060/1-A	Lab Control Sample	112	94				
LCSD 880-71866/2-A	Lab Control Sample Dup	121	99				
LCSD 880-72060/2-A	Lab Control Sample Dup	114	93				
MB 880-71863/5-A	Method Blank	74	68 S1-				
MB 880-71866/5-A	Method Blank	80	79				
MB 880-72060/5-A	Method Blank	110	108				
Surrogate Legend							
BFB = 4-Bromofluorobenzene (Surr)							
DFBZ = 1,4-Difluorobenzene (Surr)							

Method: 8015B NM - Diesel Range Organics (DRO) (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	1CO1	OTPH1				
		(70-130)	(70-130)				
880-38486-2	SB-16-S-2'-240122	116	132 S1+				
880-38486-4	SB-17-S-2'-240122	149 S1+	170 S1+				
880-38486-6	SB-18-S-2'-240122	131 S1+	149 S1+				
880-38486-9	SB-19-S-2'-240122	122	139 S1+				
880-38486-12	SB-20-S-2'-240122	120	136 S1+				
880-38486-15	SB-21-S-2'-240122	123	139 S1+				
LCS 870-17903/1-A	Lab Control Sample	129	127				
LCSD 870-17903/2-A	Lab Control Sample Dup	109	123				
MB 870-17903/3-A	Method Blank	126	126				
Surrogate Legend							
1CO = 1-Chlorooctane							
OTPH = o-Terphenyl							

QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-71863/5-A							Client Sample ID: Method Blank		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 72288							Prep Batch: 71863		
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		01/29/24 14:44	02/03/24 20:12	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		01/29/24 14:44	02/03/24 20:12	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		01/29/24 14:44	02/03/24 20:12	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		01/29/24 14:44	02/03/24 20:12	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		01/29/24 14:44	02/03/24 20:12	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		01/29/24 14:44	02/03/24 20:12	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130				01/29/24 14:44	02/03/24 20:12	1
1,4-Difluorobenzene (Surr)	68	S1-	70 - 130				01/29/24 14:44	02/03/24 20:12	1

Lab Sample ID: MB 880-71866/5-A							Client Sample ID: Method Blank		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 72288							Prep Batch: 71866		
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		01/29/24 14:51	02/04/24 06:50	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		01/29/24 14:51	02/04/24 06:50	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		01/29/24 14:51	02/04/24 06:50	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		01/29/24 14:51	02/04/24 06:50	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		01/29/24 14:51	02/04/24 06:50	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		01/29/24 14:51	02/04/24 06:50	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		70 - 130				01/29/24 14:51	02/04/24 06:50	1
1,4-Difluorobenzene (Surr)	79		70 - 130				01/29/24 14:51	02/04/24 06:50	1

Lab Sample ID: LCS 880-71866/1-A							Client Sample ID: Lab Control Sample		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 72288							Prep Batch: 71866		
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	0.100	0.1043		mg/Kg		104	70 - 130		
Toluene	0.100	0.1011		mg/Kg		101	70 - 130		
Ethylbenzene	0.100	0.1251		mg/Kg		125	70 - 130		
m-Xylene & p-Xylene	0.200	0.2514		mg/Kg		126	70 - 130		
o-Xylene	0.100	0.1221		mg/Kg		122	70 - 130		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	119		70 - 130						
1,4-Difluorobenzene (Surr)	87		70 - 130						

Lab Sample ID: LCSD 880-71866/2-A							Client Sample ID: Lab Control Sample Dup		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 72288							Prep Batch: 71866		
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.1076		mg/Kg		108	70 - 130	3	35

Eurofins Midland

QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-71866/2-A

Matrix: Solid

Analysis Batch: 72288

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 71866

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits			
Toluene	0.100	0.1186		mg/Kg		119	70 - 130		16	35
Ethylbenzene	0.100	0.1460	*+	mg/Kg		146	70 - 130		15	35
m-Xylene & p-Xylene	0.200	0.2786	*+	mg/Kg		139	70 - 130		10	35
o-Xylene	0.100	0.1353	*+	mg/Kg		135	70 - 130		10	35

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	121		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: MB 880-72060/5-A

Matrix: Solid

Analysis Batch: 72197

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 72060

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		01/31/24 14:09	02/02/24 16:40	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		01/31/24 14:09	02/02/24 16:40	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		01/31/24 14:09	02/02/24 16:40	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		01/31/24 14:09	02/02/24 16:40	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		01/31/24 14:09	02/02/24 16:40	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		01/31/24 14:09	02/02/24 16:40	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	110		70 - 130	01/31/24 14:09	02/02/24 16:40	1
1,4-Difluorobenzene (Surr)	108		70 - 130	01/31/24 14:09	02/02/24 16:40	1

Lab Sample ID: LCS 880-72060/1-A

Matrix: Solid

Analysis Batch: 72197

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 72060

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Benzene	0.100	0.08384		mg/Kg		84	70 - 130	
Toluene	0.100	0.08772		mg/Kg		88	70 - 130	
Ethylbenzene	0.100	0.09472		mg/Kg		95	70 - 130	
m-Xylene & p-Xylene	0.200	0.1609		mg/Kg		80	70 - 130	
o-Xylene	0.100	0.08406		mg/Kg		84	70 - 130	

Surrogate	LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: LCSD 880-72060/2-A

Matrix: Solid

Analysis Batch: 72197

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 72060

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits			
Benzene	0.100	0.08735		mg/Kg		87	70 - 130		4	35
Toluene	0.100	0.09318		mg/Kg		93	70 - 130		6	35
Ethylbenzene	0.100	0.1149		mg/Kg		115	70 - 130		19	35

Eurofins Midland

QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-72060/2-A

Matrix: Solid

Analysis Batch: 72197

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 72060

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m-Xylene & p-Xylene	0.200	0.1856		mg/Kg		93	70 - 130	14	35
o-Xylene	0.100	0.08348		mg/Kg		83	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Lab Sample ID: 880-38486-2 MS

Matrix: Solid

Analysis Batch: 72197

Client Sample ID: SB-16-S-2'-240122

Prep Type: Total/NA

Prep Batch: 72060

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.000383	U F1 F2	0.0996	0.06222	F1	mg/Kg		62	70 - 130
Toluene	<0.000453	U F1	0.0996	0.06767	F1	mg/Kg		68	70 - 130
Ethylbenzene	<0.000562	U	0.0996	0.08010		mg/Kg		80	70 - 130
m-Xylene & p-Xylene	<0.00100	U F1 F2	0.199	0.1506		mg/Kg		76	70 - 130
o-Xylene	<0.000342	U F1 F2	0.0996	0.07395		mg/Kg		74	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Lab Sample ID: 880-38486-2 MSD

Matrix: Solid

Analysis Batch: 72197

Client Sample ID: SB-16-S-2'-240122

Prep Type: Total/NA

Prep Batch: 72060

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.000383	U F1 F2	0.0990	0.1140	F2	mg/Kg		115	70 - 130	59	35
Toluene	<0.000453	U F1	0.0990	0.07298		mg/Kg		74	70 - 130	8	35
Ethylbenzene	<0.000562	U	0.0990	0.09438		mg/Kg		95	70 - 130	16	35
m-Xylene & p-Xylene	<0.00100	U F1 F2	0.198	0.3115	F1 F2	mg/Kg		157	70 - 130	70	35
o-Xylene	<0.000342	U F1 F2	0.0990	0.1636	F1 F2	mg/Kg		165	70 - 130	75	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	233	S1+	70 - 130
1,4-Difluorobenzene (Surr)	129		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 870-17903/3-A

Matrix: Solid

Analysis Batch: 17969

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 17903

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<25.0	U	50.0	25.0	mg/Kg		01/29/24 11:31	02/04/24 21:09	1
Diesel Range Organics (Over C10-C28)	<25.0	U	50.0	25.0	mg/Kg		01/29/24 11:31	02/04/24 21:09	1
Oil Range Organics (Over C28-C36)	<25.0	U	50.0	25.0	mg/Kg		01/29/24 11:31	02/04/24 21:09	1

Eurofins Midland

QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	126		70 - 130	01/29/24 11:31	02/04/24 21:09	1
o-Terphenyl	126		70 - 130	01/29/24 11:31	02/04/24 21:09	1

Lab Sample ID: LCS 870-17903/1-A

Matrix: Solid

Analysis Batch: 17969

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 17903

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1020	1055		mg/Kg		104	70 - 130
Diesel Range Organics (Over C10-C28)	1010	1107		mg/Kg		110	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	129		70 - 130
o-Terphenyl	127		70 - 130

Lab Sample ID: LCSD 870-17903/2-A

Matrix: Solid

Analysis Batch: 17969

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 17903

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1020	1121		mg/Kg		110	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	1010	1142		mg/Kg		113	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	109		70 - 130
o-Terphenyl	123		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-71661/1-A

Matrix: Solid

Analysis Batch: 71691

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.395	U	5.00	0.395	mg/Kg			01/26/24 12:43	1

Lab Sample ID: LCS 880-71661/2-A

Matrix: Solid

Analysis Batch: 71691

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	232.6		mg/Kg		93	90 - 110

Lab Sample ID: LCSD 880-71661/3-A

Matrix: Solid

Analysis Batch: 71691

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	238.5		mg/Kg		95	90 - 110	3	20

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QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-38486-8 MS

Matrix: Solid

Analysis Batch: 71691

Client Sample ID: SB-19-S-1'-240122

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	19.7		252	256.4		mg/Kg		94	90 - 110		

Lab Sample ID: 880-38486-8 MSD

Matrix: Solid

Analysis Batch: 71691

Client Sample ID: SB-19-S-1'-240122

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	19.7		252	256.0		mg/Kg		94	90 - 110	0	20

QC Association Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

GC VOA

Prep Batch: 71863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-71863/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 71866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38486-15	SB-21-S-2'-240122	Total/NA	Solid	5030B	
MB 880-71866/5-A	Method Blank	Total/NA	Solid	5030B	
LCS 880-71866/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 880-71866/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	

Prep Batch: 72060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38486-2	SB-16-S-2'-240122	Total/NA	Solid	5030B	
880-38486-4	SB-17-S-2'-240122	Total/NA	Solid	5030B	
880-38486-6	SB-18-S-2'-240122	Total/NA	Solid	5030B	
880-38486-9	SB-19-S-2'-240122	Total/NA	Solid	5030B	
880-38486-12	SB-20-S-2'-240122	Total/NA	Solid	5030B	
MB 880-72060/5-A	Method Blank	Total/NA	Solid	5030B	
LCS 880-72060/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 880-72060/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
880-38486-2 MS	SB-16-S-2'-240122	Total/NA	Solid	5030B	
880-38486-2 MSD	SB-16-S-2'-240122	Total/NA	Solid	5030B	

Analysis Batch: 72197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38486-2	SB-16-S-2'-240122	Total/NA	Solid	8021B	72060
880-38486-4	SB-17-S-2'-240122	Total/NA	Solid	8021B	72060
880-38486-6	SB-18-S-2'-240122	Total/NA	Solid	8021B	72060
880-38486-9	SB-19-S-2'-240122	Total/NA	Solid	8021B	72060
880-38486-12	SB-20-S-2'-240122	Total/NA	Solid	8021B	72060
MB 880-72060/5-A	Method Blank	Total/NA	Solid	8021B	72060
LCS 880-72060/1-A	Lab Control Sample	Total/NA	Solid	8021B	72060
LCSD 880-72060/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	72060
880-38486-2 MS	SB-16-S-2'-240122	Total/NA	Solid	8021B	72060
880-38486-2 MSD	SB-16-S-2'-240122	Total/NA	Solid	8021B	72060

Analysis Batch: 72288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38486-15	SB-21-S-2'-240122	Total/NA	Solid	8021B	71866
MB 880-71863/5-A	Method Blank	Total/NA	Solid	8021B	71863
MB 880-71866/5-A	Method Blank	Total/NA	Solid	8021B	71866
LCS 880-71866/1-A	Lab Control Sample	Total/NA	Solid	8021B	71866
LCSD 880-71866/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	71866

Analysis Batch: 72410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38486-2	SB-16-S-2'-240122	Total/NA	Solid	Total BTEX	
880-38486-4	SB-17-S-2'-240122	Total/NA	Solid	Total BTEX	
880-38486-6	SB-18-S-2'-240122	Total/NA	Solid	Total BTEX	
880-38486-9	SB-19-S-2'-240122	Total/NA	Solid	Total BTEX	
880-38486-12	SB-20-S-2'-240122	Total/NA	Solid	Total BTEX	
880-38486-15	SB-21-S-2'-240122	Total/NA	Solid	Total BTEX	

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QC Association Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

GC Semi VOA

Prep Batch: 17903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38486-2	SB-16-S-2'-240122	Total/NA	Solid	8015NM Prep	
880-38486-4	SB-17-S-2'-240122	Total/NA	Solid	8015NM Prep	
880-38486-6	SB-18-S-2'-240122	Total/NA	Solid	8015NM Prep	
880-38486-9	SB-19-S-2'-240122	Total/NA	Solid	8015NM Prep	
880-38486-12	SB-20-S-2'-240122	Total/NA	Solid	8015NM Prep	
880-38486-15	SB-21-S-2'-240122	Total/NA	Solid	8015NM Prep	
MB 870-17903/3-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 870-17903/1-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 870-17903/2-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 17969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38486-2	SB-16-S-2'-240122	Total/NA	Solid	8015B NM	17903
880-38486-4	SB-17-S-2'-240122	Total/NA	Solid	8015B NM	17903
880-38486-6	SB-18-S-2'-240122	Total/NA	Solid	8015B NM	17903
880-38486-9	SB-19-S-2'-240122	Total/NA	Solid	8015B NM	17903
880-38486-12	SB-20-S-2'-240122	Total/NA	Solid	8015B NM	17903
880-38486-15	SB-21-S-2'-240122	Total/NA	Solid	8015B NM	17903
MB 870-17903/3-A	Method Blank	Total/NA	Solid	8015B NM	17903
LCS 870-17903/1-A	Lab Control Sample	Total/NA	Solid	8015B NM	17903
LCSD 870-17903/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17903

Analysis Batch: 17978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38486-2	SB-16-S-2'-240122	Total/NA	Solid	8015 NM	
880-38486-4	SB-17-S-2'-240122	Total/NA	Solid	8015 NM	
880-38486-6	SB-18-S-2'-240122	Total/NA	Solid	8015 NM	
880-38486-9	SB-19-S-2'-240122	Total/NA	Solid	8015 NM	
880-38486-12	SB-20-S-2'-240122	Total/NA	Solid	8015 NM	
880-38486-15	SB-21-S-2'-240122	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 71661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38486-1	SB-16-S-1'-240122	Soluble	Solid	DI Leach	
880-38486-2	SB-16-S-2'-240122	Soluble	Solid	DI Leach	
880-38486-3	SB-17-S-1'-240122	Soluble	Solid	DI Leach	
880-38486-4	SB-17-S-2'-240122	Soluble	Solid	DI Leach	
880-38486-5	SB-18-S-1'-240122	Soluble	Solid	DI Leach	
880-38486-6	SB-18-S-2'-240122	Soluble	Solid	DI Leach	
880-38486-7	SB-18-S-4'-240122	Soluble	Solid	DI Leach	
880-38486-8	SB-19-S-1'-240122	Soluble	Solid	DI Leach	
880-38486-9	SB-19-S-2'-240122	Soluble	Solid	DI Leach	
880-38486-10	SB-19-S-3'-240122	Soluble	Solid	DI Leach	
880-38486-11	SB-20-S-1'-240122	Soluble	Solid	DI Leach	
880-38486-12	SB-20-S-2'-240122	Soluble	Solid	DI Leach	
880-38486-13	SB-20-S-4'-240122	Soluble	Solid	DI Leach	
880-38486-14	SB-21-S-1'-240122	Soluble	Solid	DI Leach	
880-38486-15	SB-21-S-2'-240122	Soluble	Solid	DI Leach	
880-38486-16	SB-21-S-4'-240122	Soluble	Solid	DI Leach	

Eurofins Midland

QC Association Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

HPLC/IC (Continued)

Leach Batch: 71661 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-71661/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71661/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71661/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-38486-8 MS	SB-19-S-1'-240122	Soluble	Solid	DI Leach	
880-38486-8 MSD	SB-19-S-1'-240122	Soluble	Solid	DI Leach	

Analysis Batch: 71691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38486-1	SB-16-S-1'-240122	Soluble	Solid	300.0	71661
880-38486-2	SB-16-S-2'-240122	Soluble	Solid	300.0	71661
880-38486-3	SB-17-S-1'-240122	Soluble	Solid	300.0	71661
880-38486-4	SB-17-S-2'-240122	Soluble	Solid	300.0	71661
880-38486-5	SB-18-S-1'-240122	Soluble	Solid	300.0	71661
880-38486-6	SB-18-S-2'-240122	Soluble	Solid	300.0	71661
880-38486-7	SB-18-S-4'-240122	Soluble	Solid	300.0	71661
880-38486-8	SB-19-S-1'-240122	Soluble	Solid	300.0	71661
880-38486-9	SB-19-S-2'-240122	Soluble	Solid	300.0	71661
880-38486-10	SB-19-S-3'-240122	Soluble	Solid	300.0	71661
880-38486-11	SB-20-S-1'-240122	Soluble	Solid	300.0	71661
880-38486-12	SB-20-S-2'-240122	Soluble	Solid	300.0	71661
880-38486-13	SB-20-S-4'-240122	Soluble	Solid	300.0	71661
880-38486-14	SB-21-S-1'-240122	Soluble	Solid	300.0	71661
880-38486-15	SB-21-S-2'-240122	Soluble	Solid	300.0	71661
880-38486-16	SB-21-S-4'-240122	Soluble	Solid	300.0	71661
MB 880-71661/1-A	Method Blank	Soluble	Solid	300.0	71661
LCS 880-71661/2-A	Lab Control Sample	Soluble	Solid	300.0	71661
LCSD 880-71661/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71661
880-38486-8 MS	SB-19-S-1'-240122	Soluble	Solid	300.0	71661
880-38486-8 MSD	SB-19-S-1'-240122	Soluble	Solid	300.0	71661

Lab Chronicle

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Client Sample ID: SB-16-S-1'-240122
Date Collected: 01/22/24 08:30
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		1			71691	01/26/24 16:34	CH	EET MID

Client Sample ID: SB-16-S-2'-240122
Date Collected: 01/22/24 08:40
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5 mL	72060	01/31/24 14:09	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72197	02/02/24 17:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72410	02/02/24 17:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			17978	02/05/24 03:21	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	17903	01/29/24 11:31	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17969	02/05/24 03:21	WP	EET DAL
Soluble	Leach	DI Leach			5.04 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		1			71691	01/26/24 13:41	CH	EET MID

Client Sample ID: SB-17-S-1'-240122
Date Collected: 01/22/24 09:00
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		1			71691	01/26/24 14:02	CH	EET MID

Client Sample ID: SB-17-S-2'-240122
Date Collected: 01/22/24 09:10
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.01 g	5 mL	72060	01/31/24 14:09	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72197	02/02/24 22:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72410	02/02/24 22:02	SM	EET MID
Total/NA	Analysis	8015 NM		1			17978	02/05/24 03:42	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	17903	01/29/24 11:31	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17969	02/05/24 03:42	WP	EET DAL
Soluble	Leach	DI Leach			5.05 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		1			71691	01/26/24 14:09	CH	EET MID

Lab Chronicle

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Client Sample ID: SB-18-S-1'-240122
Date Collected: 01/22/24 09:40
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		1			71691	01/26/24 14:16	CH	EET MID

Client Sample ID: SB-18-S-2'-240122
Date Collected: 01/22/24 09:50
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.98 g	5 mL	72060	01/31/24 14:09	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72197	02/02/24 22:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72410	02/02/24 22:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			17978	02/05/24 04:02	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	17903	01/29/24 11:31	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17969	02/05/24 04:02	WP	EET DAL
Soluble	Leach	DI Leach			5.00 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		1			71691	01/26/24 14:22	CH	EET MID

Client Sample ID: SB-18-S-4'-240122
Date Collected: 01/22/24 10:00
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		5			71691	01/26/24 14:29	CH	EET MID

Client Sample ID: SB-19-S-1'-240122
Date Collected: 01/22/24 10:30
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.97 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		1			71691	01/26/24 14:37	CH	EET MID

Client Sample ID: SB-19-S-2'-240122
Date Collected: 01/22/24 10:40
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.02 g	5 mL	72060	01/31/24 14:09	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72197	02/02/24 22:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72410	02/02/24 22:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			17978	02/05/24 04:23	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	17903	01/29/24 11:31	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17969	02/05/24 04:23	WP	EET DAL

Eurofins Midland

Lab Chronicle

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Client Sample ID: SB-19-S-2'-240122
Date Collected: 01/22/24 10:40
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.95 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		1			71691	01/26/24 15:00	CH	EET MID

Client Sample ID: SB-19-S-3'-240122
Date Collected: 01/22/24 10:50
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		1			71691	01/26/24 15:08	CH	EET MID

Client Sample ID: SB-20-S-1'-240122
Date Collected: 01/22/24 11:10
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		1			71691	01/26/24 15:31	CH	EET MID

Client Sample ID: SB-20-S-2'-240122
Date Collected: 01/22/24 11:20
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.02 g	5 mL	72060	01/31/24 14:09	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72197	02/03/24 01:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72410	02/03/24 01:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			17978	02/05/24 04:44	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	17903	01/29/24 11:31	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17969	02/05/24 04:44	WP	EET DAL
Soluble	Leach	DI Leach			5.03 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		5			71691	01/26/24 15:39	CH	EET MID

Client Sample ID: SB-20-S-4'-240122
Date Collected: 01/22/24 11:30
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		10			71691	01/26/24 15:47	CH	EET MID

Lab Chronicle

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Client Sample ID: SB-21-S-1'-240122
Date Collected: 01/22/24 11:50
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		5			71691	01/26/24 15:55	CH	EET MID

Client Sample ID: SB-21-S-2'-240122
Date Collected: 01/22/24 12:00
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5 mL	71866	02/02/24 14:51	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72288	02/04/24 13:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72410	02/04/24 13:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			17978	02/05/24 05:04	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	17903	01/29/24 11:31	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17969	02/05/24 05:04	WP	EET DAL
Soluble	Leach	DI Leach			4.96 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		5			71691	01/26/24 16:03	CH	EET MID

Client Sample ID: SB-21-S-4'-240122
Date Collected: 01/22/24 12:10
Date Received: 01/25/24 14:56

Lab Sample ID: 880-38486-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.97 g	50 mL	71661	01/26/24 08:13	SA	EET MID
Soluble	Analysis	300.0		5			71691	01/26/24 16:10	CH	EET MID

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Solid	Total BTEX

Laboratory: Eurofins Dallas

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704295-23-34	06-30-24

Method Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
300.0	Anions, Ion Chromatography	EPA	EET MID
5030B	Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET DAL
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38486-1
SDG: Lovington, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-38486-1	SB-16-S-1'-240122	Solid	01/22/24 08:30	01/25/24 14:56
880-38486-2	SB-16-S-2'-240122	Solid	01/22/24 08:40	01/25/24 14:56
880-38486-3	SB-17-S-1'-240122	Solid	01/22/24 09:00	01/25/24 14:56
880-38486-4	SB-17-S-2'-240122	Solid	01/22/24 09:10	01/25/24 14:56
880-38486-5	SB-18-S-1'-240122	Solid	01/22/24 09:40	01/25/24 14:56
880-38486-6	SB-18-S-2'-240122	Solid	01/22/24 09:50	01/25/24 14:56
880-38486-7	SB-18-S-4'-240122	Solid	01/22/24 10:00	01/25/24 14:56
880-38486-8	SB-19-S-1'-240122	Solid	01/22/24 10:30	01/25/24 14:56
880-38486-9	SB-19-S-2'-240122	Solid	01/22/24 10:40	01/25/24 14:56
880-38486-10	SB-19-S-3'-240122	Solid	01/22/24 10:50	01/25/24 14:56
880-38486-11	SB-20-S-1'-240122	Solid	01/22/24 11:10	01/25/24 14:56
880-38486-12	SB-20-S-2'-240122	Solid	01/22/24 11:20	01/25/24 14:56
880-38486-13	SB-20-S-4'-240122	Solid	01/22/24 11:30	01/25/24 14:56
880-38486-14	SB-21-S-1'-240122	Solid	01/22/24 11:50	01/25/24 14:56
880-38486-15	SB-21-S-2'-240122	Solid	01/22/24 12:00	01/25/24 14:56
880-38486-16	SB-21-S-4'-240122	Solid	01/22/24 12:10	01/25/24 14:56

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Eurofins Midland

1211 W Florida Ave
Midland TX 79701
Phone (432) 704-5440

Chain of Custody Record

eurofins
Environment Testing

Client Information		Sampler	Lab PM		Carrier Tracking No(s)		COC No.
Client Contact: Mr Morgan Jordan		Heath Boyd	Bulles John				880-8032-1136 4
Company: ARCADIS US Inc		Phone: 575-390-4618	E-Mail: John.Bulles@et.eurofinsus.com		State of Origin: NM		Page 1 of 1
Address: 1004 North Big Spring Suite 300		Due Date Requested	Analysis Requested		Job #		1022
City: Midland		TAT Requested (days)					
State Zip: TX, 79701		Compliance Project: A Yes Δ No					
Phone: 281-644-9437 (Te)		PO #					
Email: douglas.jordan@arcadis.com		Purchase Order Requested					
Project Name: WCU 41		Project #					
Site: Lovington, NM		SSOV#					
		Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=water, S=solid, O=wastewat, B=triple A+B)	Field Filtered Sample (Yes or No)
		SB-16-S-1'-240122	1/22/24	830	G	Solid	Perform MS/MSD (Yes or No)
		SB-16-S-2'-240122		840		Solid	300-ORGM-28B; 8015MOD_NM, 8021B
		SB-17-S-1'-240122		900		Solid	300-ORGM-28B
		SB-17-S-2'-240122		910		Solid	
		SB-18-S-1'-240122		940		Solid	
		SB-18-S-2'-240122		950		Solid	
		SB-18-S-4'-240122		1000		Solid	
		SB-19-S-1'-240122		1030		Solid	
		SB-19-S-2'-240122		1040		Solid	
		SB-19-S-3'-240122		1050		Solid	
		SB-20-S-1'-240122	X	1110	X	Solid	
Possible Hazard Identification							
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological							
Deliverable Requested I II III IV Other (Specify)							
Empty Kit Relinquished by		Date	Time				
Relinquished by: [Signature]		1/23/24	1600				
Relinquished by: [Signature]		Date/Time	Company: ARCADIS				
Relinquished by: [Signature]		Date/Time	Received By: [Signature]				
Custody Seals Intact: Δ Yes Δ No		Custody Seal No	Cooler Temperature(s) °C and Other Remarks:				
			3.0/3.2				



880-38486 Chain of Custody

Preservation Codes
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Anchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsHAc2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecylhydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)

Special Instructions/Note:

Chain of Custody Record

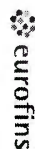
eurolins
4986
Environment Testing

Ver. 01/16/2019

Eurofins Midland

**1211 W. Florida Ave
Midland, TX 79701
Phone: 432-704-5440**

Chain of Custody Record



Environment Testing

[illegible]

Login Sample Receipt Checklist

Client: ARCADIS US Inc

Job Number: 880-38486-1

SDG Number: Lovington, NM

Login Number: 38486

List Number: 1

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
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.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: ARCADIS US Inc

Job Number: 880-38486-1
SDG Number: Lovington, NM

Login Number: 38486
List Number: 2
Creator: Dabinett, Ian

List Source: Eurofins Dallas
List Creation: 02/02/24 12:43 PM

Question	Answer	Comment
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.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Morgan Jordan
ARCADIS US Inc
1004 North Big Spring
Suite 300
Midland, Texas 79701

Generated 2/12/2024 10:49:27 AM

JOB DESCRIPTION

WLU 41
Lovington, NM

JOB NUMBER

880-38635-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701



Eurofins Midland

Job Notes

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

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

Authorization



Generated
2/12/2024 10:49:27 AM

Authorized for release by
John Builes, Project Manager
John.Builes@et.eurofinsus.com
(561)558-4549

Client: ARCADIS US Inc
Project/Site: WLU 41

Laboratory Job ID: 880-38635-1
SDG: Lovington, NM

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Definitions/Glossary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38635-1
SDG: Lovington, NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

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

Case Narrative

Client: ARCADIS US Inc
Project: WLU 41

Job ID: 880-38635-1

Job ID: 880-38635-1

Eurofins Midland

Job Narrative 880-38635-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/30/2024 8:35 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.7°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SB-22-S-1'-240124 (880-38635-1), SB-22-S-2'-240124 (880-38635-2), SB-24-S-1'-240124 (880-38635-3) and SB-24-S-2'-240124 (880-38635-4).

GC VOA

Method 8021B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 880-72315 recovered outside control limits for the following analytes: MTBE.

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

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following samples were outside the upper control limit: SB-22-S-2'-240124 (880-38635-2), SB-24-S-2'-240124 (880-38635-4) and (890-6040-A-1-J). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC

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

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Client Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38635-1
SDG: Lovington, NM

Client Sample ID: SB-22-S-1'-240124

Lab Sample ID: 880-38635-1

Date Collected: 01/24/24 10:50

Matrix: Solid

Date Received: 01/30/24 08:35

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.13		4.99	0.394	mg/Kg			01/31/24 03:11	1

Client Sample ID: SB-22-S-2'-240124

Lab Sample ID: 880-38635-2

Date Collected: 01/24/24 11:00

Matrix: Solid

Date Received: 01/30/24 08:35

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000386	U	0.00200	0.000386	mg/Kg		02/05/24 11:33	02/05/24 22:58	1
Toluene	<0.000457	U	0.00200	0.000457	mg/Kg		02/05/24 11:33	02/05/24 22:58	1
Ethylbenzene	<0.000566	U *	0.00200	0.000566	mg/Kg		02/05/24 11:33	02/05/24 22:58	1
m-Xylene & p-Xylene	<0.00101	U *	0.00401	0.00101	mg/Kg		02/05/24 11:33	02/05/24 22:58	1
o-Xylene	<0.000345	U	0.00200	0.000345	mg/Kg		02/05/24 11:33	02/05/24 22:58	1
Xylenes, Total	<0.00101	U *	0.00401	0.00101	mg/Kg		02/05/24 11:33	02/05/24 22:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130				02/05/24 11:33	02/05/24 22:58	1
1,4-Difluorobenzene (Surr)	84		70 - 130				02/05/24 11:33	02/05/24 22:58	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00401	0.00101	mg/Kg			02/05/24 22:58	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<24.9	U	49.8	24.9	mg/Kg			02/05/24 14:00	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<24.9	U	49.8	24.9	mg/Kg		01/30/24 11:05	02/05/24 14:00	1
Diesel Range Organics (Over C10-C28)	<24.9	U	49.8	24.9	mg/Kg		01/30/24 11:05	02/05/24 14:00	1
Oil Range Organics (Over C28-C36)	<24.9	U	49.8	24.9	mg/Kg		01/30/24 11:05	02/05/24 14:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	131	S1+	70 - 130				01/30/24 11:05	02/05/24 14:00	1
o-Terphenyl	149	S1+	70 - 130				01/30/24 11:05	02/05/24 14:00	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	68.1		5.04	0.398	mg/Kg			01/31/24 08:32	1

Client Sample ID: SB-24-S-1'-240124

Lab Sample ID: 880-38635-3

Date Collected: 01/24/24 11:20

Matrix: Solid

Date Received: 01/30/24 08:35

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13.3		5.02	0.397	mg/Kg			01/31/24 03:38	1

Eurofins Midland

Client Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38635-1
SDG: Lovington, NM

Client Sample ID: SB-24-S-2'-240124

Lab Sample ID: 880-38635-4

Date Collected: 01/24/24 11:30

Matrix: Solid

Date Received: 01/30/24 08:35

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		02/05/24 11:33	02/05/24 23:19	1
Toluene	<0.000453	U	0.00199	0.000453	mg/Kg		02/05/24 11:33	02/05/24 23:19	1
Ethylbenzene	<0.000562	U **	0.00199	0.000562	mg/Kg		02/05/24 11:33	02/05/24 23:19	1
m-Xylene & p-Xylene	<0.00100	U **	0.00398	0.00100	mg/Kg		02/05/24 11:33	02/05/24 23:19	1
o-Xylene	<0.000342	U	0.00199	0.000342	mg/Kg		02/05/24 11:33	02/05/24 23:19	1
Xylenes, Total	<0.00100	U **	0.00398	0.00100	mg/Kg		02/05/24 11:33	02/05/24 23:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130				02/05/24 11:33	02/05/24 23:19	1
1,4-Difluorobenzene (Surr)	77		70 - 130				02/05/24 11:33	02/05/24 23:19	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00100	U	0.00398	0.00100	mg/Kg			02/05/24 23:19	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<24.9	U	49.7	24.9	mg/Kg			02/05/24 14:21	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<24.9	U	49.7	24.9	mg/Kg		01/30/24 11:05	02/05/24 14:21	1
Diesel Range Organics (Over C10-C28)	<24.9	U	49.7	24.9	mg/Kg		01/30/24 11:05	02/05/24 14:21	1
Oil Range Organics (Over C28-C36)	<24.9	U	49.7	24.9	mg/Kg		01/30/24 11:05	02/05/24 14:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	122		70 - 130				01/30/24 11:05	02/05/24 14:21	1
o-Terphenyl	139	S1+	70 - 130				01/30/24 11:05	02/05/24 14:21	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.5		4.96	0.392	mg/Kg			01/31/24 03:45	1

Surrogate Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38635-1
SDG: Lovington, NM

Method: 8021B - Volatile Organic Compounds (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-38635-2	SB-22-S-2'-240124	83	84
880-38635-2 MS	SB-22-S-2'-240124	121	98
880-38635-2 MSD	SB-22-S-2'-240124	122	96
880-38635-4	SB-24-S-2'-240124	86	77
LCS 880-72362/1-A	Lab Control Sample	110	92
LCSD 880-72362/2-A	Lab Control Sample Dup	129	97
MB 880-72103/5-A	Method Blank	76	77
MB 880-72362/5-A	Method Blank	73	80
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-38635-2	SB-22-S-2'-240124	131 S1+	149 S1+
880-38635-4	SB-24-S-2'-240124	122	139 S1+
LCS 870-17904/1-A	Lab Control Sample	110	119
LCSD 870-17904/2-A	Lab Control Sample Dup	113	120
MB 870-17904/3-A	Method Blank	130	122
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38635-1
SDG: Lovington, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-72103/5-A

Matrix: Solid

Analysis Batch: 72315

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 72103

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		02/01/24 10:19	02/05/24 11:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		70 - 130	02/01/24 10:19	02/05/24 11:23	1
1,4-Difluorobenzene (Surr)	77		70 - 130	02/01/24 10:19	02/05/24 11:23	1

Lab Sample ID: MB 880-72362/5-A

Matrix: Solid

Analysis Batch: 72315

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 72362

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		02/05/24 11:33	02/05/24 22:36	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		02/05/24 11:33	02/05/24 22:36	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		02/05/24 11:33	02/05/24 22:36	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		02/05/24 11:33	02/05/24 22:36	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		02/05/24 11:33	02/05/24 22:36	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		02/05/24 11:33	02/05/24 22:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	73		70 - 130	02/05/24 11:33	02/05/24 22:36	1
1,4-Difluorobenzene (Surr)	80		70 - 130	02/05/24 11:33	02/05/24 22:36	1

Lab Sample ID: LCS 880-72362/1-A

Matrix: Solid

Analysis Batch: 72315

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 72362

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08244		mg/Kg		82	70 - 130
Toluene	0.100	0.09597		mg/Kg		96	70 - 130
Ethylbenzene	0.100	0.1204		mg/Kg		120	70 - 130
m-Xylene & p-Xylene	0.200	0.2275		mg/Kg		114	70 - 130
o-Xylene	0.100	0.1104		mg/Kg		110	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: LCSD 880-72362/2-A

Matrix: Solid

Analysis Batch: 72315

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 72362

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09873		mg/Kg		99	70 - 130	18	35

Eurofins Midland

QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38635-1
SDG: Lovington, NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-72362/2-A
Matrix: Solid
Analysis Batch: 72315

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 72362

Analyte	Spike		LCSD		Unit	D	%Rec	%Rec		RPD
	Added		Result	Qualifier				Limits	RPD	
Toluene	0.100		0.1077		mg/Kg		108	70 - 130	11	35
Ethylbenzene	0.100		0.1382	*+	mg/Kg		138	70 - 130	14	35
m-Xylene & p-Xylene	0.200		0.2649	*+	mg/Kg		132	70 - 130	15	35
o-Xylene	0.100		0.1288		mg/Kg		129	70 - 130	15	35
		LCSD	LCSD							
Surrogate	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene (Surr)	129		70 - 130							
1,4-Difluorobenzene (Surr)	97		70 - 130							

Lab Sample ID: 880-38635-2 MS
Matrix: Solid
Analysis Batch: 72315

Client Sample ID: SB-22-S-2'-240124
Prep Type: Total/NA
Prep Batch: 72362

Analyte	Sample		Spike	MS		Unit	D	%Rec	%Rec	
	Result	Qualifier		Result	Qualifier				Limits	RPD
Benzene	<0.000386	U	0.0996	0.09172		mg/Kg		92	70 - 130	
Toluene	<0.000457	U	0.0996	0.09725		mg/Kg		98	70 - 130	
Ethylbenzene	<0.000566	U *	0.0996	0.1164		mg/Kg		117	70 - 130	
m-Xylene & p-Xylene	<0.00101	U *	0.199	0.2228		mg/Kg		112	70 - 130	
o-Xylene	<0.000345	U	0.0996	0.1067		mg/Kg		107	70 - 130	
		MS	MS							
Surrogate	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene (Surr)	121		70 - 130							
1,4-Difluorobenzene (Surr)	98		70 - 130							

Lab Sample ID: 880-38635-2 MSD
Matrix: Solid
Analysis Batch: 72315

Client Sample ID: SB-22-S-2'-240124
Prep Type: Total/NA
Prep Batch: 72362

Analyte	Sample		Spike	MSD		Unit	D	%Rec	%Rec	
	Result	Qualifier		Result	Qualifier				Limits	RPD
Benzene	<0.000386	U	0.0994	0.09992		mg/Kg		101	70 - 130	9
Toluene	<0.000457	U	0.0994	0.1044		mg/Kg		105	70 - 130	7
Ethylbenzene	<0.000566	U *	0.0994	0.1253		mg/Kg		126	70 - 130	7
m-Xylene & p-Xylene	<0.00101	U *	0.199	0.2399		mg/Kg		121	70 - 130	7
o-Xylene	<0.000345	U	0.0994	0.1152		mg/Kg		116	70 - 130	8
		MSD	MSD							
Surrogate	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene (Surr)	122		70 - 130							
1,4-Difluorobenzene (Surr)	96		70 - 130							

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 870-17904/3-A
Matrix: Solid
Analysis Batch: 17969

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17904

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Gasoline Range Organics (GRO)-C6-C10	<25.0	U	50.0	25.0	mg/Kg		01/30/24 11:05	02/05/24 06:27	1

Eurofins Midland

QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38635-1
SDG: Lovington, NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 870-17904/3-A

Matrix: Solid

Analysis Batch: 17969

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 17904

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics (Over C10-C28)	<25.0	U	50.0	25.0	mg/Kg		01/30/24 11:05	02/05/24 06:27	1
Oil Range Organics (Over C28-C36)	<25.0	U	50.0	25.0	mg/Kg		01/30/24 11:05	02/05/24 06:27	1
Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac			
	%Recovery	Qualifier							
1-Chlorooctane	130		70 - 130	01/30/24 11:05	02/05/24 06:27	1			
o-Terphenyl	122		70 - 130	01/30/24 11:05	02/05/24 06:27	1			

Lab Sample ID: LCS 870-17904/1-A

Matrix: Solid

Analysis Batch: 17969

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 17904

Analyte			Spike	LCS	LCS	Unit	D	%Rec			
			Added	Result	Qualifier			%Rec			
Gasoline Range Organics (GRO)-C6-C10			1020			mg/Kg		110		70 - 130	
Diesel Range Organics (Over C10-C28)			1010		1194	mg/Kg		118		70 - 130	

Lab Sample ID: LCSD 870-17904/2-A

Matrix: Solid

Analysis Batch: 17969

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 17904

Analyte			Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
			Added	Result	Qualifier				Limits		Limit
Gasoline Range Organics (GRO)-C6-C10			1020	1176		mg/Kg		115	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1010	1206		mg/Kg		119	70 - 130	1	20
Surrogate	LCSD		Limits								
	%Recovery	Qualifier									
1-Chlorooctane	113		70 - 130								
o-Terphenyl	120		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-71925/1-A

Matrix: Solid

Analysis Batch: 71958

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	<0.395	U	5.00	0.395	mg/Kg			01/31/24 02:50	1

Eurofins Midland

QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38635-1
SDG: Lovington, NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-71925/2-A				Client Sample ID: Lab Control Sample							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 71958											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	260.5		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-71925/3-A				Client Sample ID: Lab Control Sample Dup							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 71958											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	261.1		mg/Kg		104	90 - 110	0	20

Lab Sample ID: 880-38635-1 MS				Client Sample ID: SB-22-S-1'-240124							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 71958											
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	5.13		250	257.4		mg/Kg		101	90 - 110		

Lab Sample ID: 880-38635-1 MSD				Client Sample ID: SB-22-S-1'-240124							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 71958											
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	5.13		250	256.5		mg/Kg		101	90 - 110	0	20

QC Association Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38635-1
SDG: Lovington, NM

GC VOA

Prep Batch: 72103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-72103/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 72315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38635-2	SB-22-S-2'-240124	Total/NA	Solid	8021B	72362
880-38635-4	SB-24-S-2'-240124	Total/NA	Solid	8021B	72362
MB 880-72103/5-A	Method Blank	Total/NA	Solid	8021B	72103
MB 880-72362/5-A	Method Blank	Total/NA	Solid	8021B	72362
LCS 880-72362/1-A	Lab Control Sample	Total/NA	Solid	8021B	72362
LCSD 880-72362/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	72362
880-38635-2 MS	SB-22-S-2'-240124	Total/NA	Solid	8021B	72362
880-38635-2 MSD	SB-22-S-2'-240124	Total/NA	Solid	8021B	72362

Prep Batch: 72362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38635-2	SB-22-S-2'-240124	Total/NA	Solid	5030B	
880-38635-4	SB-24-S-2'-240124	Total/NA	Solid	5030B	
MB 880-72362/5-A	Method Blank	Total/NA	Solid	5030B	
LCS 880-72362/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 880-72362/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
880-38635-2 MS	SB-22-S-2'-240124	Total/NA	Solid	5030B	
880-38635-2 MSD	SB-22-S-2'-240124	Total/NA	Solid	5030B	

Analysis Batch: 72510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38635-2	SB-22-S-2'-240124	Total/NA	Solid	Total BTEX	
880-38635-4	SB-24-S-2'-240124	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 17904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38635-2	SB-22-S-2'-240124	Total/NA	Solid	8015NM Prep	
880-38635-4	SB-24-S-2'-240124	Total/NA	Solid	8015NM Prep	
MB 870-17904/3-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 870-17904/1-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 870-17904/2-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 17969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38635-2	SB-22-S-2'-240124	Total/NA	Solid	8015B NM	17904
880-38635-4	SB-24-S-2'-240124	Total/NA	Solid	8015B NM	17904
MB 870-17904/3-A	Method Blank	Total/NA	Solid	8015B NM	17904
LCS 870-17904/1-A	Lab Control Sample	Total/NA	Solid	8015B NM	17904
LCSD 870-17904/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17904

Analysis Batch: 17980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38635-2	SB-22-S-2'-240124	Total/NA	Solid	8015 NM	
880-38635-4	SB-24-S-2'-240124	Total/NA	Solid	8015 NM	

Eurofins Midland

QC Association Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38635-1
SDG: Lovington, NM

HPLC/IC

Leach Batch: 71925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38635-1	SB-22-S-1'-240124	Soluble	Solid	DI Leach	
880-38635-2	SB-22-S-2'-240124	Soluble	Solid	DI Leach	
880-38635-3	SB-24-S-1'-240124	Soluble	Solid	DI Leach	
880-38635-4	SB-24-S-2'-240124	Soluble	Solid	DI Leach	
MB 880-71925/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71925/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71925/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-38635-1 MS	SB-22-S-1'-240124	Soluble	Solid	DI Leach	
880-38635-1 MSD	SB-22-S-1'-240124	Soluble	Solid	DI Leach	

Analysis Batch: 71958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38635-1	SB-22-S-1'-240124	Soluble	Solid	300.0	71925
880-38635-2	SB-22-S-2'-240124	Soluble	Solid	300.0	71925
880-38635-3	SB-24-S-1'-240124	Soluble	Solid	300.0	71925
880-38635-4	SB-24-S-2'-240124	Soluble	Solid	300.0	71925
MB 880-71925/1-A	Method Blank	Soluble	Solid	300.0	71925
LCS 880-71925/2-A	Lab Control Sample	Soluble	Solid	300.0	71925
LCSD 880-71925/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71925
880-38635-1 MS	SB-22-S-1'-240124	Soluble	Solid	300.0	71925
880-38635-1 MSD	SB-22-S-1'-240124	Soluble	Solid	300.0	71925

Lab Chronicle

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38635-1
SDG: Lovington, NM

Client Sample ID: SB-22-S-1'-240124
Date Collected: 01/24/24 10:50
Date Received: 01/30/24 08:35

Lab Sample ID: 880-38635-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	71925	01/30/24 10:30	SMC	EET MID
Soluble	Analysis	300.0		1			71958	01/31/24 03:11	CH	EET MID

Client Sample ID: SB-22-S-2'-240124
Date Collected: 01/24/24 11:00
Date Received: 01/30/24 08:35

Lab Sample ID: 880-38635-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.99 g	5 mL	72362	02/05/24 11:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72315	02/05/24 22:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72510	02/05/24 22:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			17980	02/05/24 14:00	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	17904	01/30/24 11:05	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17969	02/05/24 14:00	WP	EET DAL
Soluble	Leach	DI Leach			4.96 g	50 mL	71925	01/30/24 10:30	SMC	EET MID
Soluble	Analysis	300.0		1			71958	01/31/24 08:32	CH	EET MID

Client Sample ID: SB-24-S-1'-240124
Date Collected: 01/24/24 11:20
Date Received: 01/30/24 08:35

Lab Sample ID: 880-38635-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	71925	01/30/24 10:30	SMC	EET MID
Soluble	Analysis	300.0		1			71958	01/31/24 03:38	CH	EET MID

Client Sample ID: SB-24-S-2'-240124
Date Collected: 01/24/24 11:30
Date Received: 01/30/24 08:35

Lab Sample ID: 880-38635-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5 mL	72362	02/05/24 11:33	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72315	02/05/24 23:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72510	02/05/24 23:19	SM	EET MID
Total/NA	Analysis	8015 NM		1			17980	02/05/24 14:21	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	17904	01/30/24 11:05	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17969	02/05/24 14:21	WP	EET DAL
Soluble	Leach	DI Leach			5.04 g	50 mL	71925	01/30/24 10:30	SMC	EET MID
Soluble	Analysis	300.0		1			71958	01/31/24 03:45	CH	EET MID

Laboratory References:
EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38635-1
SDG: Lovington, NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Solid	Total BTEX

Laboratory: Eurofins Dallas

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704295-23-34	06-30-24

Method Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38635-1
SDG: Lovington, NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
300.0	Anions, Ion Chromatography	EPA	EET MID
5030B	Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET DAL
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38635-1
SDG: Lovington, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-38635-1	SB-22-S-1'-240124	Solid	01/24/24 10:50	01/30/24 08:35
880-38635-2	SB-22-S-2'-240124	Solid	01/24/24 11:00	01/30/24 08:35
880-38635-3	SB-24-S-1'-240124	Solid	01/24/24 11:20	01/30/24 08:35
880-38635-4	SB-24-S-2'-240124	Solid	01/24/24 11:30	01/30/24 08:35

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- 14

1211 W Florida Ave
Midland TX 79701
Phone (432) 704-5440

August 1962

Ver. 01/16/2019

Chain of Custody Record

Record



Environment Testing

War. 18/10/1911

Login Sample Receipt Checklist

Client: ARCADIS US Inc

Job Number: 880-38635-1

SDG Number: Lovington, NM

Login Number: 38635

List Number: 1

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
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.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: ARCADIS US Inc

Job Number: 880-38635-1

SDG Number: Lovington, NM

Login Number: 38635

List Source: Eurofins Dallas

List Number: 2

List Creation: 02/01/24 12:45 PM

Creator: Dabinett, Ian

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



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Morgan Jordan
ARCADIS US Inc
1004 North Big Spring
Suite 300
Midland, Texas 79701

Generated 2/15/2024 7:48:24 PM

JOB DESCRIPTION

WLU 41
Lovington, NM

JOB NUMBER

880-38872-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

Eurofins Midland

Job Notes

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

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

Authorization



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Client: ARCADIS US Inc
Project/Site: WLU 41

Laboratory Job ID: 880-38872-1
SDG: Lovington, NM

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Definitions/Glossary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38872-1
SDG: Lovington, NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: ARCADIS US Inc
Project: WLU 41

Job ID: 880-38872-1

Job ID: 880-38872-1

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Job Narrative 880-38872-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 2/5/2024 8:42 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.5°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SB-23-S-1'-240202 (880-38872-1) and SB-23-S-2'-240202 (880-38872-2).

GC VOA

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-72779 and analytical batch 880-72796 was outside the upper control limits.

Method 8015MOD_NM: The method blank for preparation batch 880-72779 and analytical batch 880-72796 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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

HPLC/IC

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

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Client Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38872-1
SDG: Lovington, NM

Client Sample ID: SB-23-S-1'-240202

Lab Sample ID: 880-38872-1

Date Collected: 02/02/24 09:20

Matrix: Solid

Date Received: 02/05/24 08:42

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	168		5.03	0.397	mg/Kg			02/05/24 19:43	1

Client Sample ID: SB-23-S-2'-240202

Lab Sample ID: 880-38872-2

Date Collected: 02/02/24 09:30

Matrix: Solid

Date Received: 02/05/24 08:42

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000383	U	0.00199	0.000383	mg/Kg		02/15/24 08:59	02/15/24 13:42	1
Toluene	<0.000453	U	0.00199	0.000453	mg/Kg		02/15/24 08:59	02/15/24 13:42	1
Ethylbenzene	0.00360		0.00199	0.000562	mg/Kg		02/15/24 08:59	02/15/24 13:42	1
m-Xylene & p-Xylene	0.0121		0.00398	0.00100	mg/Kg		02/15/24 08:59	02/15/24 13:42	1
o-Xylene	0.00955		0.00199	0.000342	mg/Kg		02/15/24 08:59	02/15/24 13:42	1
Xylenes, Total	0.0217		0.00398	0.00100	mg/Kg		02/15/24 08:59	02/15/24 13:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130	02/15/24 08:59	02/15/24 13:42	1
1,4-Difluorobenzene (Surr)	100		70 - 130	02/15/24 08:59	02/15/24 13:42	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0253		0.00398	0.00100	mg/Kg			02/15/24 13:42	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	70.6		50.2	15.0	mg/Kg			02/10/24 17:41	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	41.7	J B	50.2	15.0	mg/Kg		02/09/24 15:00	02/10/24 17:41	1
Diesel Range Organics (Over C10-C28)	28.9	J	50.2	15.0	mg/Kg		02/09/24 15:00	02/10/24 17:41	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.2	15.0	mg/Kg		02/09/24 15:00	02/10/24 17:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	121		70 - 130	02/09/24 15:00	02/10/24 17:41	1
o-Terphenyl	129		70 - 130	02/09/24 15:00	02/10/24 17:41	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	146		5.05	0.399	mg/Kg			02/05/24 19:58	1

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Surrogate Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38872-1
SDG: Lovington, NM

Method: 8021B - Volatile Organic Compounds (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-38872-2	SB-23-S-2'-240202	126	100
LCS 880-73222/1-A	Lab Control Sample	120	84
LCSD 880-73222/2-A	Lab Control Sample Dup	114	94
MB 880-73222/5-A	Method Blank	82	94
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-38872-2	SB-23-S-2'-240202	121	129
LCS 880-72779/2-A	Lab Control Sample	105	103
LCSD 880-72779/3-A	Lab Control Sample Dup	102	98
MB 880-72779/1-A	Method Blank	164 S1+	183 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38872-1
SDG: Lovington, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-73222/5-A							Client Sample ID: Method Blank		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 73209							Prep Batch: 73222		
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		02/15/24 08:59	02/15/24 11:17	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		02/15/24 08:59	02/15/24 11:17	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		02/15/24 08:59	02/15/24 11:17	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		02/15/24 08:59	02/15/24 11:17	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		02/15/24 08:59	02/15/24 11:17	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		02/15/24 08:59	02/15/24 11:17	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		70 - 130				02/15/24 08:59	02/15/24 11:17	1
1,4-Difluorobenzene (Surr)	94		70 - 130				02/15/24 08:59	02/15/24 11:17	1

Lab Sample ID: LCS 880-73222/1-A							Client Sample ID: Lab Control Sample		
Matrix: Solid							Prep Type: Total/NA		
Analysis Batch: 73209							Prep Batch: 73222		
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	0.100	0.09819		mg/Kg		98	70 - 130		
Toluene	0.100	0.1209		mg/Kg		121	70 - 130		
Ethylbenzene	0.100	0.1149		mg/Kg		115	70 - 130		
m-Xylene & p-Xylene	0.200	0.2350		mg/Kg		117	70 - 130		
o-Xylene	0.100	0.1174		mg/Kg		117	70 - 130		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	120		70 - 130						
1,4-Difluorobenzene (Surr)	84		70 - 130						

Lab Sample ID: LCSD 880-73222/2-A					Client Sample ID: Lab Control Sample Dup						
Matrix: Solid					Prep Type: Total/NA						
Analysis Batch: 73209					Prep Batch: 73222						
Analyte	Spike		LCSD	LCSD	Unit	D	%Rec	%Rec	RPD		
	Added	Result	Qualifier	Limits				RPD	Limit		
Benzene	0.100	0.1042			mg/Kg		104	70 - 130	6	35	
Toluene	0.100	0.1198			mg/Kg		120	70 - 130	1	35	
Ethylbenzene	0.100	0.1131			mg/Kg		113	70 - 130	2	35	
m-Xylene & p-Xylene	0.200	0.2284			mg/Kg		114	70 - 130	3	35	
o-Xylene	0.100	0.1137			mg/Kg		114	70 - 130	3	35	
Surrogate	LCSD		LCSD								
	%Recovery	Qualifier	Limits								
	4-Bromofluorobenzene (Surr)	114	70 - 130								
	1,4-Difluorobenzene (Surr)	94	70 - 130								

QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38872-1
SDG: Lovington, NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-72779/1-A
Matrix: Solid
Analysis Batch: 72796

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72779

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	23.87	J	50.0	15.0	mg/Kg		02/09/24 15:00	02/10/24 07:36	1
Diesel Range Organics (Over C10-C28)	<15.0	U	50.0	15.0	mg/Kg		02/09/24 15:00	02/10/24 07:36	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		02/09/24 15:00	02/10/24 07:36	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	164	S1+	70 - 130				02/09/24 15:00	02/10/24 07:36	1
o-Terphenyl	183	S1+	70 - 130				02/09/24 15:00	02/10/24 07:36	1

Lab Sample ID: LCS 880-72779/2-A
Matrix: Solid
Analysis Batch: 72796

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72779

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	920.8		mg/Kg		92	70 - 130
Diesel Range Organics (Over C10-C28)	1000	909.9		mg/Kg		91	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	105		70 - 130				
o-Terphenyl	103		70 - 130				

Lab Sample ID: LCSD 880-72779/3-A
Matrix: Solid
Analysis Batch: 72796

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 72779

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	914.9		mg/Kg		91	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	900.4		mg/Kg		90	70 - 130	1	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	102		70 - 130						
o-Terphenyl	98		70 - 130						

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-72356/1-A
Matrix: Solid
Analysis Batch: 72369

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.395	U	5.00	0.395	mg/Kg			02/05/24 19:29	1

QC Sample Results

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38872-1
SDG: Lovington, NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-72356/2-A				Client Sample ID: Lab Control Sample							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 72369											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	237.5		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-72356/3-A				Client Sample ID: Lab Control Sample Dup							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 72369											
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	239.6		mg/Kg		96	90 - 110	1	20

Lab Sample ID: 880-38872-1 MS				Client Sample ID: SB-23-S-1'-240202							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 72369											
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	168		252	409.4		mg/Kg		96	90 - 110		

Lab Sample ID: 880-38872-1 MSD				Client Sample ID: SB-23-S-1'-240202							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 72369											
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	168		252	411.4		mg/Kg		97	90 - 110	0	20

QC Association Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38872-1
SDG: Lovington, NM

GC VOA

Analysis Batch: 73209

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38872-2	SB-23-S-2'-240202	Total/NA	Solid	8021B	73222
MB 880-73222/5-A	Method Blank	Total/NA	Solid	8021B	73222
LCS 880-73222/1-A	Lab Control Sample	Total/NA	Solid	8021B	73222
LCSD 880-73222/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	73222

Prep Batch: 73222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38872-2	SB-23-S-2'-240202	Total/NA	Solid	5030B	
MB 880-73222/5-A	Method Blank	Total/NA	Solid	5030B	
LCS 880-73222/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 880-73222/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	

Analysis Batch: 73308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38872-2	SB-23-S-2'-240202	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 72779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38872-2	SB-23-S-2'-240202	Total/NA	Solid	8015NM Prep	
MB 880-72779/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-72779/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-72779/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 72796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38872-2	SB-23-S-2'-240202	Total/NA	Solid	8015B NM	72779
MB 880-72779/1-A	Method Blank	Total/NA	Solid	8015B NM	72779
LCS 880-72779/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	72779
LCSD 880-72779/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	72779

Analysis Batch: 72969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38872-2	SB-23-S-2'-240202	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 72356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38872-1	SB-23-S-1'-240202	Soluble	Solid	DI Leach	
880-38872-2	SB-23-S-2'-240202	Soluble	Solid	DI Leach	
MB 880-72356/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-72356/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-72356/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-38872-1 MS	SB-23-S-1'-240202	Soluble	Solid	DI Leach	
880-38872-1 MSD	SB-23-S-1'-240202	Soluble	Solid	DI Leach	

Analysis Batch: 72369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-38872-1	SB-23-S-1'-240202	Soluble	Solid	300.0	72356
880-38872-2	SB-23-S-2'-240202	Soluble	Solid	300.0	72356

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QC Association Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38872-1
SDG: Lovington, NM

HPLC/IC (Continued)

Analysis Batch: 72369 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-72356/1-A	Method Blank	Soluble	Solid	300.0	72356
LCS 880-72356/2-A	Lab Control Sample	Soluble	Solid	300.0	72356
LCSD 880-72356/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	72356
880-38872-1 MS	SB-23-S-1'-240202	Soluble	Solid	300.0	72356
880-38872-1 MSD	SB-23-S-1'-240202	Soluble	Solid	300.0	72356

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Lab Chronicle

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38872-1
SDG: Lovington, NM

Client Sample ID: SB-23-S-1'-240202
Date Collected: 02/02/24 09:20
Date Received: 02/05/24 08:42

Lab Sample ID: 880-38872-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.97 g	50 mL	72356	02/05/24 10:33	SMC	EET MID
Soluble	Analysis	300.0		1			72369	02/05/24 19:43	CH	EET MID

Client Sample ID: SB-23-S-2'-240202
Date Collected: 02/02/24 09:30
Date Received: 02/05/24 08:42

Lab Sample ID: 880-38872-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5 mL	73222	02/15/24 08:59	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73209	02/15/24 13:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73308	02/15/24 13:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			72969	02/10/24 17:41	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	72779	02/09/24 15:00	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72796	02/10/24 17:41	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	72356	02/05/24 10:33	SMC	EET MID
Soluble	Analysis	300.0		1			72369	02/05/24 19:58	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38872-1
SDG: Lovington, NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38872-1
SDG: Lovington, NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5030B	Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: ARCADIS US Inc
Project/Site: WLU 41

Job ID: 880-38872-1
SDG: Lovington, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-38872-1	SB-23-S-1'-240202	Solid	02/02/24 09:20	02/05/24 08:42
880-38872-2	SB-23-S-2'-240202	Solid	02/02/24 09:30	02/05/24 08:42

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Login Sample Receipt Checklist

Client: ARCADIS US Inc

Job Number: 880-38872-1

SDG Number: Lovington, NM

Login Number: 38872

List Number: 1

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
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.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Appendix F

NMOCD Correspondence

From: Jordan, Morgan
Sent: Monday, May 6, 2024 10:52 AM
To: Krueger, Lauren
Subject: FW: [EXTERNAL] NMOCD Deadline Extension Requests - Chevron Sites

Thank You,

Morgan Jordan | Project Manager | douglas.jordan@arcadis.com
Arcadis | Arcadis U.S., Inc.
[98 San Jacinto Blvd, Suite 414](#) | [Austin, TX](#) | [78701](#) | USA
M. +1 281 644 9437

Connect with us! www.arcadis.com | [LinkedIn](#) | [Twitter](#) | [Facebook](#)



Be green, leave it on the screen.

From: Maxwell, Ashley, EMNRD <Ashley.Maxwell@emnrd.nm.gov>
Sent: Thursday, May 2, 2024 12:54 PM
To: Foord, Scott <William.Foord@arcadis.com>
Cc: Chrisbrand@chevron.com; Michelson, Jason C <jmichelson@chevron.com>; Jordan, Morgan <Douglas.Jordan@arcadis.com>; Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: RE: [EXTERNAL] NMOCD Deadline Extension Requests - Chevron Sites

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Good Afternoon Scott,

The incidents below have been granted a **final** 60 day extension of July 24, 2024. Please submit all reports via the OCD permitting portal by July 24, 2024.

1. Inc. No. nLWJ1016954547 – WLU East Test Sat (State Land) - Additional soil assessment activities completed in February and April 2024. The Site Characterization and Remediation Work Plan is currently under development and will be submitted to NMOCD.
2. Inc. No. nPAC0614230052 & nPAC0718639351 – WLU Water Inj Station (State Land) - Additional soil assessment activities completed in January and April 2024. The Site Characterization and Remediation Work Plan is currently under development and will be submitted to NMOCD.
3. Inc. No. nGRL1006731469 – WLU 41 (Private) - Additional soil assessment activities conducted in January and February 2024. Vertical delineation was not completed, additional assessment will be required and will be conducted within 30 days. A Site Characterization and Remediation Work Plan will be prepared and submitted to NMOCD following completion of assessment activities within the next 30 days.
4. Inc. No. nPAC0708526071 – WLU 47 (Private) - Additional soil assessment activities completed in January and February 2024. The Site Characterization and Remediation Work Plan is currently under development and will be submitted to NMOCD.

5. Inc. No. nPAC0617348887 – WLU 56 (Private) - The latest soil assessment was completed in March 2023 and a Site Characterization and Remediation Work Plan was submitted to NMOCD in December 2023. The 2023 Site Characterization and Remediation Work Plan was rejected and is currently being revised to address NMOCD comments for resubmittal to the Portal.
6. Inc. No. nTO1424533890 – Keel Fed Battery (BLM) - Closure request report was submitted in December of 2023 and denied by NMOCD on December 22, 2023. The Closure Request Report is currently being revised to address NMOCD comments and will be resubmitted to the Portal.
7. Inc. No. nKJ1515353221 – Moran 2-6 Tank Battery (State Land) – Closure request report was submitted in December of 2023 and denied by NMOCD on December 22, 2023. The Closure Request Report is currently being revised to address NMOCD comments and will be resubmitted to the Portal.

Ashley Maxwell • Environmental Specialist
 Environmental Bureau Projects Group
 EMNRD - Oil Conservation Division
 1000 Rio Brazos Road | Aztec, NM 87110
 505.635.5000 | Ashley.Maxwell@emnrd.nm.gov
<http://www.emnrd.state.nm.us/OCD/>

Please be advised that the new Digital C-141 is live as of December 1, 2023. Please review the new Digital C-141 submission Dec 1, 2023 Guidance document posted on the EMNRD Website prior to submitting any C-141s. The guidance documents can be found at <https://www.emnrd.nm.gov/ocd/ocd-announcements-and-notifications/or> <https://www.emnrd.nm.gov/ocd/ocd-forms/>.

From: Foord, Scott <William.Foord@arcadis.com>
Sent: Thursday, May 2, 2024 11:02 AM
To: Maxwell, Ashley, EMNRD <Ashley.Maxwell@emnrd.nm.gov>
Cc: Chrisbrand@chevron.com; Michelson, Jason C <jmichelson@chevron.com>; Jordan, Morgan <Douglas.Jordan@arcadis.com>; Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: RE: [EXTERNAL] NMOCD Deadline Extension Requests - Chevron Sites

Ashley,

Just following up. Please let me know if you have any questions or need anything additional information.

Thanks,
 Scott
 Direct 713-953-4853
 Cell 281-725-7477

From: Foord, Scott
Sent: Monday, April 29, 2024 9:13 AM
To: Maxwell, Ashley, EMNRD <Ashley.Maxwell@emnrd.nm.gov>
Cc: Chrisbrand@chevron.com; Michelson, Jason C <jmichelson@chevron.com>; Jordan, Morgan <Douglas.Jordan@arcadis.com>; Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: RE: [EXTERNAL] NMOCD Deadline Extension Requests - Chevron Sites

Ashley,

Please see responses below and let me know if you need any additional information.

1. Inc. No. nLWJ1016954547 – WLU East Test Sat (State Land) - Additional soil assessment activities completed in February and April 2024. The Site Characterization and Remediation Work Plan is currently under development and will be submitted to NMOCD.
2. Inc. No. nPAC0614230052 & nPAC0718639351 – WLU Water Inj Station (State Land) - Additional soil assessment activities completed in January and April 2024. The Site Characterization and Remediation Work Plan is currently under development and will be submitted to NMOCD.
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Thanks,
 Scott
 Direct 713-953-4853
 Cell 281-725-7477

From: Maxwell, Ashley, EMNRD <Ashley.Maxwell@emnrd.nm.gov>
Sent: Wednesday, April 24, 2024 9:27 AM
To: Foord, Scott <William.Foord@arcadis.com>
Cc: Chrisbrand@chevron.com; Michelson, Jason C <jmichelson@chevron.com>; Jordan, Morgan <Douglas.Jordan@arcadis.com>; Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: RE: [EXTERNAL] NMOCD Deadline Extension Requests - Chevron Sites

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Good Morning,

Please see the notes below for the requested extensions:

1. Inc. No. nLWJ1016954547 – WLU East Test Sat (State Land)-Before an extension can be granted, describe what work has been completed and specify why work has not been completed within the initial time granted.
2. Inc. No. nPAC0614230052 & nPAC0718639351 – WLU Water Inj Station (State Land)- Before an extension can be granted, describe what work has been completed and specify why work has not been completed within the initial time granted.

3. Inc. No. nGRL1006731469 – WLU 41 (Private)- Before an extension can be granted, describe what work has been completed and specify why work has not been completed within the initial time granted.
4. Inc. No. nPAC0712954774 – WLU 47 (Private)-Incident nPAC0712954774 is a duplicate incident. Refer to incident NPAC0708526071 for current status.
5. Inc. No. nPAC0617348887 – WLU 56 (Private)- Before an extension can be granted, describe what work has been completed and specify why work has not been completed within the initial time granted.
6. Inc. No. nTO1424533890 – Keel Fed Battery (BLM)- Before an extension can be granted, describe what work has been completed and specify why work has not been completed within the initial time granted.
7. Inc. No. nKJ1515353221 – Moran 2-6 Tank Battery (State Land)- Before an extension can be granted, describe what work has been completed and specify why work has not been completed within the initial time granted.

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From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Wednesday, April 24, 2024 8:04 AM
To: Maxwell, Ashley, EMNRD <Ashley.Maxwell@emnrd.nm.gov>
Subject: Fw: [EXTERNAL] NMOCD Deadline Extension Requests - Chevron Sites

FYI. All are under your review except for the second one.

Nelson V

From: Foord, Scott <William.Foord@arcadis.com>
Sent: Wednesday, April 3, 2024 3:43 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Cc: Brand, Chris M <Chrisbrand@chevron.com>; Michelson, Jason C <jmichelson@chevron.com>; Jordan, Morgan <Douglas.Jordan@arcadis.com>
Subject: [EXTERNAL] NMOCD Deadline Extension Requests - Chevron Sites

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Nelson,

We would like to please request 90-day extensions on the 4/30/2024 deadlines for the following sites. Additional assessments are currently ongoing and remediation work plans or closure requests will be submitted within that timeline. We are also working with the other agencies if applicable.

1. Inc. No. nLWJ1016954547 – WLU East Test Sat (State Land)
2. Inc. No. nPAC0614230052 & nPAC0718639351 – WLU Water Inj Station (State Land)

3. Inc. No. nGRL1006731469 – WLU 41 (Private)
4. Inc. No. nPAC0712954774 – WLU 47 (Private)
5. Inc. No. nPAC0617348887 – WLU 56 (Private)
6. Inc. No. nTO1424533890 – Keel Fed Battery (BLM)
7. Inc. No. nKJ1515353221 – Moran 2-6 Tank Battery (State Land)

Thanks,
Scott

Scott Foord PG, RSO, CPM
AFS Group Service Leader
Arcadis U.S., Inc.
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District IV
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Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS

Action 366448

QUESTIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID:
	4323
	Action Number:
	366448
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

QUESTIONS

Prerequisites	
Incident ID (n#)	nGRL1006731469
Incident Name	NGRL1006731469 WEST LOVINGTON UNIT #41 @ 30-025-03901
Incident Type	Produced Water Release
Incident Status	Remediation Plan Received
Incident Well	[30-025-03901] WEST LOVINGTON UNIT #041

Location of Release Source	
Please answer all the questions in this group.	
Site Name	WEST LOVINGTON UNIT #41
Date Release Discovered	03/27/2009
Surface Owner	Private

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion Flow Line - Injection Produced Water Released: 20 BBL Recovered: 14 BBL Lost: 6 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
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QUESTIONS, Page 2

Action 366448

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID:
	4323
	Action Number:
	366448
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	No
Reasons why this would be considered a submission for a notification of a major release	Unavailable.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

I hereby agree and sign off to the above statement	Name: Chris Brand Title: Lead Environmental Specialist Email: Chrisbrand@chevron.com Date: 07/23/2024
--	--

District I

1625 N. French Dr., Hobbs, NM 88240
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Santa Fe, NM 87505

QUESTIONS, Page 3

Action 366448

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID:
	4323
	Action Number:
	366448
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

QUESTIONS**Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	Direct Measurement
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride	(EPA 300.0 or SM4500 Cl B)	6150
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	236
GRO+DRO	(EPA SW-846 Method 8015M)	155
BTEX	(EPA SW-846 Method 8021B or 8260B)	0
Benzene	(EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	08/23/2024
On what date will (or did) the final sampling or liner inspection occur	08/24/2024
On what date will (or was) the remediation complete(d)	09/23/2024
What is the estimated surface area (in square feet) that will be reclaimed	27500
What is the estimated volume (in cubic yards) that will be reclaimed	4100
What is the estimated surface area (in square feet) that will be remediated	27500
What is the estimated volume (in cubic yards) that will be remediated	4100

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
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QUESTIONS, Page 4

Action 366448

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID:	4323
	Action Number:	366448
	Action Type:	[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	R360 ARTESIA LLC LANDFARM [FEEM0112340644]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Chris Brand Title: Lead Environmental Specialist Email: Chrisbrand@chevron.com Date: 07/23/2024
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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District II
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District III
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QUESTIONS, Page 5

Action 366448

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 366448
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 366448

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 366448
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	{Unavailable.}

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Action 366448

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 366448
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Remediation plan approved.	7/29/2024
amaxwell	Submit remediation closure report via the OCD permitting portal by December 2, 2024.	7/29/2024