



## Division of Environmental Testing

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

October 31, 2024

143 Diamond Ave  
Parachute, CO 81635  
970-285-2925

**Project Manager :** Derek Horn  
**Project Name :** D23A 596 8' Lateral  
**Project Number :** N/A

Attached are the analytical results for D23A 596 8' Lateral N/A received by Elevation Diagnostics, Division of Environmental Testing on October 25, 2024. This is associated with Elevation's number AA13502 .

The results were analyzed under the guidelines of various methods. These methods are identified in the report as follows: "SW" is referring to the EPA's SW-846 Compendium; "EPA" is referring to 40 CFR part 136; "HACH" is referring to a method which was validated by HACH®; "SM" is referring to a revision of the Standard Methods For the Examination of Water and Wastewater; and "ASTM" is referring to the standard test method set forth by ASTM International.

The analytical results in this report apply specifically to the samples listed in the attached Chain of Custody. This report may only be duplicated in full.

Any deviations to sample integrity, method specifications, or Elevation Diagnostics's standard operating procedures are documented in the report below.

Please contact us for any questions or comments concerning the content of this report.

Thank you,

Elevation Diagnostics, Division of Environmental Testing




# Chain of Custody Form

Client: QB Energy Operating, LLC  
 Address: 143 Diamond Avenue  
 City/State/ZIP: Parachute/ Colorado/ 81635  
 Phone: (720) 830-7549  
 Project Contact: Derek Horn

# Elevation Diagnostics

2115 North Scranton Street Suite 3040A Aurora, CO 80045  
 800.440.5184

Project Name/Number: D23A 596 8" Lateral  
 Project Location: D23A 596  
 Collector Name: Alex Slorby

					Preservative				Matrix			Analysis Requested								Interim report requested			
Sample ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Other	Table 915-1 VOC's	TPH (ORO, GRO, DRO)	Table 915-1 Metal's	Table 915-1 PAHs	pH, EC, SAR	Boron (Hot Water Soluble Soil)	CR6IC		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Notes		
1	20241022-D23A 596-(SB02)@10-12	10/22/2024	1145	4						✓		✓	✓	✓	✓	✓	✓	✓					
2	20241022-D23A 596-(SB02)@20-22	10/22/2024	1240	4						✓		✓	✓	✓	✓	✓	✓	✓					
3	20241022-D23A 596-(SB02)@30-32	10/22/2024	1335	4						✓		✓	✓	✓	✓	✓	✓	✓					
4																							
5																							
6																							
7																							
8																							
9																							
10																							

Relinquished By: Alex Slorby  
 Date/Time: 10/24/2024

Relinquished By:  
 Date/Time:

Relinquished By:  
 Date/Time:

Scan to  
 Deliver  
 Samples



EFOR-008.005

Lab Use Only  
 Observed Temperature Upon Receipt: 16°C  
 Corrected Temperature Upon Receipt: 2.9°C  
 Thermometer #: EDXEQ238  
 Correction Factor: +1.3°C

Samples Intact: Yes No  
 pH Checked: Yes No  
 pH Adjusted: Yes No  
 PFAS rec'd on ice: Yes No  
 Lot/EQM Number: 2024-10-25-007  
 Name/Lot Number of Adjustment: \_\_\_\_\_

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 10/31/2024**Report Time :** 11:19**Project Manager:** Derek Horn**Project Name:** D23A 596 8' Lateral**Project Number:** N/A

Sample ID	Customer ID	Collected	Dilution	Result	Units	MDL	Method Ref.
Analyte Name		Analysis Start					Recovery
<b>AA13502-1</b>	20241022-D23A 596-(SB02)@10-12	<b>Collected :</b> 10/22/2024	11:45				
SAR - Calcium		10/29/2024	09:58 10.00	19.75	mEq/L		EPA 6020B
SAR - Magnesium		10/29/2024	09:58 10.00	2.31	mEq/L		EPA 6020B
SAR - Sodium		10/29/2024	09:58 10.00	7.50	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio		10/29/2024	09:58 10.00	2.26	No Unit		EPA 6020B
Soil Conductivity		10/28/2024	16:59	2.49	mmhos/cm	0.0005	USDA 60
<b>AA13502-2</b>	20241022-D23A 596-(SB02)@10-12	<b>Collected :</b> 10/22/2024	11:45				
Chromium VI, Soil		10/29/2024	09:07	<0.08	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron		10/30/2024	16:27	0.24	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature		10/29/2024	14:56	20	°C		
pH, Soils		10/29/2024	14:56	8.20	SU	0.01	EPA 9045D
Total Metals, Soils - Arsenic		10/30/2024	10:22 10.00	20.93	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium		10/30/2024	10:22 10.00	284.95	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium		10/30/2024	10:22 10.00	0.46	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper		10/30/2024	10:22 10.00	24.44	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead		10/30/2024	10:22 10.00	24.50	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel		10/30/2024	10:22 10.00	20.55	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium		10/30/2024	10:22 10.00	3.67	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver		10/30/2024	10:22 10.00	<0.25 - RL1	mg/kg	0.250	EPA 6020B
Total Metals, Soils - Zinc		10/30/2024	10:22 10.00	75.62	mg/kg	0.025	EPA 6020B
<b>AA13502-3</b>	20241022-D23A 596-(SB02)@10-12	<b>Collected :</b> 10/22/2024	11:45				
DRO & ORO, Soil - DRO		10/31/2024	08:56	Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO		10/31/2024	08:56	Not Detected	mg/kg	100.00	EPA 8015D
Gasoline Range Organics, Soil		10/30/2024	10:27	1.54	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene		10/29/2024	09:00 10.00	<0.100 - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - 2-methylnaphthalene		10/29/2024	09:00 10.00	<0.100 - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Acenaphthene		10/29/2024	09:00 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Anthracene		10/29/2024	09:00 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benz(a)anthracene		10/29/2024	09:00 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(a)pyrene		10/29/2024	09:00 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene		10/29/2024	09:00 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene		10/29/2024	09:00 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Chrysene		10/29/2024	09:00 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene		10/29/2024	09:00 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Fluoranthene		10/29/2024	09:00 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Fluorene		10/29/2024	09:00 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		10/29/2024	09:00 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Naphthalene		10/29/2024	09:00 10.00	<0.100 - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Pyrene		10/29/2024	09:00 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene		10/29/2024	15:00	0.022	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene		10/29/2024	15:00	0.023	mg/kg	0.005	EPA 8260
VOC, Soils - Benzene		10/29/2024	15:00	<0.0024	mg/kg	0.00242	EPA 8260
VOC, Soils - Ethylbenzene		10/29/2024	15:00	<0.0026	mg/kg	0.005	EPA 8260
VOC, Soils - m&p- xylene		10/29/2024	15:00	0.16	mg/kg	0.00427	EPA 8260



## Division of Environmental Testing

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

Report Date : 10/31/2024

Report Time : 11:19

## FINAL RESULTS REPORT

Project Manager: Derek Horn

Project Name: D23A 596 8' Lateral

Project Number: N/A

Sample ID	Customer ID	Collected	Dilution	Result	Units	MDL	Method Ref.
Analyte Name		Analysis Start					Recovery
VOC, Soils - o-xylene		10/29/2024 15:00		0.022	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024 15:00		0.020	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024 15:00		0.182	mg/kg	0.00654	EPA 8260

AA13503-1 20241022-D23A 596-(SB02)@20-22

Collected : 10/22/2024 12:40

SAR - Calcium	10/29/2024 09:58	10.00	7.36	mEq/L		EPA 6020B
SAR - Magnesium	10/29/2024 09:58	10.00	3.13	mEq/L		EPA 6020B
SAR - Sodium	10/29/2024 09:58	10.00	3.49	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio	10/29/2024 09:58	10.00	1.52	No Unit		EPA 6020B
Soil Conductivity	10/28/2024 16:59		1.34	mmhos/cm	0.0005	USDA 60

AA13503-2 20241022-D23A 596-(SB02)@20-22

Collected : 10/22/2024 12:40

Chromium VI, Soil	10/29/2024 09:07		<0.08	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron	10/30/2024 16:27		0.23	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature	10/29/2024 14:56		19.9	°C		
pH, Soils	10/29/2024 14:56		8.43	SU	0.01	EPA 9045D
Total Metals, Soils - Arsenic	10/30/2024 10:22	10.00	25.78	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium	10/30/2024 10:22	10.00	223.00	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium	10/30/2024 10:22	10.00	0.38	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper	10/30/2024 10:22	10.00	19.79	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead	10/30/2024 10:22	10.00	14.74	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel	10/30/2024 10:22	10.00	17.92	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium	10/30/2024 10:22	10.00	2.52	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver	10/30/2024 10:22	10.00	<0.25 - RL1	mg/kg	0.250	EPA 6020B
Total Metals, Soils - Zinc	10/30/2024 10:22	10.00	68.73	mg/kg	0.025	EPA 6020B

AA13503-3 20241022-D23A 596-(SB02)@20-22

Collected : 10/22/2024 12:40

DRO & ORO, Soil - DRO	10/31/2024 08:56		Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO	10/31/2024 08:56		Not Detected	mg/kg	100.00	EPA 8015D
Gasoline Range Organics, Soil	10/30/2024 10:27		0.46	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - 2-methylnaphthalene	10/29/2024 09:00	10.00	<0.100 - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Acenaphthene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Anthracene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benz(a)anthracene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(a)pyrene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene	10/29/2024 09:00	10.00	<0.100 - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Chrysene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Fluoranthene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Fluorene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Naphthalene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Pyrene	10/29/2024 09:00	10.00	<0.100 - RL1	mg/kg	0.100	EPA 8270

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 10/31/2024**Report Time :** 11:19**Project Manager:** Derek Horn**Project Name:** D23A 596 8' Lateral**Project Number:** N/A

Sample ID	Customer ID	Collected	Dilution	Result	Units	MDL	Method Ref.
Analyte Name		Analysis Start					Recovery
VOC, Soils - 1,2,4-trimethylbenzene		10/29/2024 15:00		0.0073	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene		10/29/2024 15:00		0.0059	mg/kg	0.005	EPA 8260
VOC, Soils - Benzene		10/29/2024 15:00		<0.0024	mg/kg	0.00242	EPA 8260
VOC, Soils - Ethylbenzene		10/29/2024 15:00		<0.0050	mg/kg	0.005	EPA 8260
VOC, Soils - m&p- xylene		10/29/2024 15:00		0.056	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene		10/29/2024 15:00		0.0058	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024 15:00		0.027	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024 15:00		0.062	mg/kg	0.00654	EPA 8260

**AA13504-1** 20241022-D23A 596-(SB02)@30-32**Collected :** 10/22/2024 13:35

SAR - Calcium	10/29/2024 09:58	10.00	6.87	mEq/L		EPA 6020B
SAR - Magnesium	10/29/2024 09:58	10.00	2.68	mEq/L		EPA 6020B
SAR - Sodium	10/29/2024 09:58	10.00	4.62	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio	10/29/2024 09:58	10.00	2.12	No Unit		EPA 6020B
Soil Conductivity	10/28/2024 16:59		1.43	mmhos/cm	0.0005	USDA 60

**AA13504-2** 20241022-D23A 596-(SB02)@30-32**Collected :** 10/22/2024 13:35

Chromium VI, Soil	10/30/2024 14:32		<0.08 - MS	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron	10/30/2024 16:27		0.35	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature	10/29/2024 14:56		19.9	°C		
pH, Soils	10/29/2024 14:56		8.54	SU	0.01	EPA 9045D
Total Metals, Soils - Arsenic	10/30/2024 10:22	10.00	17.44	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium	10/30/2024 10:22	10.00	250.16	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium	10/30/2024 10:22	10.00	0.45	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper	10/30/2024 10:22	10.00	18.37	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead	10/30/2024 10:22	10.00	13.93	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel	10/30/2024 10:22	10.00	17.92	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium	10/30/2024 10:22	10.00	2.74	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver	10/30/2024 10:22	10.00	<0.25 - RL1	mg/kg	0.25	EPA 6020B
Total Metals, Soils - Zinc	10/30/2024 10:22	10.00	56.25	mg/kg	0.025	EPA 6020B

**AA13504-3** 20241022-D23A 596-(SB02)@30-32**Collected :** 10/22/2024 13:35

DRO & ORO, Soil - DRO	10/31/2024 08:56		Not Detected	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO	10/31/2024 08:56		Not Detected	mg/kg	100.00	EPA 8015D
Gasoline Range Organics, Soil	10/30/2024 10:27		0.37	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - 2-methylnaphthalene	10/29/2024 09:00	10.00	<0.100 - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Acenaphthene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Anthracene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benz(a)anthracene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(a)pyrene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Chrysene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Dibenz(a,h)anthracene	10/29/2024 09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270



**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 10/31/2024**Report Time :** 11:19**Project Manager:** Derek Horn**Project Name:** D23A 596 8' Lateral**Project Number:** N/A

Sample ID	Customer ID	Collected		Dilution	Result	Units	MDL	Method Ref.
Analyte Name		Analysis Start						Recovery
SVOC, Soils - Fluoranthene		10/29/2024	09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Fluorene		10/29/2024	09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		10/29/2024	09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Naphthalene		10/29/2024	09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Pyrene		10/29/2024	09:00	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene		10/29/2024	15:00		<0.0025	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene		10/29/2024	15:00		<0.0050	mg/kg	0.005	EPA 8260
VOC, Soils - Benzene		10/29/2024	15:00		Not Detected	mg/kg	0.00242	EPA 8260
VOC, Soils - Ethylbenzene		10/29/2024	15:00		Not Detected	mg/kg	0.005	EPA 8260
VOC, Soils - m&p- xylene		10/29/2024	15:00		0.0070	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene		10/29/2024	15:00		<0.0023	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024	15:00		0.0051	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024	15:00		0.0070	mg/kg	0.00654	EPA 8260



## Division of Environmental Testing

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

# FINAL RESULTS REPORT

Report Date : 10/31/2024

Report Time : 11:19

Project Manager: Derek Horn

Project Name: D23A 596 8' Lateral

Project Number: N/A

## QC Report

QC	Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
<b>BORON-5460</b>										
DUP	AA13492	0.30	0.050	mg/kg					9.5238	-15 - 15
MB	AA13596	0.01		mg/kg						
LCS	AA13597	1.05		mg/kg	1.00		105	80 - 120		
LCS	AA13598	9.84		mg/kg	9.00		109	80 - 120		
<b>CHROM_VI_SOIL-5412</b>										
DUP	AA13450	0.09	0.080	mg/kg					<%MDL%	
MB	AA13472	Not Detected		mg/kg						
LCS	AA13474	0.04		mg/kg	0.04		100			
LCS	AA13475	0.04		mg/kg	0.04		100			
<b>CHROM_VI_SOIL-5438</b>										
DUP	AA13504	<0.08	0.080	mg/kg						
MB	AA13545	Not Detected		mg/kg						
LCS	AA13547	0.04		mg/kg	0.04		100			
LCS	AA13548	0.04		mg/kg	0.04		100			
<b>ECISOIL_MMHOS-5440</b>										
DUP	AA13491	1.56		mmhos/cm					1.9048	
LCS	AA13553	9.55		mmhos/cm	10.00		95.5			
LCS	AA13554	9.66		mmhos/cm	10.00		96.6			
<b>GRO_SOIL-5432</b>										
DUP	AA13450	1.67	0.26827	mg/kg					10.765	
Matrix Spike	AA13450	1.86		mg/kg	2.15		86.5			
MB	AA13530	<0.27		mg/kg						
LCS	AA13531	2.46		mg/kg	2.15		114			
LCS	AA13532	2.68		mg/kg	2.15		125			
<b>PH_S-5449</b>										
DUP	AA13491	7.30	0.01	S.U.					0.6825938566	-5 - 5
LCS	AA13568	6.91	0.01	S.U.	6.86		101	95 - 105		
LCS	AA13569	6.86	0.01	S.U.	6.86		100	95 - 105		



## Division of Environmental Testing

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

# FINAL RESULTS REPORT

Report Date : 10/31/2024

Report Time : 11:19

Project Manager: Derek Horn

Project Name: D23A 596 8' Lateral

Project Number: N/A

## QC Report

QC	Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
----	---------	--------	-----------------	-------	-------------	---------------	------	--------------	-----	-----------

### DRO\_ORO\_SOIL-5445

#### AA13491

Dup	DRO	402.18				Not Detected			12.0	
Dup	ORO	278.85				Not Detected			2.44	
Matrix Spike	DRO	453.66		mg/kg	350	Not Detected	130			
Matrix Spike	ORO	285.74		mg/kg	350	Not Detected	81.6			

#### AA13563

MB	DRO	Not Detected		mg/kg						
MB	ORO	Not Detected		mg/kg						

#### AA13564

LCS	DRO	427.58		mg/kg			122			
LCS	ORO	258.01		mg/kg			73.7			

#### AA13565

LCS	DRO	440.19		mg/kg			126			
LCS	ORO	264.30		mg/kg			75.5			

### METALS S-5461

#### AA13517

Dup	Arsenic	20.21	0.025	mg/kg		21.48			6.09	0 - 15
Dup	Barium	259.75	0.025	mg/kg		268.05			3.15	0 - 15
Dup	Cadmium	0.48	0.001	mg/kg		0.48			<%MDL%	0 - 15
Dup	Copper	22.49	0.025	mg/kg		21.61			3.99	0 - 15
Dup	Lead	15.60	0.025	mg/kg		15.51			0.579	0 - 15
Dup	Nickel	18.08	0.025	mg/kg		20.87			14.3	0 - 15
Dup	Selenium	2.98	0.025	mg/kg		3.02			1.33	0 - 15
Dup	Silver	<0.25	0.250	mg/kg		<0.25				
Dup	Zinc	57.97	0.025	mg/kg		60.10			3.61	0 - 15
Matrix Spike	Arsenic	40.88		mg/kg	20	21.48	97.0			
Matrix Spike	Barium	290.83		mg/kg	20	268.05	114			
Matrix Spike	Cadmium	19.97		mg/kg	20	0.48	97.4			
Matrix Spike	Copper	41.80		mg/kg	20	21.61	101			
Matrix Spike	Lead	36.70		mg/kg	20	15.51	106			
Matrix Spike	Nickel	40.89		mg/kg	20	20.87	100			
Matrix Spike	Selenium	22.71		mg/kg	20	3.02	98.4			
Matrix Spike	Silver	16.24		mg/kg	20	<0.25	81.2			
Matrix Spike	Zinc	83.52		mg/kg	20	60.10	117			

#### AA13592

MB	Arsenic	0.00		mg/kg						
MB	Barium	0.00		mg/kg						
MB	Cadmium	0.00		mg/kg						
MB	Copper	0.00		mg/kg						
MB	Lead	0.00		mg/kg						
MB	Nickel	0.00		mg/kg						
MB	Selenium	0.00		mg/kg						
MB	Silver	0.00		mg/kg						
MB	Zinc	0.00		mg/kg						

#### AA13594





## Division of Environmental Testing

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

# FINAL RESULTS REPORT

Report Date : 10/31/2024

Report Time : 11:19

Project Manager: Derek Horn

Project Name: D23A 596 8' Lateral

Project Number: N/A

## QC Report

QC	Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
LCS	Arsenic	0.10		mg/kg			100	80 - 120		
LCS	Barium	0.10		mg/kg			100	80 - 120		
LCS	Cadmium	0.10		mg/kg			100	80 - 120		
LCS	Copper	0.10		mg/kg			100	80 - 120		
LCS	Lead	0.10		mg/kg			100	80 - 120		
LCS	Nickel	0.10		mg/kg			100	80 - 120		
LCS	Selenium	0.10		mg/kg			100	80 - 120		
LCS	Silver	0.09		mg/kg			90.0	80 - 120		
LCS	Zinc	0.10		mg/kg			100	80 - 120		

## AA13595

LCS	Arsenic	0.10		mg/kg			100	80 - 120		
LCS	Barium	0.09		mg/kg			90.0	80 - 120		
LCS	Cadmium	0.10		mg/kg			100	80 - 120		
LCS	Copper	0.10		mg/kg			100	80 - 120		
LCS	Lead	0.10		mg/kg			100	80 - 120		
LCS	Nickel	0.10		mg/kg			100	80 - 120		
LCS	Selenium	0.10		mg/kg			100	80 - 120		
LCS	Silver	0.09		mg/kg			90.0	80 - 120		
LCS	Zinc	0.10		mg/kg			100	80 - 120		

## SAR-5458

## AA13491

Dup	Calcium	13.40		mEq/L	13.40	13.60			1.48	
Dup	Magnesium	4.64		mEq/L	4.64	4.74			2.13	
Dup	Sodium	0.50		mEq/L	0.50	0.50			<%MDL%	
Dup	Sodium Adsorption Ratio	0.16		mEq/L	0.16	0.17			6.06	

## AA13589

MB	Calcium	0.00		mEq/L						
MB	Magnesium	0.00		mEq/L						
MB	Sodium	0.01		mEq/L						
MB	Sodium Adsorption Ratio	Not Detected								

## AA13590

LCS	Calcium	8.99		ppm			89.9			
LCS	Magnesium	9.28		ppm			92.8			
LCS	Sodium	8.92		ppm			89.2			
LCS	Sodium Adsorption Ratio	0.50		ppm			92.6			

## AA13591

LCS	Calcium	418.43		ppm			83.7			
LCS	Magnesium	428.11		ppm			85.6			
LCS	Sodium	430.72		ppm			86.1			
LCS	Sodium Adsorption Ratio	3.54		ppm			93.7			

## SVOC SOIL-5452

## AA13491

Dup	1-methylnaphthalene	0.328	0.010	mg/kg		<0.010			4.36	
Dup	2-methylnaphthalene	0.354	0.010	mg/kg		<0.010			6.41	
Dup	Acenaphthene	0.281	0.010	mg/kg		Not Detected			1.80	
Dup	Acenaphthylene	Not Tested		mg/kg						

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 10/31/2024**Report Time :** 11:19**Project Manager:** Derek Horn**Project Name:** D23A 596 8' Lateral**Project Number:** N/A**QC Report**

QC	Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
Dup	Anthracene	0.331	0.010	mg/kg		Not Detected			0.910	
Dup	Benz(a)anthracene	0.261	0.010	mg/kg		Not Detected			1.93	
Dup	Benzo(a)pyrene	0.320	0.010	mg/kg		Not Detected			0.942	
Dup	Benzo(b)fluoranthene	0.304	0.010	mg/kg		Not Detected			4.37	
Dup	Benzo(g,h,i)perylene	Not Tested		mg/kg						
Dup	Benzo(k)fluoranthene	0.288	0.010	mg/kg		Not Detected			5.71	
Dup	Chrysene	0.257	0.010	mg/kg		<0.010			3.56	
Dup	Dibenz(a,h)anthracene	0.239	0.010	mg/kg		Not Detected			4.71	
Dup	Fluoranthene	0.317	0.010	mg/kg		Not Detected			2.88	
Dup	Fluorene	0.346	0.010	mg/kg		Not Detected			4.43	
Dup	Indeno(1,2,3-cd)pyrene	0.232	0.010	mg/kg		Not Detected			4.41	
Dup	Naphthalene	0.294	0.010	mg/kg		Not Detected			1.03	
Dup	Phenanthrene	Not Tested		mg/kg						
Dup	Pyrene	0.325	0.010	mg/kg		Not Detected			3.44	
Matrix Spike	1-methylnaphthalene	0.314	0.010	mg/kg	0.300	<0.010	105			
Matrix Spike	2-methylnaphthalene	0.332	0.010	mg/kg	0.300	<0.010	111			
Matrix Spike	Acenaphthene	0.276	0.010	mg/kg	0.300	Not Detected	92.0			
Matrix Spike	Acenaphthylene	Not Tested		mg/kg						
Matrix Spike	Anthracene	0.328	0.010	mg/kg	0.300	Not Detected	109			
Matrix Spike	Benz(a)anthracene	0.256	0.010	mg/kg	0.300	Not Detected	85.3			
Matrix Spike	Benzo(a)pyrene	0.317	0.010	mg/kg	0.300	Not Detected	106			
Matrix Spike	Benzo(b)fluoranthene	0.291	0.010	mg/kg	0.300	Not Detected	97.0			
Matrix Spike	Benzo(g,h,i)perylene	Not Tested		mg/kg						
Matrix Spike	Benzo(k)fluoranthene	0.272	0.010	mg/kg	0.300	Not Detected	90.7			
Matrix Spike	Chrysene	0.248	0.010	mg/kg	0.300	<0.010	82.7			
Matrix Spike	Dibenz(a,h)anthracene	0.228	0.010	mg/kg	0.300	Not Detected	76.0			
Matrix Spike	Fluoranthene	0.308	0.010	mg/kg	0.300	Not Detected	103			
Matrix Spike	Fluorene	0.331	0.010	mg/kg	0.300	Not Detected	110			
Matrix Spike	Indeno(1,2,3-cd)pyrene	0.222	0.010	mg/kg	0.300	Not Detected	74.0			
Matrix Spike	Naphthalene	0.291	0.010	mg/kg	0.300	Not Detected	97.0			
Matrix Spike	Phenanthrene	Not Tested		mg/kg						
Matrix Spike	Pyrene	0.314	0.010	mg/kg	0.300	Not Detected	105			

**AA13577**

MB	1-methylnaphthalene	Not Detected	0.010	mg/kg						
MB	2-methylnaphthalene	<0.10	0.010	mg/kg						
MB	Acenaphthene	Not Detected	0.010	mg/kg						
MB	Acenaphthylene	Not Tested		mg/kg						
MB	Anthracene	Not Detected	0.010	mg/kg						
MB	Benz(a)anthracene	Not Detected	0.010	mg/kg						
MB	Benzo(a)pyrene	Not Detected	0.010	mg/kg						
MB	Benzo(b)fluoranthene	Not Detected	0.010	mg/kg						
MB	Benzo(g,h,i)perylene	Not Tested		mg/kg						
MB	Benzo(k)fluoranthene	Not Detected	0.010	mg/kg						
MB	Chrysene	Not Detected	0.010	mg/kg						
MB	Dibenz(a,h)anthracene	Not Detected	0.010	mg/kg						
MB	Fluoranthene	Not Detected	0.010	mg/kg						
MB	Fluorene	Not Detected	0.010	mg/kg						

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 10/31/2024**Report Time :** 11:19**Project Manager:** Derek Horn**Project Name:** D23A 596 8' Lateral**Project Number:** N/A**QC Report**

QC	Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
MB	Indeno(1,2,3-cd)pyrene	Not Detected	0.010	mg/kg						
MB	Naphthalene	Not Detected	0.010	mg/kg						
MB	Phenanthrene	Not Tested		mg/kg						
MB	Pyrene	Not Detected	0.010	mg/kg						

**AA13578**

LCS	1-methylnaphthalene	0.316	0.010	mg/kg			105			
LCS	2-methylnaphthalene	0.331	0.010	mg/kg			110			
LCS	Acenaphthene	0.276	0.010	mg/kg			92.0			
LCS	Acenaphthylene	Not Tested		mg/kg						
LCS	Anthracene	0.295	0.010	mg/kg			98.3			
LCS	Benz(a)anthracene	0.289	0.010	mg/kg			96.3			
LCS	Benzo(a)pyrene	0.306	0.010	mg/kg			102			
LCS	Benzo(b)fluoranthene	0.302	0.010	mg/kg			101			
LCS	Benzo(g,h,i)perylene	Not Tested		mg/kg						
LCS	Benzo(k)fluoranthene	0.288	0.010	mg/kg			96.0			
LCS	Chrysene	0.282	0.010	mg/kg			94.0			
LCS	Dibenz(a,h)anthracene	0.258	0.010	mg/kg			86.0			
LCS	Fluoranthene	0.332	0.010	mg/kg			111			
LCS	Fluorene	0.314	0.010	mg/kg			105			
LCS	Indeno(1,2,3-cd)pyrene	0.260	0.010	mg/kg			86.7			
LCS	Naphthalene	0.287	0.010	mg/kg			95.7			
LCS	Phenanthrene	Not Tested		mg/kg						
LCS	Pyrene	0.336	0.010	mg/kg			112			

**AA13579**

LCS	1-methylnaphthalene	0.312	0.010	mg/kg			104			
LCS	2-methylnaphthalene	0.334	0.010	mg/kg			111			
LCS	Acenaphthene	0.265	0.010	mg/kg			88.3			
LCS	Acenaphthylene	Not Tested		mg/kg						
LCS	Anthracene	0.305	0.010	mg/kg			102			
LCS	Benz(a)anthracene	0.290	0.010	mg/kg			96.7			
LCS	Benzo(a)pyrene	0.306	0.010	mg/kg			102			
LCS	Benzo(b)fluoranthene	0.299	0.010	mg/kg			99.7			
LCS	Benzo(g,h,i)perylene	Not Tested		mg/kg						
LCS	Benzo(k)fluoranthene	0.292	0.010	mg/kg			97.3			
LCS	Chrysene	0.291	0.010	mg/kg			97.0			
LCS	Dibenz(a,h)anthracene	0.260	0.010	mg/kg			86.7			
LCS	Fluoranthene	0.329	0.010	mg/kg			110			
LCS	Fluorene	0.321	0.010	mg/kg			107			
LCS	Indeno(1,2,3-cd)pyrene	0.259	0.010	mg/kg			86.3			
LCS	Naphthalene	0.289	0.010	mg/kg			96.3			
LCS	Phenanthrene	Not Tested		mg/kg						
LCS	Pyrene	0.333	0.010	mg/kg			111			

**VOC S-5427****AA13450**

Dup	1,2,4-trimethylbenzene	0.025		mg/kg		Not Detected			11.3	
Dup	1,3,5-trimethylbenzene	0.021		mg/kg		Not Detected			13.3	

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 10/31/2024**Report Time :** 11:19**Project Manager:** Derek Horn**Project Name:** D23A 596 8' Lateral**Project Number:** N/A**QC Report**

QC	Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%Rec	% REC Limits	RPD	RPD Limit
Dup	Benzene	0.036		mg/kg		Not Detected			15.4	
Dup	Ethylbenzene	0.030		mg/kg		Not Detected			12.5	
Dup	m&p- xylene	0.057		mg/kg		Not Detected			11.6	
Dup	o-xylene	0.030		mg/kg		Not Detected			9.52	
Dup	Toluene	0.033		mg/kg		Not Detected			11.4	
Dup	Xylenes, total	0.087		mg/kg		Not Detected			10.9	
Matrix Spike	1,2,4-trimethylbenzene	0.028		mg/kg	0.050	Not Detected	56.0			
Matrix Spike	1,3,5-trimethylbenzene	0.024		mg/kg	0.050	Not Detected	48.0			
Matrix Spike	Benzene	0.042		mg/kg	0.050	Not Detected	84.0			
Matrix Spike	Ethylbenzene	0.034		mg/kg	0.050	Not Detected	68.0			
Matrix Spike	m&p- xylene	0.064		mg/kg	0.100	Not Detected	64.0			
Matrix Spike	o-xylene	0.033		mg/kg	0.050	Not Detected	66.0			
Matrix Spike	Toluene	0.037		mg/kg	0.050	Not Detected	74.0			
Matrix Spike	Xylenes, total	0.097		mg/kg	0.150	Not Detected	64.7			

**AA13524**

MB	1,2,4-trimethylbenzene	<0.0025	mg/kg
MB	1,3,5-trimethylbenzene	<0.0050	mg/kg
MB	Benzene	<0.0024	mg/kg
MB	Ethylbenzene	<0.0050	mg/kg
MB	m&p- xylene	<0.0043	mg/kg
MB	o-xylene	<0.0023	mg/kg
MB	Toluene	<0.0026	mg/kg
MB	Xylenes, total	<0.0065	mg/kg

**AA13525**

LCS	1,2,4-trimethylbenzene	0.059	mg/kg	118
LCS	1,3,5-trimethylbenzene	0.046	mg/kg	92.0
LCS	Benzene	0.050	mg/kg	100
LCS	Ethylbenzene	0.050	mg/kg	100
LCS	m&p- xylene	0.096	mg/kg	96.0
LCS	o-xylene	0.055	mg/kg	110
LCS	Toluene	0.047	mg/kg	94.0
LCS	Xylenes, total	0.151	mg/kg	101

**AA13526**

LCS	1,2,4-trimethylbenzene	0.061	mg/kg	122
LCS	1,3,5-trimethylbenzene	0.046	mg/kg	92.0
LCS	Benzene	0.045	mg/kg	90.0
LCS	Ethylbenzene	0.049	mg/kg	98.0
LCS	m&p- xylene	0.095	mg/kg	95.0
LCS	o-xylene	0.054	mg/kg	108
LCS	Toluene	0.046	mg/kg	92.0
LCS	Xylenes, total	0.149	mg/kg	99.3

**Division of Environmental Testing**

2115 N Scranton St Suite 3040A

Aurora, CO 80045

800-440-5184

**FINAL RESULTS REPORT****Report Date :** 10/31/2024**Report Time :** 11:19**Project Manager:** Derek Horn**Project Name:** D23A 596 8' Lateral**Project Number:** N/A

Sample ID	Customer ID	Collected	Dilution	Result	Units	MDL	Method Ref.
Analyte Name		Analysis Start					Recovery

QualifierExplanation

H1	Sample received outside of regulatory holding time.
H2	Sample analyzed outside of regulatory holding time due to a laboratory error.
P1	Sample received outside temperature requirements, 0-6°C.
P2	Sample received unpreserved.
P3	Broken or leaking sample container.
P4	Sample improperly collected
P5	Sample incorrectly preserved
B1	Blank failed high, indicating possible high bias in sample results.
B2	Blank failed low, indicating possible low bias in sample results.
MS	Matrix Spike / Matrix Spike Duplicate recovery and/or RPD limit exceeded, indicating potential matrix interference.
D1	Duplicate RPD limit exceeded due to low sample concentration.
D2	Duplicate RPD limit exceeded due to matrix interference.
S	Surrogate recovery failed, indicating potential matrix interference.
RL1	Reporting limits raised due to matrix interference.
RL2	Reporting limits raised due to limited sample.
U	Sample result less than method detection limit.
J	Sample result less than reporting limit but higher than method detection limit.
E	Electronic loss or corruption of data.
I	Subcontracted sample