

December 31, 2024

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Report of Work Completed – Pipeline Release

ECMC Location Name (ID)	8" D23A Lateral / (487672)
Client Location Name	8" D23A Lateral
ECMC Spill/Release Point ID	487672
Legal Description	NWNW Sec. 23 T5S-R96W
Coordinates (Lat/Long)	39.606880 / -108.143140
County	Garfield County, Colorado

Mr. Horn,

Confluence Compliance Companies, LLC (Confluence) prepared this Report of Work Completed (ROWC) for QB Energy Operating, LLC (QB Energy) to document findings of investigation activities of the pipeline release north of the D23A well pad (Location). The Location is 11.2 miles northwest of Parachute, Colorado, in Garfield County, as illustrated in the attached Topographic Location Map. Additional information on the Location and associated release is provided in the title block above, attached Site Diagrams, and laboratory analytical reports. This ROWC provides background on the Location, methods used to complete the investigation, results of the investigation, and recommendations for how to proceed with this information.

Background

On August 21, 2024, liquid was observed surfacing from a buried pipeline approximately 315 feet north of the D23A well pad. An unknown volume of condensate and produced water was released from the line. The release was reported via Energy & Carbon Management Commission (ECMC) Form 19 Document 403896466 to open Spill/Release Point ID 487672.

On August 28, 2024, Confluence provided initial sampling support to characterize soil impacts at the point of release (POR). Approximately 101 cubic yards of impacted soil was removed and transported to Greenleaf Environmental Services, LLC in De Beque, Colorado. Analytical results of the POR exceeded Table 915-1 Residential Soil Screening Levels (RSSLs) for total petroleum hydrocarbons (TPH), benzene, ethylbenzenes, xylene, 1,2,4-trimethylbenzene, sodium adsorption ratio (SAR), and arsenic.

On December 4, 2024, the ECMC approved Form 27 document 403929237 presenting initial assessment results along with a request to use RSSLs and a reduced analyte suite of TPH, benzene, ethylbenzene, xylenes, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, naphthalene, electrical conductivity (EC), SAR, and boron.

Methodology

On October 22 and 23, 2024, Confluence coordinated and oversaw drilling activities to assess soil impacts documented at the POR. Five soil borings (SB01-SB05) were advanced using an environmental drill rig. Soil samples were screened every 5 feet, with three to four samples collected from each boring, depending on the depth at which bedrock was encountered. In total, 17 soil samples were collected. Soil samples were characterized using visual and olfactory observations and field screened using a photoionization detector (PID).

All soil samples were collected in laboratory provided jars, immediately placed on ice, shipped under a completed chain-of-custody form to Pace Analytical Services (Pace) and analyzed for ECMC Table 915-1 soil constituents of concern.

Results

These results summarize observations from onsite investigation efforts and associated laboratory analytical results. For organizational and presentation purposes, the results summary is divided between general observations of lithology and hydrogeology for the entire Location and site investigation activities. Collected spatial data are depicted in the attached Site Diagrams. Laboratory analytical reports are attached and summarized in the Soil Analytical Results.

Lithology and Hydrogeology

Lithology at the Location is characterized by clayey gravels. Groundwater is expected to flow south along the West Fork of Parachute Creek and ultimately to the Colorado River, located 11.3 miles southeast of the Location. The F23 596 well pad, located approximately 0.35 miles southeast of the POR, has four groundwater monitoring wells which were previously installed to characterize groundwater conditions related to ECMC Remediation Project 15312. One well is located on the working surface of the F23 596 well pad, and three wells are located south and west of the pad, along the West Fork access road. Total depths of these wells range from 37.10 feet bgs in MW02 to 86.25 feet bgs in NPR25NW. Historically, groundwater has not been detected within any of these wells. Monitoring well NPR25NW sits at an elevation that is approximately 90 feet lower than the investigation area. Therefore, based on the lack of observed groundwater, relative elevation, and the depth of the wells, groundwater at the Location is estimated to be greater than 100 feet bgs. No groundwater was observed during sampling activities.

Site Assessment Results

Field screening results indicate organic impacts near the POR, with PID measurements ranging from 1,604 to 2,776 parts per million (ppm). Analytical results from SB01 exceed RSSLs for TPH, xylenes, and naphthalene as follows. TPH concentrations range from 1,400.75 milligrams per kilogram (mg/kg) at 25–27 feet bgs to 7,567.34 mg/kg at 15–17 feet bgs, while compliance is observed at 35–37 feet bgs with 0.62 mg/kg. Xylene exceedances range from 69.55 mg/kg at 10–12 feet bgs to 78.78 mg/kg at 15–17 feet bgs, with compliance at 25–27 feet bgs at 18.24 mg/kg. Naphthalene exceedances range from 2.629 mg/kg at 10–12 feet bgs to 3.861 mg/kg at 15–17 feet bgs, with compliance at 25–27 feet bgs at 0.341 mg/kg. Based on field observations, SB01 was completed as soil vapor extraction (SVE) well SVE01, screened from 10 to 25 feet bgs where PID readings indicated organic impacts.

Analytical results also identified exceedances related to Soil Suitability for Reclamation (SSR) and metals. Values of EC exceedances range from 4.32 millimhos per centimeter (mmhos/cm) in SB04 at 26–27.5 feet bgs to 15.00 mmhos/cm in SB01 at 25–27 feet bgs. SAR exceedances are observed only



in SB01, ranging from 9.20 at 35–37 feet bgs to 51.98 at 15–17 feet bgs. pH exceedances range from 8.35 in SB05 at 30–32 feet bgs to 8.87 in SB01 at 15–17 feet bgs. A single boron exceedance of 2.49 milligrams per liter (mg/L) is reported in SB01 at 10–12 feet bgs. Arsenic exceedances are identified in all samples, ranging from 9.66 mg/kg in SB03 at 30–32 feet bgs to 25.78 mg/kg in SB02 at 20–22 feet bgs.

Analysis and Recommendations

Although arsenic concentrations exceeded the approved limit of 20.78 mg/kg, the most recent assessment was conducted prior to the approval of a reduced analyte suite. Given recent arsenic values of up to 25.78 mg/kg, Confluence recommends that QB submit a request to exclude arsenic from the approved reduced analyte suite under Footnote 11, with an adjusted background concentration of 25.98 mg/kg.

Based on recent assessment data, organic exceedances are delineated both vertically and horizontally. Impacts extend to at least 27 feet bgs and no deeper than 35 feet bgs beneath the POR. No organic exceedances were identified in horizontal delineation borings SB02 through SB05. Confluence recommends a limited pilot test using SVE01 to evaluate soil vapor extraction as a remedial alternative.

Exceedances of EC remain undelineated vertically, as well as to the east and south. SAR exceedances also remain undelineated vertically. While pH impacts appear to be vertically delineated, they remain undelineated in all horizontal directions. Boron exceedances observed at the POR and SB01 are fully delineated both vertically and horizontally. Confluence recommends additional soil borings to complete horizontal delineation of inorganic impacts. Prior to additional sampling, Confluence further recommends that QB request an updated reduced analyte suite of TPH, benzene, ethylbenzene, xylenes, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, naphthalene, EC, SAR, pH, and boron, for all future investigations.

Confluence is grateful for the opportunity to support you with this project. If you have any questions about the methods, results or recommendations presented here, please do not hesitate to contact us.

Regards,

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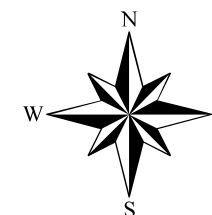
Attachments

- Topographic Location Map
- Site Diagram – Site Investigation
- Soil Analytical Results Table
- Photographic Log
- Soil Boring Logs
- Laboratory Reports



Topographic Location Map

QB Energy Operating, LLC
8" D23A Lateral
(8" D23A Lateral /)
ECMC Location ID: 487672
Garfield County
NWNW Sec. 23 T5S-R96W



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Miles

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Site Diagram: Site Investigation

QB Energy Operating, LLC

8" D23A Lateral

(8" D23A Lateral /)

ECMC Location ID: 487672

Garfield County

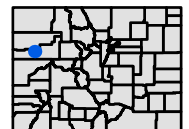
NWNW Sec. 23 T5S-R96W

0 37½ 75 150
Feet

- Point of Release
- Soil Borings
- Soil Boring / SVE Well
- Excavation Extent - 08/28/2024



N
1:1,000



CONFLUENCE
COMPLIANCE COMPANIES

Spatial data was collected using a handheld GPS unit with submeter accuracy. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. The position of illustrated data may have been manually adjusted to align with the aerial imagery in a manner more representative of field conditions for presentation purposes only.

SOIL ANALYTICAL RESULTS TABLE
D23A 596

Analyte 915-1 RESIDENTIAL SOIL				Total TPH	GRO	DRO	ORO	Benzene	Toluene	Ethylbenzene	Total Xylenes	1,2,4-TMB	1,3,5-TMB	Acenaphthene	Anthracene	Benz(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Chrysene	Dibenz(a,h)anthracen	Fluoranthene	Fluorene	Indeno(1,2,3-cd)Pyre	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Pyrene
				500			500	1.2	490	5.8	58	30	27	360	1800	1.1	1.1	11	0.11	110	0.11	240	240	1.1	18	24	2	180
				Units																								
					mg/kg		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample Name	Sample	Sample	Lab Report																									
20240828-D23A 596-(POR)@6.5	Soil Boring	08/28/2024	L1773153	6329	3550	2740	39.3	9.54	112	16.6	318	61.8	71.7	0.0869	< 0.00600	< 0.00600	< 0.00600	< 0.00600	< 0.00600	< 0.00600	< 0.00600	0.00282	0.233	< 0.00600	1.77	5.58	2.73	0.00338
20241022-D23A 596-(SB01)@10-12	Soil Boring	10/22/2024	2902	3922.29	1005.17	2917.12	< 100	1.05	21.56	5.29	69.55	17.47	18.04	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	1.638	5.465	2.629	< 0.1
20241022-D23A 596-(SB01)@15-17	Soil Boring	10/22/2024	2902	7567.34	947.33	6620.01	< 100	0.78	22.72	5.75	78.78	22.44	22.36	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	2.574	9.772	3.861	< 0.1
20241022-D23A 596-(SB01)@25-27	Soil Boring	10/22/2024	2902	1400.73	216.35	1184.38	< 100	0.023	2.76	0.47	18.24	6.69	7.65	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.376	1.205	0.341	< 0.01
20241022-D23A 596-(SB01)@35-37	Soil Boring	10/22/2024	2902	0.62	0.62	< 100	< 100	< 0.00242	0.0068	0.0088	0.029	0.0057	0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
20241022-D23A 596-(SB02)@10-12	Soil Boring	10/22/2024	2903	1.54	1.54	< 100	< 100	< 0.00242	0.02	< 0.005	0.182	0.022	0.023	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
20241022-D23A 596-(SB02)@20-22	Soil Boring	10/22/2024	2903	0.46	0.46	< 100	< 100	< 0.00242	0.027	< 0.005	0.062	0.0073	0.0059	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
20241022-D23A 596-(SB02)@30-32	Soil Boring	10/22/2024	2903	0.37	0.37	< 100	< 100	< 0.00242	0.0051	< 0.005	0.007	< 0.00245	< 0.005	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
20241023-D23A 596-(SB03)@11-12.5	Soil Boring	10/23/2024	2904	344.87	3.26	224.20	117.41	< 0.00242	0.014	< 0.005	0.12	0.025	0.029	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.119	< 0.1	< 0.1
20241023-D23A 596-(SB03)@20-22	Soil Boring	10/23/2024	2904	ND	< 0.26827	< 100	< 100	< 0.00242	< 0.00263	< 0.005	< 0.00654	< 0.00245	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
20241023-D23A 596-(SB03)@30-32	Soil Boring	10/23/2024	2904	ND	< 0.26827	< 100	< 100	< 0.00242	< 0.00263	< 0.005	< 0.00654	< 0.00245	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
20241023-D23A 596-(SB04)@10-12	Soil Boring	10/23/2024	2905	ND	< 0.26827	< 100	< 100	< 0.00242	< 0.00263	< 0.005	< 0.00654	0.0039	< 0.005	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
20241023-D23A 596-(SB04)@20-22	Soil Boring	10/23/2024	2905	ND	< 0.26827	< 100	< 100	< 0.00242	< 0.00263	< 0.005	< 0.00654	< 0.00245	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
20241023-D23A 596-(SB04)@26-27.5	Soil Boring	10/23/2024	2905	405.90	3.27	249.27	153.36	0.0026	0.015	< 0.005	0.015	< 0.00245	< 0.005	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.109	< 0.1	< 0.1
20241023-D23A 596-(SB04)@30-31.5	Soil Boring	10/23/2024	2905	128.36	1.86	126.50	< 100	0.0036	0.0021	0.0051	0.019	< 0.00245	< 0.005	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
20241023-D23A 596-(SB05)@10-12	Soil Boring	10/23/2024	2915	ND	< 0.26827	< 100	< 100	< 0.00242	< 0.00263	< 0.005	< 0.00654	< 0.00245	< 0.005	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
20241023-D23A 596-(SB05)@20-22	Soil Boring	10/23/2024	2915	ND	< 0.26827	< 100	< 100	< 0.00242	< 0.00263	< 0.005	< 0.00654	< 0.00245	< 0.005	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
20241023-D23A 596-(SB05)@30-32	Soil Boring	10/23/2024	2915	ND	< 0.26827	< 100	< 100	< 0.00242	< 0.00263	< 0.005	< 0.00654	< 0.00245	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Notes:
Bold with silver highlight: Exceeds RSSLs
"<" (as in, less than laboratory reporting detection limit)

SOIL ANALYTICAL RESULTS TABLE
D23A 596

Analyte 915-1 RESIDENTIAL SOIL Units				EC	SAR	pH	HWS Boron	Arsenic	Barium	Cadmium	Chromium VI	Copper	Lead	Nickel	Selenium	Silver	Zinc
				4	6	8.3	2	0.68	15000	71	0.3	3100	400	1500	390	390	23000
				mmhos/cm	No Unit	SU	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample Name	Sample Type	Sample Date	Lab Report														
20240828-D23A 596-(POR)@6.5	Soil Boring	08/28/2024	L1773153	3.85	36.5	7.88	2.04	13.3	623	0.41	< 1.00	20.2	12.6	15.9	0.41	< 0.46	59.5
20241022-D23A 596-(SB01)@10-12	Soil Boring	10/22/2024	2902	12.01	49.4	8.6	2.49	13.99	304.38	0.39	< 0.08	21.41	15.9	17.06	2.43	< 0.25	59.72
20241022-D23A 596-(SB01)@15-17	Soil Boring	10/22/2024	2902	12.09	51.98	8.87	1.68	15.65	278.61	0.36	< 0.08	19.32	14.74	16.33	2.88	< 0.25	56.34
20241022-D23A 596-(SB01)@25-27	Soil Boring	10/22/2024	2902	15	23	8.25	1.36	15.62	179.27	0.54	< 0.08	27.39	16.59	19.24	2.47	< 0.25	76.35
20241022-D23A 596-(SB01)@35-37	Soil Boring	10/22/2024	2902	12.8	9.2	8.16	0.3	20.79	218.73	0.41	< 0.08	21.73	16.06	17.7	2.36	< 0.25	62.24
20241022-D23A 596-(SB02)@10-12	Soil Boring	10/22/2024	2903	2.49	2.26	8.2	0.24	20.93	284.95	0.46	< 0.08	24.44	24.5	20.55	3.67	< 0.25	75.62
20241022-D23A 596-(SB02)@20-22	Soil Boring	10/22/2024	2903	1.34	1.52	8.43	0.23	25.78	223	0.38	< 0.08	19.79	14.74	17.92	2.52	< 0.25	68.73
20241022-D23A 596-(SB02)@30-32	Soil Boring	10/22/2024	2903	1.43	2.12	8.54	0.35	17.44	250.16	0.45	< 0.08	18.37	13.93	17.92	2.74	< 0.25	56.25
20241023-D23A 596-(SB03)@11-12.5	Soil Boring	10/23/2024	2904	1.45	2.17	8.55	0.61	19.38	297.19	0.44	< 0.08	21.02	16.16	15.89	3.26	< 0.25	55.81
20241023-D23A 596-(SB03)@20-22	Soil Boring	10/23/2024	2904	0.92	4.23	8.57	0.28	12.38	192.4	0.33	0.1	17.49	12.84	15.29	2.69	< 0.25	55.41
20241023-D23A 596-(SB03)@30-32	Soil Boring	10/23/2024	2904	0.95	5.26	8.68	0.26	9.66	185.05	0.29	< 0.08	14.63	11.21	13.3	2.11	< 0.25	47.97
20241023-D23A 596-(SB04)@10-12	Soil Boring	10/23/2024	2905	1.8	3.25	8.51	0.73	13.43	239.54	0.49	< 0.08	19.52	13.15	15.46	2.21	< 0.25	60.44
20241023-D23A 596-(SB04)@20-22	Soil Boring	10/23/2024	2905	8.3	3.76	8.27	0.43	13.72	229.71	0.59	< 0.08	17.31	12.18	17.72	2.77	< 0.25	59.64
20241023-D23A 596-(SB04)@26-27.5	Soil Boring	10/23/2024	2905	4.32	3.16	8.43	0.59	14.95	237.59	0.44	< 0.08	13.52	8.35	12.57	2.16	< 0.25	48.06
20241023-D23A 596-(SB04)@30-31.5	Soil Boring	10/23/2024	2905	3.14	2.22	8.54	0.45	15.42	202.56	0.41	< 0.08	16.91	10.28	12.83	1.57	< 0.25	42.65
20241023-D23A 596-(SB05)@10-12	Soil Boring	10/23/2024	2915	2.15	4.87	8.43	0.31	15.44	248.72	0.51	< 0.08	22.27	15.79	16.26	2.58	< 0.25	59.31
20241023-D23A 596-(SB05)@20-22	Soil Boring	10/23/2024	2915	8.23	3.14	7.89	0.4	14.83	183.06	0.45	< 0.08	23.23	13.94	17.77	2.47	< 0.25	69.91
20241023-D23A 596-(SB05)@30-32	Soil Boring	10/23/2024	2915	2.59	2.08	8.35	0.29	21.48	268.05	0.48	< 0.08	21.61	15.51	20.87	3.02	< 0.25	60.1
20210315-D23A BACKGROUND N@18"	Background	03/15/2021		0.53	0.46	8.1		8.99									
20210315-D23A BACKGROUND E@16"	Background	03/15/2021		0.99	0.31	8.0		20.78									
20210315-D23A BACKGROUND S@14"	Background	03/15/2021		0.27	0.37	8.0		14.67									

Notes:
Bold with silver highlight: Exceeds RSSLs
"<" (as in, less than laboratory reporting detection limit)

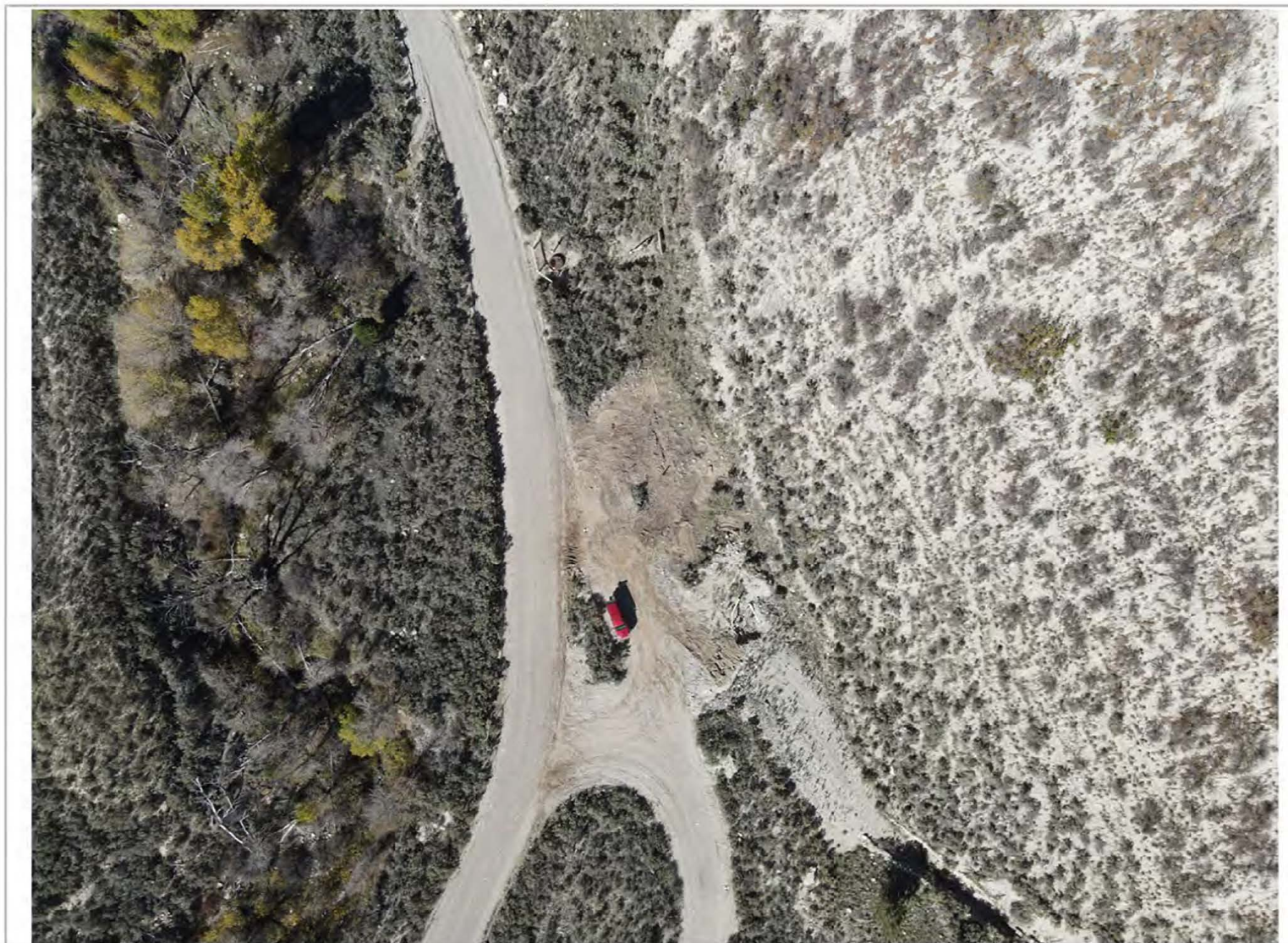


Photographic Log

Remediation Investigation

8" D23A Lateral (ECMC Location ID: 487672)

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Investigation Area Overview: Orientation North



Photographic Log

Remediation Investigation

8" D23A Lateral (ECMC Location ID: 487672)

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Site Area Overview: View South



Photographic Log

Remediation Investigation

8" 023A Lateral (ECMC Location ID: 487672)

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Investigation Area Overview: Orientation North



Photographic Log

Remediation Investigation

8" 023A Lateral (ECMC Location ID: 487672)

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(SB01) Sample Location: View East



Photographic Log

Remediation Investigation

8" 023A Lateral (ECMC Location ID: 487672)

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(SB02) Sample Location: View East



Photographic Log

Remediation Investigation

8" 023A Lateral (ECMC Location ID: 487672)

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(SB03) Sample Location: View Southwest



Photographic Log

Remediation Investigation

8" 023A Lateral (ECMC Location ID: 487672)

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(SB04) Sample Location: View Northwest



Photographic Log

Remediation Investigation

8" 023A Lateral (ECMC Location ID: 487672)

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(SB05) Sample Location: View Southwest

Boring Number: SB01				Lat/Long: 39.607259, -108.143538		
Scope: Delineation/Characterization				Drilling Equipment: SIMCO 2800		
Drilling Method: 4" Solid Stem		Drilling Contractor: Colorado Drilling & Sampling			Driller: Scott McCracken	
Date: 10/22/2024		Start Time: 0845	Finish Time: 1050	DTW: NA	Total Depth of Boring: 35 ft	
Geologist: Alex Slorby						
Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
0-10	NA	NA	NA	NA	A pvc pipe was placed adjacent to the point of release to approximately 6.5 ft bgs to clear the soil boring location and the excavation was backfilled. Field screening and sampling will begin at 10 ft bgs.	NA
10-12	0855	95%	3-7-7-10	CL	Brown. Sandy clay. Medium-fine grain. Medium plasticity. Gravel. Poorly graded. Fractured shalestone. Hydrocarbon odor. No staining.	2568
15-17	0915	90%	6-5-3-3	SC	Brown. Sandy clay. Medium-heavy grain. Low plasticity. Gravel. Poorly graded. Fractured shalestone. Hydrocarbon odor. No staining.	2776
20-22	0930	100%	2-1-3-3	SC	Brown. Sandy clay. Medium-heavy grain. Low plasticity. Gravel. Poorly graded. Fractured shalestone. Hydrocarbon odor. No staining.	2497
25-27	0955	70%	5-8-7-8	SC	Brown. Sandy clay. Medium-heavy grain. Low plasticity. Gravel. Poorly graded. Fractured shalestone. Some black/organic material. Hydrocarbon odor. No staining.	1604
30-32	1025	100%	10-19-22-12	SC	Brown. Sandy clay. Medium-heavy grain. Low plasticity. Gravel. Poorly graded. Fractured shalestone. Some red mottling. No odor. No staining.	29.3
35-37	1050	95%	3-4-5-4	SC	Brown. Sandy clay. Medium-heavy grain. Low plasticity. Gravel. Poorly graded. Fractured shalestone. Some red mottling. No odor. No staining.	30.6
					Soil Vapor Extraction Well SVE01 Construction Metal Stick Up Blank Casing: 0'-10' bgs Screen Casing: 10'-25' bgs Concrete: 0'-3" bgs Bentonite: 3"-9' bgs Sand: 9'-25' bgs Backfill: 25'-35' bgs	
Samples Collected: 10-12 (4 x 4oz jars), 15-17 (4 x 4oz jars), 25-27 (4 x 4oz jars), 35-37 (4 x 4oz jars)				Comments: Soil vapor extraction well SVE01 installed.		

Boring Number: SB02				Lat/Long: 39.607240, -108.143644		
Scope: Delineation/Characterization				Drilling Equipment: SIMCO 2800		
Drilling Method: 4" Solid Stem		Drilling Contractor: Colorado Drilling & Sampling		Driller: Scott McCracken		
Date: 10/22/2024		Start Time: 1135	Finish Time: 1335	DTW: NA	Total Depth of Boring: 30 ft	
Geologist: Alex Slorby						
Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
0-10	NA	NA	NA	NA	A pothole was advanced to approximately 8 ft bgs via hydrovac to clear the soil boring location. Field screening and sampling will begin at 10 ft bgs.	NA
10-12	1145	95%	5-5-6-6	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. Fractured shalestone. Slight organic/oil shale like odor. No staining.	112.9
15-17	1220	95%	7-5-4-5	SC	Brown. Sandy clay. Medium-heavy grain. Low plasticity. Little gravel content. Poorly graded. No odor. No staining.	9.8
20-22	1240	95%	7-9-14-12	SC	Brown. Sandy clay. Medium-heavy grain. Low plasticity. Gravel. Poorly graded. Fractured shalestone. No odor. No staining.	3.0
25-27	1305	100%	7-11-25-32	SC	Brown. Sandy clay. Medium-heavy grain. Low plasticity. Gravel. Poorly graded. Fractured shalestone. No odor. No staining.	4.1
30-32	1335	95%	12-13-10-10	SC	Brown. Sandy clay. Medium-heavy grain. Low plasticity. Gravel. Poorly graded. Fractured shalestone. No odor. No staining.	5.1
Samples Collected: 10-12 (4 x 4oz jars), 20-22 (4 x 4oz jars), 30-32 (4 x 4oz jars)					Comments:	

Boring Number: SB03				Lat/Long: 39.607350, -108.143591		
Scope: Delineation/Characterization				Drilling Equipment: SIMCO 2800		
Drilling Method: 4" Solid Stem		Drilling Contractor: Colorado Drilling & Sampling		Driller: Scott McCracken		
Date: 10/23/2024		Start Time: 0825	Finish Time: 1000	DTW: NA	Total Depth of Boring: 30 ft	
Geologist: Alex Slorby						
Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
0-10	NA	NA	NA	NA	A pothole was advanced to approximately 8 ft bgs via hydrovac to clear the soil boring location. Field screening and sampling will begin at 10 ft bgs.	NA
11-12.5	0840	100%	8-15-13	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. Fractured shalestone. Slight organic/oil shale like odor. No staining.	114.0
15-17	0900	100%	9-9-6-5	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. Some reddish/orange mottling. No odor. No staining.	3.8
20-22	0920	90%	5-4-6-9	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. Fractured shalestone. No odor. No staining.	0.5
25-27	0940	100%	5-6-19-10	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. Fractured shalestone. Red/orange mottling. No odor. No staining.	0.8
30-32	1000	100%	5-5-12-8	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. Fractured shalestone. Red/orange mottling. No odor. No staining.	0.5
Samples Collected: 11-12.5 (4 x 4oz jars), 20-22 (4 x 4oz jars), 30-32 (4 x 4oz jars)				Comments:		

Boring Number: SB04				Lat/Long: 39.607276, -108.143467		
Scope: Delineation/Characterization				Drilling Equipment: SIMCO 2800		
Drilling Method: 4" Solid Stem		Drilling Contractor: Colorado Drilling & Sampling		Driller: Scott McCracken		
Date: 10/23/2024	Start Time: 1025	Finish Time: 1200	DTW: NA	Total Depth of Boring: 30 ft		
Geologist: Alex Slorby						
Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
0-10	NA	NA	NA	NA	A pothole was advanced to approximately 8 ft bgs via hydrovac to clear the soil boring location. Field screening and sampling will begin at 10 ft bgs.	NA
10-12	1030	90%	4-4-4-3	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. Fractured shalestone. No odor. No staining.	1.2
15-17	1045	100%	4-3-3-2	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. Fractured shalestone. No odor. No staining.	0.8
20-22	1100	90%	5-5-4-4	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. Fractured shalestone. No odor. No staining.	0.7
26-27.5	1125	95%	7-13-12	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. Fractured shalestone. Organic/oil shale like odor. No staining.	187.7
30-31.5	1200	100%	6-12-14	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. Fractured shalestone. Slight organic/oil shale like odor. No staining.	40.0
Samples Collected: 10-12 (4 x 4oz jars), 20-22 (4 x 4oz jars), 26-27.5 (4 x 4oz jars), 30-31.5 (4 x 4oz jars)					Comments:	

Boring Number: SB05				Lat/Long: 39.607171, -108.143526		
Scope: Delineation/Characterization				Drilling Equipment: SIMCO 2800		
Drilling Method: 4" Solid Stem		Drilling Contractor: Colorado Drilling & Sampling		Driller: Scott McCracken		
Date: 10/23/2024		Start Time: 1230	Finish Time: 1340	DTW: NA	Total Depth of Boring: 30 ft	
Geologist: Alex Slorby						
Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
0-10	NA	NA	NA	NA	A pothole was advanced to approximately 8 ft bgs via hydrovac to clear the soil boring location. Field screening and sampling will begin at 10 ft bgs.	NA
10-12	1235	85%	10-11-6-11	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. No odor. No staining.	1.7
15-17	1245	100%	7-8-7-7	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. No odor. No staining.	1.6
20-22	1300	85%	6-7-7-9	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. Fractured shalestone. No odor. No staining.	1.8
25-27	1320	95%	8-30-14-16	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. Fractured shalestone. No odor. No staining.	4.2
30-32	1340	100%	11-11-11-10	SC	Brown. Sandy clay. Medium-heavy grain. low plasticity. Gravel. Poorly graded. Fractured shalestone. Some red/orange mottling. No odor. No staining.	0.7
Samples Collected: 10-12 (4 x 4oz jars), 20-22 (4 x 4oz jars), 30-32 (4 x 4oz jars)					Comments:	



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 AA13498 .

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, LLCAddress: 143 Diamond AvenueCity/State/ZIP: Parachute/ Colorado/ 81635Phone: (720) 830-7549Project Contact: Derek Horn

Elevation Diagnostics

2115 North Scranton Street Suite 3040A Aurora, CO 80045
800.440.5184Project Name/Number: D23A 596 8" LateralProject Location: D23A 596Collector Name: Alex Slorby

Sample ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Interim report requested	
					HCl	HNO ₃	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)	CR6/C	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Notes
1	20241022-D23A 596-(SB01)@10-12	10/22/2024	0855	4			✓			✓		✓	✓	✓	✓	✓	✓			
2	20241022-D23A 596-(SB01)@15-17	10/22/2024	0915	4			✓			✓		✓	✓	✓	✓	✓	✓			
3	20241022-D23A 596-(SB01)@25-27	10/22/2024	0955	4			✓			✓		✓	✓	✓	✓	✓	✓			
4	20241022-D23A 596-(SB01)@35-37	10/22/2024	1050	4			✓			✓		✓	✓	✓	✓	✓	✓			
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished By: Alex SlorbyDate/Time: 10/24/2024

Relinquished By:

Date/Time:

Relinquished By:

Date/Time:

Scan to
Deliver
Samples

EFOR-008.005

Lab
Use
OnlyObserved Temperature Upon Receipt: 1.6°CCorrected Temperature Upon Receipt: 2.9°CThermometer #: EDX6238Correction Factor: +1.3°CSamples Intact: Yes NopH Checked: Yes NopH Adjusted: Yes NoPFAS rec'd on ice: Yes NoName/Lot Number of Adjustment: 2024-10-25-006

Lot/EQM Number:

**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 :** 11:13**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
AA13498-1	20241022-D23A 596-(SB01)@10-12	Collected : 10/22/2024	08:55				
SAR - Calcium		10/29/2024	09:58 10.00	5.71	mEq/L		EPA 6020B
SAR - Magnesium		10/29/2024	09:58 10.00	0.91	mEq/L		EPA 6020B
SAR - Sodium		10/29/2024	09:58 10.00	89.87	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio		10/29/2024	09:58 10.00	49.40	No Unit		EPA 6020B
Soil Conductivity		10/28/2024	16:59	12.01	mmhos/cm	0.0005	USDA 60
AA13498-2	20241022-D23A 596-(SB01)@10-12	Collected : 10/22/2024	08:55				
Chromium VI, Soil		10/29/2024	09:07	Not Detected	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron		10/30/2024	16:27	2.49	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature		10/29/2024	14:56	20.5	°C		
pH, Soils		10/29/2024	14:56	8.60	SU	0.01	EPA 9045D
Total Metals, Soils - Arsenic		10/30/2024	10:22 10.00	13.99	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium		10/30/2024	10:22 10.00	304.38	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium		10/30/2024	10:22 10.00	0.39	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper		10/30/2024	10:22 10.00	21.41	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead		10/30/2024	10:22 10.00	15.90	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel		10/30/2024	10:22 10.00	17.06	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium		10/30/2024	10:22 10.00	2.43	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	59.72	mg/kg	0.025	EPA 6020B
AA13498-3	20241022-D23A 596-(SB01)@10-12	Collected : 10/22/2024	08:55				
DRO & ORO, Soil - DRO		10/31/2024	08:56 10.00	2917.12	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO		10/31/2024	08:56	<100	mg/kg	100.00	EPA 8015D
Gasoline Range Organics, Soil		10/30/2024	10:27 150.00	1005.17	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene		10/29/2024	09:00 10.00	1.638	mg/kg	0.010	EPA 8270
SVOC, Soils - 2-methylnaphthalene		10/29/2024	09:00 20.00	5.465	mg/kg	0.010	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	2.629	mg/kg	0.010	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	15:00 150.00	17.47	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene		10/29/2024	15:00 150.00	18.04	mg/kg	0.005	EPA 8260
VOC, Soils - Benzene		10/29/2024	15:00 150.00	1.05	mg/kg	0.00242	EPA 8260
VOC, Soils - Ethylbenzene		10/29/2024	15:00 150.00	5.29	mg/kg	0.005	EPA 8260
VOC, Soils - m&p- xylene		10/29/2024	15:00 150.00	58.73	mg/kg	0.00427	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 :** 11:13**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	150.00	10.82	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024 15:00	150.00	21.56	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024 15:00	150.00	69.55	mg/kg	0.00654	EPA 8260

AA13499-1 20241022-D23A 596-(SB01)@15-17**Collected :** 10/22/2024 09:15

SAR - Calcium	10/29/2024 09:58	10.00	4.01	mEq/L		EPA 6020B
SAR - Magnesium	10/29/2024 09:58	10.00	2.03	mEq/L		EPA 6020B
SAR - Sodium	10/29/2024 09:58	10.00	90.37	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio	10/29/2024 09:58	10.00	51.98	No Unit		EPA 6020B
Soil Conductivity	10/28/2024 16:59	12.09	mmhos/cm	0.0005		USDA 60

AA13499-2 20241022-D23A 596-(SB01)@15-17**Collected :** 10/22/2024 09:15

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	1.68	mg/kg	0.050		Boron Hot Water Extraction
pH, Soils Temperature	10/29/2024 14:56	20.4	°C			
pH, Soils	10/29/2024 14:56	8.87	SU	0.01		EPA 9045D
Total Metals, Soils - Arsenic	10/30/2024 10:22	10.00	15.65	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium	10/30/2024 10:22	10.00	278.61	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium	10/30/2024 10:22	10.00	0.36	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper	10/30/2024 10:22	10.00	19.32	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	16.33	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium	10/30/2024 10:22	10.00	2.88	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	56.34	mg/kg	0.025	EPA 6020B

AA13499-3 20241022-D23A 596-(SB01)@15-17**Collected :** 10/22/2024 09:15

DRO & ORO, Soil - DRO	10/31/2024 08:56	10.00	6620.01	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO	10/31/2024 08:56		<100	mg/kg	100.00	EPA 8015D
Gasoline Range Organics, Soil	10/30/2024 10:27	150.00	947.33	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene	10/29/2024 09:00	10.00	2.574	mg/kg	0.010	EPA 8270
SVOC, Soils - 2-methylnaphthalene	10/29/2024 09:00	50.00	9.772	mg/kg	0.010	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
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	3.861	mg/kg	0.010	EPA 8270
SVOC, Soils - Pyrene	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 :** 11:13**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	200.00	22.44	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene		10/29/2024 15:00	200.00	22.36	mg/kg	0.005	EPA 8260
VOC, Soils - Benzene		10/29/2024 15:00	200.00	0.78	mg/kg	0.00242	EPA 8260
VOC, Soils - Ethylbenzene		10/29/2024 15:00	200.00	5.75	mg/kg	0.005	EPA 8260
VOC, Soils - m&p- xylene		10/29/2024 15:00	200.00	66.92	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene		10/29/2024 15:00	200.00	11.86	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024 15:00	200.00	22.72	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024 15:00	200.00	78.78	mg/kg	0.00654	EPA 8260

AA13500-1 20241022-D23A 596-(SB01)@25-27**Collected :** 10/22/2024 09:55

SAR - Calcium	10/29/2024 09:58	10.00	29.16	mEq/L		EPA 6020B
SAR - Magnesium	10/29/2024 09:58	10.00	6.01	mEq/L		EPA 6020B
SAR - Sodium	10/29/2024 09:58	10.00	96.46	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio	10/29/2024 09:58	10.00	23.00	No Unit		EPA 6020B
Soil Conductivity	10/28/2024 16:59		15.00	mmhos/cm	0.0005	USDA 60

AA13500-2 20241022-D23A 596-(SB01)@25-27**Collected :** 10/22/2024 09:55

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		1.36	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature	10/29/2024 14:56		20.2	°C		
pH, Soils	10/29/2024 14:56		8.25	SU	0.01	EPA 9045D
Total Metals, Soils - Arsenic	10/30/2024 10:22	10.00	15.62	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium	10/30/2024 10:22	10.00	179.27	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium	10/30/2024 10:22	10.00	0.54	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper	10/30/2024 10:22	10.00	27.39	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead	10/30/2024 10:22	10.00	16.59	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel	10/30/2024 10:22	10.00	19.24	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium	10/30/2024 10:22	10.00	2.47	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	76.35	mg/kg	0.025	EPA 6020B

AA13500-3 20241022-D23A 596-(SB01)@25-27**Collected :** 10/22/2024 09:55

DRO & ORO, Soil - DRO	10/31/2024 08:56	5.00	1184.38	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO	10/31/2024 08:56		<100.00	mg/kg	100.00	EPA 8015D
Gasoline Range Organics, Soil	10/30/2024 10:27	200.00	216.35	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene	10/29/2024 09:00		0.376	mg/kg	0.010	EPA 8270
SVOC, Soils - 2-methylnaphthalene	10/29/2024 09:00	10.00	1.205	mg/kg	0.010	EPA 8270
SVOC, Soils - Acenaphthene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Anthracene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benz(a)anthracene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(a)pyrene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Chrysene	10/29/2024 09:00		<0.010	mg/kg	0.010	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene	10/29/2024 09:00		Not Detected	mg/kg	0.010	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 :** 11:13**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		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluorene		10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Naphthalene		10/29/2024 09:00		0.341	mg/kg	0.010	EPA 8270
SVOC, Soils - Pyrene		10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene		10/29/2024 15:00	50.00	6.69	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene		10/29/2024 15:00	50.00	7.65	mg/kg	0.005	EPA 8260
VOC, Soils - Benzene		10/29/2024 15:00		0.023	mg/kg	0.00242	EPA 8260
VOC, Soils - Ethylbenzene		10/29/2024 15:00	50.00	0.47	mg/kg	0.005	EPA 8260
VOC, Soils - m&p- xylene		10/29/2024 15:00	50.00	15.26	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene		10/29/2024 15:00	50.00	2.98	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024 15:00	50.00	2.76	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024 15:00	50.00	18.24	mg/kg	0.00654	EPA 8260

AA13501-1 20241022-D23A 596-(SB01)@35-37**Collected :** 10/22/2024 10:50

SAR - Calcium	10/29/2024 09:58	10.00	63.84	mEq/L		EPA 6020B
SAR - Magnesium	10/29/2024 09:58	10.00	3.00	mEq/L		EPA 6020B
SAR - Sodium	10/29/2024 09:58	10.00	53.21	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio	10/29/2024 09:58	10.00	9.20	No Unit		EPA 6020B
Soil Conductivity	10/28/2024 16:59		12.80	mmhos/cm	0.0005	USDA 60

AA13501-2 20241022-D23A 596-(SB01)@35-37**Collected :** 10/22/2024 10:50

Chromium VI, Soil	10/29/2024 09:07		Not Detected	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron	10/30/2024 16:27		0.30	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature	10/29/2024 14:56		20.2	°C		
pH, Soils	10/29/2024 14:56		8.16	SU	0.01	EPA 9045D
Total Metals, Soils - Arsenic	10/30/2024 10:22	10.00	20.79	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium	10/30/2024 10:22	10.00	218.73	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium	10/30/2024 10:22	10.00	0.41	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper	10/30/2024 10:22	10.00	21.73	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead	10/30/2024 10:22	10.00	16.06	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel	10/30/2024 10:22	10.00	17.70	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium	10/30/2024 10:22	10.00	2.36	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	62.24	mg/kg	0.025	EPA 6020B

AA13501-3 20241022-D23A 596-(SB01)@35-37**Collected :** 10/22/2024 10:50

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		0.62	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene	10/29/2024 09:00		<0.010	mg/kg	0.010	EPA 8270
SVOC, Soils - 2-methylnaphthalene	10/29/2024 09:00		<0.010	mg/kg	0.010	EPA 8270
SVOC, Soils - Acenaphthene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Anthracene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benz(a)anthracene	10/29/2024 09:00		Not Detected	mg/kg	0.010	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 :** 11:13**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 - Benzo(a)pyrene		10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene		10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene		10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Chrysene		10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene		10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluoranthene		10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluorene		10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Naphthalene		10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Pyrene		10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene		10/29/2024 15:00		0.0057	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene		10/29/2024 15:00		0.011	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		0.0088	mg/kg	0.005	EPA 8260
VOC, Soils - m&p- xylene		10/29/2024 15:00		0.012	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene		10/29/2024 15:00		0.017	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024 15:00		0.0068	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024 15:00		0.029	mg/kg	0.00654	EPA 8260

**Division of Environmental Testing**

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800-440-5184

FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 11:13**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
BORON-5460										
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		
CHROM_VI_SOIL-5412										
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			
ECISOIL_MMHOS-5440										
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			
GRO_SOIL-5432										
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			
PH_S-5449										
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**

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FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 11:13**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
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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**

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800-440-5184

FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 11:13**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**

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FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 11:13**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 :** 11:13**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 :** 11:13**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 :** 11:13**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

**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 Storby

Sample ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Interim report requested	
					HCl	HNO ₃	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 Storby
 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
 Name/Lot Number of Adjustment: 2024-10-25-007
 Lot/EQM Number: N/A

**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
AA13502-1	20241022-D23A 596-(SB02)@10-12	Collected : 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
AA13502-2	20241022-D23A 596-(SB02)@10-12	Collected : 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
AA13502-3	20241022-D23A 596-(SB02)@10-12	Collected : 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

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 - 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 - Dibenz(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

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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
BORON-5460										
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		
CHROM_VI_SOIL-5412										
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			
CHROM_VI_SOIL-5438										
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			
ECISOIL_MMHOS-5440										
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			
GRO_SOIL-5432										
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			
PH_S-5449										
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

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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
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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**

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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**

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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**

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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



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 AA13508 .

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 ₃	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	20241023-D23A 596-(SB03)@11-12.5	10/23/2024	0840	4						✓		✓	✓	✓	✓	✓	✓	✓				
2	20241023-D23A 596-(SB03)@20-22	10/23/2024	0920	4						✓		✓	✓	✓	✓	✓	✓	✓				
3	20241023-D23A 596-(SB03)@30-32	10/23/2024	1000	4						✓		✓	✓	✓	✓	✓	✓	✓				
4																						
5																						
6																						
7																						
8	 AA13500-1																					
9	 AA13500-1																					
10																						

Relinquished By: <u>Alex Slorby</u> Date/Time: <u>10/24/2024</u>	Relinquished By: Date/Time:	Relinquished By: Date/Time:	Scan to Deliver Samples  EFOR-008.005
Lab Use Only Observed Temperature Upon Receipt: <u>1.6°C</u> Corrected Temperature Upon Receipt: <u>2.9°C</u> Thermometer #: <u>EDXEQ238</u> Correction Factor: <u>+1.3°C</u>	Samples Intact: <u>Yes</u> No pH Checked: Yes <u>No</u> pH Adjusted: Yes <u>No</u> PFAS rec'd on ice: Yes No <u>p/A</u> Name/Lot Number of Adjustment:	2024-10-25-008 Lot/EQM Number:	

**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 :** 11:26**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
AA13508-1	20241023-D23A 596-(SB03)@11-12.5	Collected : 10/23/2024	08:40				
SAR - Calcium		10/30/2024	09:58	10.00	6.96	mEq/L	EPA 6020B
SAR - Magnesium		10/30/2024	09:58	10.00	4.69	mEq/L	EPA 6020B
SAR - Sodium		10/30/2024	09:58	10.00	5.23	mEq/L	EPA 6020B
SAR - Sodium Adsorption Ratio		10/30/2024	09:58	10.00	2.17	No Unit	EPA 6020B
Soil Conductivity		10/29/2024	16:28		1.45	mmhos/cm	0.0005 USDA 60
AA13508-2	20241023-D23A 596-(SB03)@11-12.5	Collected : 10/23/2024	08:40				
Chromium VI, Soil		10/30/2024	14:32		<0.08	mg/kg	0.080 EPA 7199
Hot Water Soluble Boron		10/30/2024	16:27		0.61	mg/kg	0.050 Boron Hot Water Extraction
pH, Soils Temperature		10/29/2024	15:33		19.6	°C	
pH, Soils		10/29/2024	15:33		8.55	SU	0.01 EPA 9045D
Total Metals, Soils - Arsenic		10/30/2024	10:22	10.00	19.38	mg/kg	0.025 EPA 6020B
Total Metals, Soils - Barium		10/30/2024	10:22	10.00	297.19	mg/kg	0.025 EPA 6020B
Total Metals, Soils - Cadmium		10/30/2024	10:22	10.00	0.44	mg/kg	0.001 EPA 6020B
Total Metals, Soils - Copper		10/30/2024	10:22	10.00	21.02	mg/kg	0.025 EPA 6020B
Total Metals, Soils - Lead		10/30/2024	10:22	10.00	16.16	mg/kg	0.025 EPA 6020B
Total Metals, Soils - Nickel		10/30/2024	10:22	10.00	15.89	mg/kg	0.025 EPA 6020B
Total Metals, Soils - Selenium		10/30/2024	10:22	10.00	3.26	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	55.81	mg/kg	0.025 EPA 6020B
AA13508-3	20241023-D23A 596-(SB03)@11-12.5	Collected : 10/23/2024	08:40				
DRO & ORO, Soil - DRO		10/31/2024	08:56		224.20	mg/kg	100.00 EPA 8015D
DRO & ORO, Soil - ORO		10/31/2024	08:56		117.41	mg/kg	100.00 EPA 8015D
Gasoline Range Organics, Soil		10/30/2024	10:27		3.26	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	0.119	mg/kg	0.010 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	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		0.025	mg/kg	0.00245 EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene		10/29/2024	15:00		0.029	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		0.11	mg/kg	0.00427 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 :** 11:26**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		0.013	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024 15:00		0.014	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024 15:00		0.12	mg/kg	0.00654	EPA 8260

AA13509-1 20241023-D23A 596-(SB03)@20-22**Collected :** 10/23/2024 09:20

SAR - Calcium	10/30/2024 09:58	10.00	2.77	mEq/L		EPA 6020B
SAR - Magnesium	10/30/2024 09:58	10.00	1.18	mEq/L		EPA 6020B
SAR - Sodium	10/30/2024 09:58	10.00	5.95	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio	10/30/2024 09:58	10.00	4.23	No Unit		EPA 6020B
Soil Conductivity	10/29/2024 16:28		0.92	mmhos/cm	0.0005	USDA 60

AA13509-2 20241023-D23A 596-(SB03)@20-22**Collected :** 10/23/2024 09:20

Chromium VI, Soil	10/30/2024 14:32		0.10	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron	10/30/2024 16:27		0.28	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature	10/29/2024 15:33		19.7	°C		
pH, Soils	10/29/2024 15:33		8.57	SU	0.01	EPA 9045D
Total Metals, Soils - Arsenic	10/30/2024 10:22	10.00	12.38	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium	10/30/2024 10:22	10.00	192.40	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium	10/30/2024 10:22	10.00	0.33	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper	10/30/2024 10:22	10.00	17.49	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead	10/30/2024 10:22	10.00	12.84	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel	10/30/2024 10:22	10.00	15.29	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium	10/30/2024 10:22	10.00	2.69	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	55.41	mg/kg	0.025	EPA 6020B

AA13509-3 20241023-D23A 596-(SB03)@20-22**Collected :** 10/23/2024 09:20

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		<0.27	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - 2-methylnaphthalene	10/29/2024 09:00		<0.010	mg/kg	0.010	EPA 8270
SVOC, Soils - Acenaphthene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Anthracene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benz(a)anthracene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(a)pyrene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Chrysene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Dibenz(a,h)anthracene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluoranthene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluorene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Naphthalene	10/29/2024 09:00		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Pyrene	10/29/2024 09:00		Not Detected	mg/kg	0.010	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 :** 11:26**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	<0.0025	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	0.0052	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene		10/29/2024	15:00	Not Detected	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024	15:00	<0.0026	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024	15:00	<0.0065	mg/kg	0.00654	EPA 8260

AA13510-1 20241023-D23A 596-(SB03)@30-32**Collected :** 10/23/2024 10:00

SAR - Calcium	10/30/2024	09:58	10.00	2.20	mEq/L		EPA 6020B
SAR - Magnesium	10/30/2024	09:58	10.00	1.03	mEq/L		EPA 6020B
SAR - Sodium	10/30/2024	09:58	10.00	6.69	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio	10/30/2024	09:58	10.00	5.26	No Unit		EPA 6020B
Soil Conductivity	10/29/2024	16:28		0.95	mmhos/cm	0.0005	USDA 60

AA13510-2 20241023-D23A 596-(SB03)@30-32**Collected :** 10/23/2024 10:00

Chromium VI, Soil	10/30/2024	14:32		<0.08	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron	10/30/2024	16:27		0.26	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature	10/29/2024	15:33		19.7	°C		
pH, Soils	10/29/2024	15:33		8.68	SU	0.01	EPA 9045D
Total Metals, Soils - Arsenic	10/30/2024	10:22	10.00	9.66	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium	10/30/2024	10:22	10.00	185.05	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium	10/30/2024	10:22	10.00	0.29	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper	10/30/2024	10:22	10.00	14.63	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead	10/30/2024	10:22	10.00	11.21	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel	10/30/2024	10:22	10.00	13.30	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium	10/30/2024	10:22	10.00	2.11	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	47.97	mg/kg	0.025	EPA 6020B

AA13510-3 20241023-D23A 596-(SB03)@30-32**Collected :** 10/23/2024 10:00

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		<0.27	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene	10/30/2024	14:45		<0.010	mg/kg	0.010	EPA 8270
SVOC, Soils - 2-methylnaphthalene	10/30/2024	14:45		<0.010	mg/kg	0.010	EPA 8270
SVOC, Soils - Acenaphthene	10/30/2024	14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Anthracene	10/30/2024	14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benz(a)anthracene	10/30/2024	14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(a)pyrene	10/30/2024	14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene	10/30/2024	14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene	10/30/2024	14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Chrysene	10/30/2024	14:45		<0.010	mg/kg	0.010	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene	10/30/2024	14:45		Not Detected	mg/kg	0.010	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 :** 11:26**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		10/30/2024 14:45		<0.010	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluorene		10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Naphthalene		10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Pyrene		10/30/2024 14:45		<0.010	mg/kg	0.010	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		<0.0043	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene		10/29/2024 15:00		Not Detected	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024 15:00		<0.0026	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024 15:00		<0.0065	mg/kg	0.00654	EPA 8260



Division of Environmental Testing

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FINAL RESULTS REPORT

Report Date : 10/31/2024

Report Time : 11:26

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
BORON-5460										
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		
CHROM_VI_SOIL-5438										
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			
ECISOIL_MMHOS-5462										
DUP	AA13508	1.51		mmhos/cm					4.0541	
LCS	AA13645	9.54		mmhos/cm	10.00		95.4			
LCS	AA13646	9.59		mmhos/cm	10.00		95.9			
GRO_SOIL-5432										
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			
PH_S-5450										
DUP	AA13508	8.50	0.01	S.U.					0.5865102639	-5 - 5
LCS	AA13571	6.90	0.01	S.U.	6.86		101	95 - 105		
LCS	AA13572	6.88	0.01	S.U.	6.86		100	95 - 105		



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FINAL RESULTS REPORT

Report Date : 10/31/2024

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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
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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**

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FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 11:26**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-5482**AA13508**

Dup	Calcium	7.41		mEq/L	7.41	6.96			6.26	
Dup	Magnesium	5.00		mEq/L	5.00	4.69			6.40	
Dup	Sodium	5.29		mEq/L	5.29	5.23			1.14	
Dup	Sodium Adsorption Ratio	2.12		mEq/L	2.12	2.17			2.33	

AA13672

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

AA13673

LCS	Calcium	9.26		ppm			92.6			
LCS	Magnesium	10.25		ppm			102			
LCS	Sodium	9.96		ppm			99.6			
LCS	Sodium Adsorption Ratio	0.54		ppm			100			

AA13674

LCS	Calcium	530.53		ppm			106			
LCS	Magnesium	542.66		ppm			109			
LCS	Sodium	527.69		ppm			106			
LCS	Sodium Adsorption Ratio	3.85		ppm			102			

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**

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FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 11:26**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**

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Aurora, CO 80045

800-440-5184

FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 11:26**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			

SVOC SOIL-5455**AA13510**

Dup	1-methylnaphthalene	0.253	0.010	mg/kg		<0.010			15.0	
Dup	2-methylnaphthalene	0.272	0.010	mg/kg		<0.010			9.79	

**Division of Environmental Testing**

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FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 11:26**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	Acenaphthene	0.234	0.010	mg/kg		Not Detected			12.4	
Dup	Acenaphthylene	Not Tested		mg/kg						
Dup	Anthracene	0.325	0.010	mg/kg		Not Detected			3.03	
Dup	Benz(a)anthracene	0.264	0.010	mg/kg		Not Detected			2.25	
Dup	Benzo(a)pyrene	0.320	0.010	mg/kg		Not Detected			1.55	
Dup	Benzo(b)fluoranthene	0.288	0.010	mg/kg		Not Detected			1.38	
Dup	Benzo(g,h,i)perylene	Not Tested		mg/kg						
Dup	Benzo(k)fluoranthene	0.273	0.010	mg/kg		Not Detected			2.17	
Dup	Chrysene	0.260	0.010	mg/kg		<0.010			0.766	
Dup	Dibenz(a,h)anthracene	0.228	0.010	mg/kg		Not Detected			<0.010	
Dup	Fluoranthene	0.318	0.010	mg/kg		<0.010			3.10	
Dup	Fluorene	0.300	0.010	mg/kg		Not Detected			8.31	
Dup	Indeno(1,2,3-cd)pyrene	0.222	0.010	mg/kg		Not Detected			0.905	
Dup	Naphthalene	0.243	0.010	mg/kg		Not Detected			12.0	
Dup	Phenanthrene	Not Tested		mg/kg						
Dup	Pyrene	0.327	0.010	mg/kg		<0.010			5.07	
Matrix Spike	1-methylnaphthalene	0.294	0.010	mg/kg	0.3	<0.010	98.0			
Matrix Spike	2-methylnaphthalene	0.300	0.010	mg/kg	0.3	<0.010	100			
Matrix Spike	Acenaphthene	0.265	0.010	mg/kg	0.3	Not Detected	88.3			
Matrix Spike	Acenaphthylene	Not Tested		mg/kg						
Matrix Spike	Anthracene	0.335	0.010	mg/kg	0.3	Not Detected	112			
Matrix Spike	Benz(a)anthracene	0.270	0.010	mg/kg	0.3	Not Detected	90.0			
Matrix Spike	Benzo(a)pyrene	0.325	0.010	mg/kg	0.3	Not Detected	108			
Matrix Spike	Benzo(b)fluoranthene	0.292	0.010	mg/kg	0.3	Not Detected	97.3			
Matrix Spike	Benzo(g,h,i)perylene	Not Tested		mg/kg						
Matrix Spike	Benzo(k)fluoranthene	0.279	0.010	mg/kg	0.3	Not Detected	93.0			
Matrix Spike	Chrysene	0.262	0.010	mg/kg	0.3	<0.010	87.3			
Matrix Spike	Dibenz(a,h)anthracene	0.228	0.010	mg/kg	0.3	Not Detected	76.0			
Matrix Spike	Fluoranthene	0.328	0.010	mg/kg	0.3	<0.010	109			
Matrix Spike	Fluorene	0.326	0.010	mg/kg	0.3	Not Detected	109			
Matrix Spike	Indeno(1,2,3-cd)pyrene	0.220	0.010	mg/kg	0.3	Not Detected	73.3			
Matrix Spike	Naphthalene	0.274	0.010	mg/kg	0.3	Not Detected	91.3			
Matrix Spike	Phenanthrene	Not Tested		mg/kg						
Matrix Spike	Pyrene	0.344	0.010	mg/kg	0.3	<0.010	115			

AA13586

MB	1-methylnaphthalene	<0.010	0.010	mg/kg
MB	2-methylnaphthalene	<0.010	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	<0.010	0.010	mg/kg
MB	Dibenz(a,h)anthracene	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 :** 11:26**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	Fluoranthene	Not Detected	0.010	mg/kg						
MB	Fluorene	Not Detected	0.010	mg/kg						
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						

AA13587

LCS	1-methylnaphthalene	0.275	0.010	mg/kg			91.7			
LCS	2-methylnaphthalene	0.284	0.010	mg/kg			94.7			
LCS	Acenaphthene	0.251	0.010	mg/kg			83.7			
LCS	Acenaphthylene	Not Tested		mg/kg						
LCS	Anthracene	0.287	0.010	mg/kg			95.7			
LCS	Benz(a)anthracene	0.259	0.010	mg/kg			86.3			
LCS	Benzo(a)pyrene	0.295	0.010	mg/kg			98.3			
LCS	Benzo(b)fluoranthene	0.288	0.010	mg/kg			96.0			
LCS	Benzo(g,h,i)perylene	0.251		mg/kg			83.7			
LCS	Benzo(k)fluoranthene	0.274	0.010	mg/kg			91.3			
LCS	Chrysene	0.266	0.010	mg/kg			88.7			
LCS	Dibenz(a,h)anthracene	0.267	0.010	mg/kg			89.0			
LCS	Fluoranthene	0.299	0.010	mg/kg			99.7			
LCS	Fluorene	0.306	0.010	mg/kg			102			
LCS	Indeno(1,2,3-cd)pyrene	0.253	0.010	mg/kg			84.3			
LCS	Naphthalene	0.258	0.010	mg/kg			86.0			
LCS	Phenanthrene	Not Tested		mg/kg						
LCS	Pyrene	0.306	0.010	mg/kg			102			

AA13588

LCS	1-methylnaphthalene	0.293	0.010	mg/kg			97.7			
LCS	2-methylnaphthalene	0.308	0.010	mg/kg			103			
LCS	Acenaphthene	0.261	0.010	mg/kg			87.0			
LCS	Acenaphthylene	Not Tested		mg/kg						
LCS	Anthracene	0.293	0.010	mg/kg			97.7			
LCS	Benz(a)anthracene	0.251	0.010	mg/kg			83.7			
LCS	Benzo(a)pyrene	0.280	0.010	mg/kg			93.3			
LCS	Benzo(b)fluoranthene	0.286	0.010	mg/kg			95.3			
LCS	Benzo(g,h,i)perylene	0.223		mg/kg			74.3			
LCS	Benzo(k)fluoranthene	0.268	0.010	mg/kg			89.3			
LCS	Chrysene	0.250	0.010	mg/kg			83.3			
LCS	Dibenz(a,h)anthracene	0.238	0.010	mg/kg			79.3			
LCS	Fluoranthene	0.297	0.010	mg/kg			99.0			
LCS	Fluorene	0.315	0.010	mg/kg			105			
LCS	Indeno(1,2,3-cd)pyrene	0.236	0.010	mg/kg			78.7			
LCS	Naphthalene	0.270	0.010	mg/kg			90.0			
LCS	Phenanthrene	Not Tested		mg/kg						
LCS	Pyrene	0.307	0.010	mg/kg			102			

VOC S-5427**AA13450**

**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 :** 11:26**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	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	
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 :** 11:26**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



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 AA13511 .

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 Storby

					Preservative				Matrix			Analysis Requested								Interim report requested	
Sample ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO ₃	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	20241023-D23A 596-(SB04)@10-12	10/23/2024	1030	4						✓		✓	✓	✓	✓	✓	✓	✓			
2	20241023-D23A 596-(SB04)@20-22	10/23/2024	1100	4						✓		✓	✓	✓	✓	✓	✓	✓			
3	20241023-D23A 596-(SB04)@26-27.5	10/23/2024	1125	4						✓		✓	✓	✓	✓	✓	✓	✓			
4	20241023-D23A 596-(SB04)@30-31.5	10/23/2024	1200	4						✓		✓	✓	✓	✓	✓	✓	✓			
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished By: Alex Storby
 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: 1.6°C
 Corrected Temperature Upon Receipt: 2.9°C
 Thermometer #: EDXFG235
 Correction Factor: +1.3°C

Samples Intact: Yes No
 pH Checked: Yes No
 pH Adjusted: Yes No
 PFAS rec'd on ice: Yes No
 Name/Lot Number of Adjustment: 2024-10-25-009
 Lot/EQM Number:

**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 :** 11:34**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
AA13511-1	20241023-D23A 596-(SB04)@10-12	Collected : 10/23/2024	10:30				
SAR - Calcium		10/30/2024	09:58	10.00	7.76	mEq/L	EPA 6020B
SAR - Magnesium		10/30/2024	09:58	10.00	3.71	mEq/L	EPA 6020B
SAR - Sodium		10/30/2024	09:58	10.00	7.79	mEq/L	EPA 6020B
SAR - Sodium Adsorption Ratio		10/30/2024	09:58	10.00	3.25	No Unit	EPA 6020B
Soil Conductivity		10/29/2024	16:28		1.80	mmhos/cm	0.0005 USDA 60
AA13511-2	20241023-D23A 596-(SB04)@10-12	Collected : 10/23/2024	10:30				
Chromium VI, Soil		10/30/2024	14:32		Not Detected	mg/kg	0.080 EPA 7199
Hot Water Soluble Boron		10/30/2024	16:27		0.73	mg/kg	0.050 Boron Hot Water Extraction
pH, Soils Temperature		10/29/2024	15:33		19.7	°C	
pH, Soils		10/29/2024	15:33		8.51	SU	0.01 EPA 9045D
Total Metals, Soils - Arsenic		10/30/2024	11:07	10.00	13.43	mg/kg	0.025 EPA 6020B
Total Metals, Soils - Barium		10/30/2024	11:07	10.00	239.54	mg/kg	0.025 EPA 6020B
Total Metals, Soils - Cadmium		10/30/2024	11:07	10.00	0.49	mg/kg	0.001 EPA 6020B
Total Metals, Soils - Copper		10/30/2024	11:07	10.00	19.52	mg/kg	0.025 EPA 6020B
Total Metals, Soils - Lead		10/30/2024	11:07	10.00	13.15	mg/kg	0.025 EPA 6020B
Total Metals, Soils - Nickel		10/30/2024	11:07	10.00	15.46	mg/kg	0.025 EPA 6020B
Total Metals, Soils - Selenium		10/30/2024	11:07	10.00	2.21	mg/kg	0.025 EPA 6020B
Total Metals, Soils - Silver		10/30/2024	11:07	10.00	<0.25 - RL1	mg/kg	0.250 EPA 6020B
Total Metals, Soils - Zinc		10/30/2024	11:07	10.00	60.44	mg/kg	0.025 EPA 6020B
AA13511-3	20241023-D23A 596-(SB04)@10-12	Collected : 10/23/2024	10:30				
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		<0.27	mg/kg	0.26827 EPA 8260
SVOC, Soils - 1-methylnaphthalene		10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100 EPA 8270
SVOC, Soils - 2-methylnaphthalene		10/30/2024	14:45	10.00	<0.010	mg/kg	0.010 EPA 8270
SVOC, Soils - Acenaphthene		10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100 EPA 8270
SVOC, Soils - Anthracene		10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100 EPA 8270
SVOC, Soils - Benz(a)anthracene		10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100 EPA 8270
SVOC, Soils - Benzo(a)pyrene		10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100 EPA 8270
SVOC, Soils - Benzo(b)fluoranthene		10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100 EPA 8270
SVOC, Soils - Benzo(k)fluoranthene		10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100 EPA 8270
SVOC, Soils - Chrysene		10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100 EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene		10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100 EPA 8270
SVOC, Soils - Fluoranthene		10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100 EPA 8270
SVOC, Soils - Fluorene		10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100 EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100 EPA 8270
SVOC, Soils - Naphthalene		10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100 EPA 8270
SVOC, Soils - Pyrene		10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100 EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene		10/29/2024	15:00		0.0039	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		<0.0024	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		<0.0043	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 :** 11:34**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		Not Detected	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024 15:00		<0.0026	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024 15:00		<0.0065	mg/kg	0.00654	EPA 8260

AA13512-1 20241023-D23A 596-(SB04)@20-22**Collected :** 10/23/2024 11:00

SAR - Calcium	10/30/2024 09:58	10.00	42.85	mEq/L		EPA 6020B
SAR - Magnesium	10/30/2024 09:58	10.00	32.79	mEq/L		EPA 6020B
SAR - Sodium	10/30/2024 09:58	10.00	23.13	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio	10/30/2024 09:58	10.00	3.76	No Unit		EPA 6020B
Soil Conductivity	10/29/2024 16:28		8.30	mmhos/cm	0.0005	USDA 60

AA13512-2 20241023-D23A 596-(SB04)@20-22**Collected :** 10/23/2024 11:00

Chromium VI, Soil	10/30/2024 14:32		Not Detected	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron	10/30/2024 16:27		0.43	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature	10/29/2024 15:33		19.8	°C		
pH, Soils	10/29/2024 15:33		8.27	SU	0.01	EPA 9045D
Total Metals, Soils - Arsenic	10/30/2024 11:07	10.00	13.72	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium	10/30/2024 11:07	10.00	229.71	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium	10/30/2024 11:07	10.00	0.59	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper	10/30/2024 11:07	10.00	17.31	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead	10/30/2024 11:07	10.00	12.18	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel	10/30/2024 11:07	10.00	17.72	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium	10/30/2024 11:07	10.00	2.77	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver	10/30/2024 11:07	10.00	<0.25 - RL1	mg/kg	0.250	EPA 6020B
Total Metals, Soils - Zinc	10/30/2024 11:07	10.00	59.64	mg/kg	0.025	EPA 6020B

AA13512-3 20241023-D23A 596-(SB04)@20-22**Collected :** 10/23/2024 11:00

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		<0.27	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene	10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - 2-methylnaphthalene	10/30/2024 14:45		<0.010	mg/kg	0.010	EPA 8270
SVOC, Soils - Acenaphthene	10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Anthracene	10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benz(a)anthracene	10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(a)pyrene	10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene	10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene	10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Chrysene	10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Dibenz(a,h)anthracene	10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluoranthene	10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluorene	10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene	10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Naphthalene	10/30/2024 14:45		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Pyrene	10/30/2024 14:45		Not Detected	mg/kg	0.010	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 :** 11:34**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	Not Detected	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene		10/29/2024	15:00	Not Detected	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	<0.0043	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene		10/29/2024	15:00	Not Detected	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024	15:00	<0.0026	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024	15:00	<0.0065	mg/kg	0.00654	EPA 8260

AA13513-1 20241023-D23A 596-(SB04)@26-27.5**Collected :** 10/23/2024 11:25

SAR - Calcium	10/30/2024	09:58	10.00	20.62	mEq/L		EPA 6020B
SAR - Magnesium	10/30/2024	09:58	10.00	16.25	mEq/L		EPA 6020B
SAR - Sodium	10/30/2024	09:58	10.00	13.57	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio	10/30/2024	09:58	10.00	3.16	No Unit		EPA 6020B
Soil Conductivity	10/29/2024	16:28		4.32	mmhos/cm	0.0005	USDA 60

AA13513-2 20241023-D23A 596-(SB04)@26-27.5**Collected :** 10/23/2024 11:25

Chromium VI, Soil	10/30/2024	14:32		Not Detected	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron	10/30/2024	16:27		0.59	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature	10/29/2024	15:33		19.7	°C		
pH, Soils	10/29/2024	15:33		8.43	SU	0.01	EPA 9045D
Total Metals, Soils - Arsenic	10/30/2024	11:07	10.00	14.95	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium	10/30/2024	11:07	10.00	237.59	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium	10/30/2024	11:07	10.00	0.44	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper	10/30/2024	11:07	10.00	13.52	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead	10/30/2024	11:07	10.00	8.35	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel	10/30/2024	11:07	10.00	12.57	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium	10/30/2024	11:07	10.00	2.16	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver	10/30/2024	11:07	10.00	<0.25 - RL1	mg/kg	0.250	EPA 6020B
Total Metals, Soils - Zinc	10/30/2024	11:07	10.00	48.06	mg/kg	0.025	EPA 6020B

AA13513-3 20241023-D23A 596-(SB04)@26-27.5**Collected :** 10/23/2024 11:25

DRO & ORO, Soil - DRO	10/31/2024	08:56		249.27	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO	10/31/2024	08:56		153.36	mg/kg	100.00	EPA 8015D
Gasoline Range Organics, Soil	10/30/2024	10:27		3.27	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene	10/30/2024	14:45	10.00	<0.100 - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - 2-methylnaphthalene	10/30/2024	14:45	10.00	0.109	mg/kg	0.010	EPA 8270
SVOC, Soils - Acenaphthene	10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Anthracene	10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benz(a)anthracene	10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(a)pyrene	10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene	10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene	10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Chrysene	10/30/2024	14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Dibenz(a,h)anthracene	10/30/2024	14:45	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 :** 11:34**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		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Fluorene		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Naphthalene		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Pyrene		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene		10/29/2024 16:39		<0.0025	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene		10/29/2024 16:39		<0.0050	mg/kg	0.005	EPA 8260
VOC, Soils - Benzene		10/29/2024 16:39		0.0026	mg/kg	0.00242	EPA 8260
VOC, Soils - Ethylbenzene		10/29/2024 16:39		<0.0050	mg/kg	0.005	EPA 8260
VOC, Soils - m&p- xylene		10/29/2024 16:39		0.013	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene		10/29/2024 16:39		0.0023	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024 16:39		0.015	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024 16:39		0.015	mg/kg	0.00654	EPA 8260

AA13514-1 20241023-D23A 596-(SB04)@30-31.5**Collected :** 10/23/2024 12:00

SAR - Calcium	10/30/2024 09:58	10.00	15.85	mEq/L		EPA 6020B
SAR - Magnesium	10/30/2024 09:58	10.00	13.35	mEq/L		EPA 6020B
SAR - Sodium	10/30/2024 09:58	10.00	8.47	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio	10/30/2024 09:58	10.00	2.22	No Unit		EPA 6020B
Soil Conductivity	10/29/2024 16:28		3.14	mmhos/cm	0.0005	USDA 60

AA13514-2 20241023-D23A 596-(SB04)@30-31.5**Collected :** 10/23/2024 12:00

Chromium VI, Soil	10/30/2024 14:32		Not Detected	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron	10/30/2024 16:27		0.45	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature	10/29/2024 15:33		19.8	°C		
pH, Soils	10/29/2024 15:33		8.54	SU	0.01	EPA 9045D
Total Metals, Soils - Arsenic	10/30/2024 11:07	10.00	15.42	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium	10/30/2024 11:07	10.00	202.56	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium	10/30/2024 11:07	10.00	0.41	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper	10/30/2024 11:07	10.00	16.91	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead	10/30/2024 11:07	10.00	10.28	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel	10/30/2024 11:07	10.00	12.83	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium	10/30/2024 11:07	10.00	1.57	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver	10/30/2024 11:07	10.00	<0.25 - RL1	mg/kg	0.250	EPA 6020B
Total Metals, Soils - Zinc	10/30/2024 11:07	10.00	42.65	mg/kg	0.025	EPA 6020B

AA13514-3 20241023-D23A 596-(SB04)@30-31.5**Collected :** 10/23/2024 12:00

DRO & ORO, Soil - DRO	10/31/2024 08:56		126.50	mg/kg	100.00	EPA 8015D
DRO & ORO, Soil - ORO	10/31/2024 08:56		<100.00	mg/kg	100.00	EPA 8015D
Gasoline Range Organics, Soil	10/30/2024 10:27		1.86	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene	10/30/2024 14:45	10.00	<0.100 - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - 2-methylnaphthalene	10/30/2024 14:45	10.00	<0.100 - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Acenaphthene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Anthracene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benz(a)anthracene	10/30/2024 14:45	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 :** 11:34**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 - Benzo(a)pyrene		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Chrysene		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Fluoranthene		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Fluorene		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Naphthalene		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Pyrene		10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene		10/29/2024 16:39		<0.0025	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene		10/29/2024 16:39		<0.0050	mg/kg	0.005	EPA 8260
VOC, Soils - Benzene		10/29/2024 16:39		0.0036	mg/kg	0.00242	EPA 8260
VOC, Soils - Ethylbenzene		10/29/2024 16:39		0.0051	mg/kg	0.005	EPA 8260
VOC, Soils - m&p- xylene		10/29/2024 16:39		0.016	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene		10/29/2024 16:39		0.0025	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024 16:39		0.0021	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024 16:39		0.019	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 :** 11:34**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
BORON-5460										
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		
CHROM_VI_SOIL-5438										
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			
ECISOIL_MMHOS-5462										
DUP	AA13508	1.51		mmhos/cm					4.0541	
LCS	AA13645	9.54		mmhos/cm	10.00		95.4			
LCS	AA13646	9.59		mmhos/cm	10.00		95.9			
GRO_SOIL-5432										
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			
PH_S-5450										
DUP	AA13508	8.50	0.01	S.U.					0.5865102639	-5 - 5
LCS	AA13571	6.90	0.01	S.U.	6.86		101	95 - 105		
LCS	AA13572	6.88	0.01	S.U.	6.86		100	95 - 105		

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FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 11:34**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

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FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 11:34**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-5482**AA13508**

Dup	Calcium	7.41		mEq/L	7.41	6.96			6.26	
Dup	Magnesium	5.00		mEq/L	5.00	4.69			6.40	
Dup	Sodium	5.29		mEq/L	5.29	5.23			1.14	
Dup	Sodium Adsorption Ratio	2.12		mEq/L	2.12	2.17			2.33	

AA13672

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

AA13673

LCS	Calcium	9.26		ppm			92.6			
LCS	Magnesium	10.25		ppm			102			
LCS	Sodium	9.96		ppm			99.6			
LCS	Sodium Adsorption Ratio	0.54		ppm			100			

AA13674

LCS	Calcium	530.53		ppm			106			
LCS	Magnesium	542.66		ppm			109			
LCS	Sodium	527.69		ppm			106			
LCS	Sodium Adsorption Ratio	3.85		ppm			102			

SVOC SOIL-5455**AA13510**

Dup	1-methylnaphthalene	0.253	0.010	mg/kg		<0.010			15.0	
Dup	2-methylnaphthalene	0.272	0.010	mg/kg		<0.010			9.79	
Dup	Acenaphthene	0.234	0.010	mg/kg		Not Detected			12.4	
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 :** 11:34**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	0.325	0.010	mg/kg		Not Detected			3.03	
Dup	Benz(a)anthracene	0.264	0.010	mg/kg		Not Detected			2.25	
Dup	Benzo(a)pyrene	0.320	0.010	mg/kg		Not Detected			1.55	
Dup	Benzo(b)fluoranthene	0.288	0.010	mg/kg		Not Detected			1.38	
Dup	Benzo(g,h,i)perylene	Not Tested		mg/kg						
Dup	Benzo(k)fluoranthene	0.273	0.010	mg/kg		Not Detected			2.17	
Dup	Chrysene	0.260	0.010	mg/kg		<0.010			0.766	
Dup	Dibenz(a,h)anthracene	0.228	0.010	mg/kg		Not Detected			<0.010	
Dup	Fluoranthene	0.318	0.010	mg/kg		<0.010			3.10	
Dup	Fluorene	0.300	0.010	mg/kg		Not Detected			8.31	
Dup	Indeno(1,2,3-cd)pyrene	0.222	0.010	mg/kg		Not Detected			0.905	
Dup	Naphthalene	0.243	0.010	mg/kg		Not Detected			12.0	
Dup	Phenanthrene	Not Tested		mg/kg						
Dup	Pyrene	0.327	0.010	mg/kg		<0.010			5.07	
Matrix Spike	1-methylnaphthalene	0.294	0.010	mg/kg	0.3	<0.010	98.0			
Matrix Spike	2-methylnaphthalene	0.300	0.010	mg/kg	0.3	<0.010	100			
Matrix Spike	Acenaphthene	0.265	0.010	mg/kg	0.3	Not Detected	88.3			
Matrix Spike	Acenaphthylene	Not Tested		mg/kg						
Matrix Spike	Anthracene	0.335	0.010	mg/kg	0.3	Not Detected	112			
Matrix Spike	Benz(a)anthracene	0.270	0.010	mg/kg	0.3	Not Detected	90.0			
Matrix Spike	Benzo(a)pyrene	0.325	0.010	mg/kg	0.3	Not Detected	108			
Matrix Spike	Benzo(b)fluoranthene	0.292	0.010	mg/kg	0.3	Not Detected	97.3			
Matrix Spike	Benzo(g,h,i)perylene	Not Tested		mg/kg						
Matrix Spike	Benzo(k)fluoranthene	0.279	0.010	mg/kg	0.3	Not Detected	93.0			
Matrix Spike	Chrysene	0.262	0.010	mg/kg	0.3	<0.010	87.3			
Matrix Spike	Dibenz(a,h)anthracene	0.228	0.010	mg/kg	0.3	Not Detected	76.0			
Matrix Spike	Fluoranthene	0.328	0.010	mg/kg	0.3	<0.010	109			
Matrix Spike	Fluorene	0.326	0.010	mg/kg	0.3	Not Detected	109			
Matrix Spike	Indeno(1,2,3-cd)pyrene	0.220	0.010	mg/kg	0.3	Not Detected	73.3			
Matrix Spike	Naphthalene	0.274	0.010	mg/kg	0.3	Not Detected	91.3			
Matrix Spike	Phenanthrene	Not Tested		mg/kg						
Matrix Spike	Pyrene	0.344	0.010	mg/kg	0.3	<0.010	115			

AA13586

MB	1-methylnaphthalene	<0.010	0.010	mg/kg
MB	2-methylnaphthalene	<0.010	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	<0.010	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 :** 11:34**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						

AA13587

LCS	1-methylnaphthalene	0.275	0.010	mg/kg			91.7			
LCS	2-methylnaphthalene	0.284	0.010	mg/kg			94.7			
LCS	Acenaphthene	0.251	0.010	mg/kg			83.7			
LCS	Acenaphthylene	Not Tested		mg/kg						
LCS	Anthracene	0.287	0.010	mg/kg			95.7			
LCS	Benz(a)anthracene	0.259	0.010	mg/kg			86.3			
LCS	Benzo(a)pyrene	0.295	0.010	mg/kg			98.3			
LCS	Benzo(b)fluoranthene	0.288	0.010	mg/kg			96.0			
LCS	Benzo(g,h,i)perylene	0.251		mg/kg			83.7			
LCS	Benzo(k)fluoranthene	0.274	0.010	mg/kg			91.3			
LCS	Chrysene	0.266	0.010	mg/kg			88.7			
LCS	Dibenz(a,h)anthracene	0.267	0.010	mg/kg			89.0			
LCS	Fluoranthene	0.299	0.010	mg/kg			99.7			
LCS	Fluorene	0.306	0.010	mg/kg			102			
LCS	Indeno(1,2,3-cd)pyrene	0.253	0.010	mg/kg			84.3			
LCS	Naphthalene	0.258	0.010	mg/kg			86.0			
LCS	Phenanthrene	Not Tested		mg/kg						
LCS	Pyrene	0.306	0.010	mg/kg			102			

AA13588

LCS	1-methylnaphthalene	0.293	0.010	mg/kg			97.7			
LCS	2-methylnaphthalene	0.308	0.010	mg/kg			103			
LCS	Acenaphthene	0.261	0.010	mg/kg			87.0			
LCS	Acenaphthylene	Not Tested		mg/kg						
LCS	Anthracene	0.293	0.010	mg/kg			97.7			
LCS	Benz(a)anthracene	0.251	0.010	mg/kg			83.7			
LCS	Benzo(a)pyrene	0.280	0.010	mg/kg			93.3			
LCS	Benzo(b)fluoranthene	0.286	0.010	mg/kg			95.3			
LCS	Benzo(g,h,i)perylene	0.223		mg/kg			74.3			
LCS	Benzo(k)fluoranthene	0.268	0.010	mg/kg			89.3			
LCS	Chrysene	0.250	0.010	mg/kg			83.3			
LCS	Dibenz(a,h)anthracene	0.238	0.010	mg/kg			79.3			
LCS	Fluoranthene	0.297	0.010	mg/kg			99.0			
LCS	Fluorene	0.315	0.010	mg/kg			105			
LCS	Indeno(1,2,3-cd)pyrene	0.236	0.010	mg/kg			78.7			
LCS	Naphthalene	0.270	0.010	mg/kg			90.0			
LCS	Phenanthrene	Not Tested		mg/kg						
LCS	Pyrene	0.307	0.010	mg/kg			102			

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 :** 11:34**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 :** 11:34**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



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 AA13515 .

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 Storby

					Preservative				Matrix			Analysis Requested							Interim report requested			
Sample ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO ₃	None	Other	Water	Soil	Other	Table 915-1 VOC's	TPH (ORO, GRO, DRO)	Table 915-1 Metal's	Table 915-1 PAH's	pH, EC, SAR	Boron (Hot Water Soluble Soil)	CR6IC	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Notes		
1	20241023-D23A 596-(SB05)@10-12	10/23/2024	1235	4						✓		✓	✓	✓	✓	✓	✓	✓				
2	20241023-D23A 596-(SB05)@20-22	10/23/2024	1300	4						✓		✓	✓	✓	✓	✓	✓	✓				
3	20241023-D23A 596-(SB05)@30-32	10/23/2024	1340	4						✓		✓	✓	✓	✓	✓	✓	✓				
4																						
5																						
6																						
7																						
8																						
9	AA13816-1	AA13816-1	AA13817-1																			
10																						

Relinquished By: Alex Storby
 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: 0.74°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
 Name/Lot Number of Adjustment: _____

2024-10-25-010

Lot/EQM Number:

N/A

Dentry error sat 10.25.2024

**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 :** 18:48**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
AA13515-1	20241023-D23A 596-(SB05)@10-12	Collected : 10/23/2024	12:35				
SAR - Calcium		10/30/2024	09:58 10.00	8.33	mEq/L		EPA 6020B
SAR - Magnesium		10/30/2024	09:58 10.00	5.77	mEq/L		EPA 6020B
SAR - Sodium		10/30/2024	09:58 10.00	12.93	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio		10/30/2024	09:58 10.00	4.87	No Unit		EPA 6020B
Soil Conductivity		10/29/2024	16:28	2.15	mmhos/cm	0.0005	USDA 60
AA13515-2	20241023-D23A 596-(SB05)@10-12	Collected : 10/23/2024	12:35				
Chromium VI, Soil		10/30/2024	14:32	Not Detected	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron		10/30/2024	16:27	0.31	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature		10/29/2024	15:33	19.7	°C		
pH, Soils		10/29/2024	15:33	8.43	SU	0.01	EPA 9045D
Total Metals, Soils - Arsenic		10/30/2024	11:07 10.00	15.44	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium		10/30/2024	11:07 10.00	248.72	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium		10/30/2024	11:07 10.00	0.51	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper		10/30/2024	11:07 10.00	22.27	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead		10/30/2024	11:07 10.00	15.79	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel		10/30/2024	11:07 10.00	16.26	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium		10/30/2024	11:07 10.00	2.58	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver		10/30/2024	11:07 10.00	<0.25 - RL1	mg/kg	0.250	EPA 6020B
Total Metals, Soils - Zinc		10/30/2024	11:07 10.00	59.31	mg/kg	0.025	EPA 6020B
AA13515-3	20241023-D23A 596-(SB05)@10-12	Collected : 10/23/2024	12:35				
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	<0.27	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - 2-methylnaphthalene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Acenaphthene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Anthracene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benz(a)anthracene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(a)pyrene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Chrysene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Fluoranthene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Fluorene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Naphthalene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Pyrene		10/30/2024	14:45 10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene		10/29/2024	16:39	Not Detected	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene		10/29/2024	16:39	Not Detected	mg/kg	0.005	EPA 8260
VOC, Soils - Benzene		10/29/2024	16:39	Not Detected	mg/kg	0.00242	EPA 8260
VOC, Soils - Ethylbenzene		10/29/2024	16:39	<0.0050	mg/kg	0.005	EPA 8260
VOC, Soils - m&p- xylene		10/29/2024	16:39	<0.0043	mg/kg	0.00427	EPA 8260

**Division of Environmental Testing**

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Aurora, CO 80045

800-440-5184

FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 18:48**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 16:39		Not Detected	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024 16:39		<0.0026	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024 16:39		<0.0065	mg/kg	0.00654	EPA 8260

AA13516-1 20241023-D23A 596-(SB05)@20-22**Collected :** 10/23/2024 13:00

SAR - Calcium	10/30/2024 09:58	10.00	59.38	mEq/L		EPA 6020B
SAR - Magnesium	10/30/2024 09:58	10.00	30.39	mEq/L		EPA 6020B
SAR - Sodium	10/30/2024 09:58	10.00	21.01	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio	10/30/2024 09:58	10.00	3.14	No Unit		EPA 6020B
Soil Conductivity	10/29/2024 16:28	8.23	mmhos/cm	0.0005		USDA 60

AA13516-2 20241023-D23A 596-(SB05)@20-22**Collected :** 10/23/2024 13:00

Chromium VI, Soil	10/30/2024 14:32	<0.08	mg/kg	0.080		EPA 7199
Hot Water Soluble Boron	10/30/2024 16:27	0.40	mg/kg	0.050		Boron Hot Water Extraction
pH, Soils Temperature	10/29/2024 15:33	19.7	°C			
pH, Soils	10/29/2024 15:33	7.89	SU	0.01		EPA 9045D
Total Metals, Soils - Arsenic	10/30/2024 11:07	10.00	14.83	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium	10/30/2024 11:07	10.00	183.06	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium	10/30/2024 11:07	10.00	0.45	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper	10/30/2024 11:07	10.00	23.23	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead	10/30/2024 11:07	10.00	13.94	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel	10/30/2024 11:07	10.00	17.77	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium	10/30/2024 11:07	10.00	2.47	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver	10/30/2024 11:07	10.00	<0.25 - RL1	mg/kg	0.250	EPA 6020B
Total Metals, Soils - Zinc	10/30/2024 11:07	10.00	69.91	mg/kg	0.025	EPA 6020B

AA13516-3 20241023-D23A 596-(SB05)@20-22**Collected :** 10/23/2024 13:00

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	<0.27	mg/kg	0.26827		EPA 8260
SVOC, Soils - 1-methylnaphthalene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - 2-methylnaphthalene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Acenaphthene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Anthracene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benz(a)anthracene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(a)pyrene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Chrysene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Dibenz(a,h)anthracene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Fluoranthene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Fluorene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Naphthalene	10/30/2024 14:45	10.00	Not Detected - RL1	mg/kg	0.100	EPA 8270
SVOC, Soils - Pyrene	10/30/2024 14:45	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 :** 18:48**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 16:39		Not Detected	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene		10/29/2024 16:39		Not Detected	mg/kg	0.005	EPA 8260
VOC, Soils - Benzene		10/29/2024 16:39		Not Detected	mg/kg	0.00242	EPA 8260
VOC, Soils - Ethylbenzene		10/29/2024 16:39		Not Detected	mg/kg	0.005	EPA 8260
VOC, Soils - m&p- xylene		10/29/2024 16:39		<0.0043	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene		10/29/2024 16:39		Not Detected	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024 16:39		<0.0026	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024 16:39		<0.0065	mg/kg	0.00654	EPA 8260

AA13517-1 20241023-D23A 596-(SB05)@30-32**Collected :** 10/23/2024 13:40

SAR - Calcium	10/30/2024 09:58	10.00	14.66	mEq/L		EPA 6020B
SAR - Magnesium	10/30/2024 09:58	10.00	9.61	mEq/L		EPA 6020B
SAR - Sodium	10/30/2024 09:58	10.00	7.24	mEq/L		EPA 6020B
SAR - Sodium Adsorption Ratio	10/30/2024 09:58	10.00	2.08	No Unit		EPA 6020B
Soil Conductivity	10/29/2024 16:28		2.59	mmhos/cm	0.0005	USDA 60

AA13517-2 20241023-D23A 596-(SB05)@30-32**Collected :** 10/23/2024 13:40

Chromium VI, Soil	10/30/2024 14:32		Not Detected	mg/kg	0.080	EPA 7199
Hot Water Soluble Boron	10/30/2024 16:27		0.29	mg/kg	0.050	Boron Hot Water Extraction
pH, Soils Temperature	10/29/2024 15:33		19.6	°C		
pH, Soils	10/29/2024 15:33		8.35	SU	0.01	EPA 9045D
Total Metals, Soils - Arsenic	10/30/2024 11:07	10.00	21.48	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Barium	10/30/2024 11:07	10.00	268.05	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Cadmium	10/30/2024 11:07	10.00	0.48	mg/kg	0.001	EPA 6020B
Total Metals, Soils - Copper	10/30/2024 11:07	10.00	21.61	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Lead	10/30/2024 11:07	10.00	15.51	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Nickel	10/30/2024 11:07	10.00	20.87	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Selenium	10/30/2024 11:07	10.00	3.02	mg/kg	0.025	EPA 6020B
Total Metals, Soils - Silver	10/30/2024 11:07	10.00	<0.25 - RL1	mg/kg	0.250	EPA 6020B
Total Metals, Soils - Zinc	10/30/2024 11:07	10.00	60.10	mg/kg	0.025	EPA 6020B

AA13517-3 20241023-D23A 596-(SB05)@30-32**Collected :** 10/23/2024 13:40

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		<0.27	mg/kg	0.26827	EPA 8260
SVOC, Soils - 1-methylnaphthalene	10/31/2024 09:40		<0.010	mg/kg	0.010	EPA 8270
SVOC, Soils - 2-methylnaphthalene	10/31/2024 09:40		<0.010	mg/kg	0.010	EPA 8270
SVOC, Soils - Acenaphthene	10/31/2024 09:40		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Anthracene	10/31/2024 09:40		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benz(a)anthracene	10/31/2024 09:40		<0.010	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(a)pyrene	10/31/2024 09:40		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(b)fluoranthene	10/31/2024 09:40		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Benzo(k)fluoranthene	10/31/2024 09:40		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Chrysene	10/31/2024 09:40		<0.010	mg/kg	0.010	EPA 8270
SVOC, Soils - Dibenzo(a,h)anthracene	10/31/2024 09:40		Not Detected	mg/kg	0.010	EPA 8270

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FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 18:48**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		10/31/2024	09:40		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Fluorene		10/31/2024	09:40		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Indeno(1,2,3-cd)pyrene		10/31/2024	09:40		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Naphthalene		10/31/2024	09:40		Not Detected	mg/kg	0.010	EPA 8270
SVOC, Soils - Pyrene		10/31/2024	09:40		Not Detected	mg/kg	0.010	EPA 8270
VOC, Soils - 1,2,4-trimethylbenzene		10/29/2024	16:39		Not Detected	mg/kg	0.00245	EPA 8260
VOC, Soils - 1,3,5-trimethylbenzene		10/29/2024	16:39		Not Detected	mg/kg	0.005	EPA 8260
VOC, Soils - Benzene		10/29/2024	16:39		<0.0024	mg/kg	0.00242	EPA 8260
VOC, Soils - Ethylbenzene		10/29/2024	16:39		Not Detected	mg/kg	0.005	EPA 8260
VOC, Soils - m&p- xylene		10/29/2024	16:39		<0.0043	mg/kg	0.00427	EPA 8260
VOC, Soils - o-xylene		10/29/2024	16:39		Not Detected	mg/kg	0.00227	EPA 8260
VOC, Soils - Toluene		10/29/2024	16:39		<0.0026	mg/kg	0.00263	EPA 8260
VOC, Soils - Xylenes, total		10/29/2024	16:39		<0.0065	mg/kg	0.00654	EPA 8260

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FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 18:48**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
BORON-5460										
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		
CHROM_VI_SOIL-5438										
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			
ECISOIL_MMHOS-5462										
DUP	AA13508	1.51		mmhos/cm					4.0541	
LCS	AA13645	9.54		mmhos/cm	10.00		95.4			
LCS	AA13646	9.59		mmhos/cm	10.00		95.9			
GRO_SOIL-5432										
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			
PH_S-5450										
DUP	AA13508	8.50	0.01	S.U.					0.5865102639	-5 - 5
LCS	AA13571	6.90	0.01	S.U.	6.86		101	95 - 105		
LCS	AA13572	6.88	0.01	S.U.	6.86		100	95 - 105		

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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										

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FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 18:48**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-5482**AA13508**

Dup	Calcium	7.41		mEq/L	7.41	6.96			6.26	
Dup	Magnesium	5.00		mEq/L	5.00	4.69			6.40	
Dup	Sodium	5.29		mEq/L	5.29	5.23			1.14	
Dup	Sodium Adsorption Ratio	2.12		mEq/L	2.12	2.17			2.33	

AA13672

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

AA13673

LCS	Calcium	9.26		ppm			92.6			
LCS	Magnesium	10.25		ppm			102			
LCS	Sodium	9.96		ppm			99.6			
LCS	Sodium Adsorption Ratio	0.54		ppm			100			

AA13674

LCS	Calcium	530.53		ppm			106			
LCS	Magnesium	542.66		ppm			109			
LCS	Sodium	527.69		ppm			106			
LCS	Sodium Adsorption Ratio	3.85		ppm			102			

SVOC SOIL-5455**AA13510**

Dup	1-methylnaphthalene	0.253	0.010	mg/kg		<0.010			15.0	
Dup	2-methylnaphthalene	0.272	0.010	mg/kg		<0.010			9.79	
Dup	Acenaphthene	0.234	0.010	mg/kg		Not Detected			12.4	
Dup	Acenaphthylene	Not Tested		mg/kg						

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FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 18:48**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	0.325	0.010	mg/kg		Not Detected			3.03	
Dup	Benz(a)anthracene	0.264	0.010	mg/kg		Not Detected			2.25	
Dup	Benzo(a)pyrene	0.320	0.010	mg/kg		Not Detected			1.55	
Dup	Benzo(b)fluoranthene	0.288	0.010	mg/kg		Not Detected			1.38	
Dup	Benzo(g,h,i)perylene	Not Tested		mg/kg						
Dup	Benzo(k)fluoranthene	0.273	0.010	mg/kg		Not Detected			2.17	
Dup	Chrysene	0.260	0.010	mg/kg		<0.010			0.766	
Dup	Dibenz(a,h)anthracene	0.228	0.010	mg/kg		Not Detected			<0.010	
Dup	Fluoranthene	0.318	0.010	mg/kg		<0.010			3.10	
Dup	Fluorene	0.300	0.010	mg/kg		Not Detected			8.31	
Dup	Indeno(1,2,3-cd)pyrene	0.222	0.010	mg/kg		Not Detected			0.905	
Dup	Naphthalene	0.243	0.010	mg/kg		Not Detected			12.0	
Dup	Phenanthrene	Not Tested		mg/kg						
Dup	Pyrene	0.327	0.010	mg/kg		<0.010			5.07	
Matrix Spike	1-methylnaphthalene	0.294	0.010	mg/kg	0.3	<0.010	98.0			
Matrix Spike	2-methylnaphthalene	0.300	0.010	mg/kg	0.3	<0.010	100			
Matrix Spike	Acenaphthene	0.265	0.010	mg/kg	0.3	Not Detected	88.3			
Matrix Spike	Acenaphthylene	Not Tested		mg/kg						
Matrix Spike	Anthracene	0.335	0.010	mg/kg	0.3	Not Detected	112			
Matrix Spike	Benz(a)anthracene	0.270	0.010	mg/kg	0.3	Not Detected	90.0			
Matrix Spike	Benzo(a)pyrene	0.325	0.010	mg/kg	0.3	Not Detected	108			
Matrix Spike	Benzo(b)fluoranthene	0.292	0.010	mg/kg	0.3	Not Detected	97.3			
Matrix Spike	Benzo(g,h,i)perylene	Not Tested		mg/kg						
Matrix Spike	Benzo(k)fluoranthene	0.279	0.010	mg/kg	0.3	Not Detected	93.0			
Matrix Spike	Chrysene	0.262	0.010	mg/kg	0.3	<0.010	87.3			
Matrix Spike	Dibenz(a,h)anthracene	0.228	0.010	mg/kg	0.3	Not Detected	76.0			
Matrix Spike	Fluoranthene	0.328	0.010	mg/kg	0.3	<0.010	109			
Matrix Spike	Fluorene	0.326	0.010	mg/kg	0.3	Not Detected	109			
Matrix Spike	Indeno(1,2,3-cd)pyrene	0.220	0.010	mg/kg	0.3	Not Detected	73.3			
Matrix Spike	Naphthalene	0.274	0.010	mg/kg	0.3	Not Detected	91.3			
Matrix Spike	Phenanthrene	Not Tested		mg/kg						
Matrix Spike	Pyrene	0.344	0.010	mg/kg	0.3	<0.010	115			

AA13586

MB	1-methylnaphthalene	<0.010	0.010	mg/kg						
MB	2-methylnaphthalene	<0.010	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	<0.010	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 :** 18:48**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						

AA13587

LCS	1-methylnaphthalene	0.275	0.010	mg/kg			91.7			
LCS	2-methylnaphthalene	0.284	0.010	mg/kg			94.7			
LCS	Acenaphthene	0.251	0.010	mg/kg			83.7			
LCS	Acenaphthylene	Not Tested		mg/kg						
LCS	Anthracene	0.287	0.010	mg/kg			95.7			
LCS	Benz(a)anthracene	0.259	0.010	mg/kg			86.3			
LCS	Benzo(a)pyrene	0.295	0.010	mg/kg			98.3			
LCS	Benzo(b)fluoranthene	0.288	0.010	mg/kg			96.0			
LCS	Benzo(g,h,i)perylene	0.251		mg/kg			83.7			
LCS	Benzo(k)fluoranthene	0.274	0.010	mg/kg			91.3			
LCS	Chrysene	0.266	0.010	mg/kg			88.7			
LCS	Dibenz(a,h)anthracene	0.267	0.010	mg/kg			89.0			
LCS	Fluoranthene	0.299	0.010	mg/kg			99.7			
LCS	Fluorene	0.306	0.010	mg/kg			102			
LCS	Indeno(1,2,3-cd)pyrene	0.253	0.010	mg/kg			84.3			
LCS	Naphthalene	0.258	0.010	mg/kg			86.0			
LCS	Phenanthrene	Not Tested		mg/kg						
LCS	Pyrene	0.306	0.010	mg/kg			102			

AA13588

LCS	1-methylnaphthalene	0.293	0.010	mg/kg			97.7			
LCS	2-methylnaphthalene	0.308	0.010	mg/kg			103			
LCS	Acenaphthene	0.261	0.010	mg/kg			87.0			
LCS	Acenaphthylene	Not Tested		mg/kg						
LCS	Anthracene	0.293	0.010	mg/kg			97.7			
LCS	Benz(a)anthracene	0.251	0.010	mg/kg			83.7			
LCS	Benzo(a)pyrene	0.280	0.010	mg/kg			93.3			
LCS	Benzo(b)fluoranthene	0.286	0.010	mg/kg			95.3			
LCS	Benzo(g,h,i)perylene	0.223		mg/kg			74.3			
LCS	Benzo(k)fluoranthene	0.268	0.010	mg/kg			89.3			
LCS	Chrysene	0.250	0.010	mg/kg			83.3			
LCS	Dibenz(a,h)anthracene	0.238	0.010	mg/kg			79.3			
LCS	Fluoranthene	0.297	0.010	mg/kg			99.0			
LCS	Fluorene	0.315	0.010	mg/kg			105			
LCS	Indeno(1,2,3-cd)pyrene	0.236	0.010	mg/kg			78.7			
LCS	Naphthalene	0.270	0.010	mg/kg			90.0			
LCS	Phenanthrene	Not Tested		mg/kg						
LCS	Pyrene	0.307	0.010	mg/kg			102			

SVOC SOIL-5511**AA13517**

Dup	1-methylnaphthalene	0.248	0.010	mg/kg		<0.010			12.5	
Dup	2-methylnaphthalene	0.255	0.010	mg/kg		<0.010			10.8	

**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 :** 18:48**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	Acenaphthene	0.266	0.010	mg/kg		Not Detected			<0.010	
Dup	Acenaphthylene	Not Detected		mg/kg						
Dup	Anthracene	0.321	0.010	mg/kg		Not Detected			2.84	
Dup	Benz(a)anthracene	0.248	0.010	mg/kg		<0.010			0.402	
Dup	Benzo(a)pyrene	0.295	0.010	mg/kg		Not Detected			3.66	
Dup	Benzo(b)fluoranthene	0.267	0.010	mg/kg		Not Detected			0.752	
Dup	Benzo(g,h,i)perylene	Not Detected		mg/kg						
Dup	Benzo(k)fluoranthene	0.255	0.010	mg/kg		Not Detected			<0.010	
Dup	Chrysene	0.239	0.010	mg/kg		<0.010			0.419	
Dup	Dibenz(a,h)anthracene	0.217	0.010	mg/kg		Not Detected			2.33	
Dup	Fluoranthene	0.306	0.010	mg/kg		Not Detected			0.651	
Dup	Fluorene	0.306	0.010	mg/kg		Not Detected			0.326	
Dup	Indeno(1,2,3-cd)pyrene	0.218	0.010	mg/kg		Not Detected			0.460	
Dup	Naphthalene	0.233	0.010	mg/kg		Not Detected			15.1	
Dup	Phenanthrene	Not Detected		mg/kg						
Dup	Pyrene	0.314	0.010	mg/kg		Not Detected			1.28	
Matrix Spike	1-methylnaphthalene	0.281	0.010	mg/kg	0.300	<0.010	93.7			
Matrix Spike	2-methylnaphthalene	0.284	0.010	mg/kg	0.300	<0.010	94.7			
Matrix Spike	Acenaphthene	0.266	0.010	mg/kg	0.300	Not Detected	88.7			
Matrix Spike	Acenaphthylene	Not Detected		mg/kg						
Matrix Spike	Anthracene	0.312	0.010	mg/kg	0.300	Not Detected	104			
Matrix Spike	Benz(a)anthracene	0.249	0.010	mg/kg	0.300	<0.010	83.0			
Matrix Spike	Benzo(a)pyrene	0.306	0.010	mg/kg	0.300	Not Detected	102			
Matrix Spike	Benzo(b)fluoranthene	0.265	0.010	mg/kg	0.300	Not Detected	88.3			
Matrix Spike	Benzo(g,h,i)perylene	Not Detected		mg/kg						
Matrix Spike	Benzo(k)fluoranthene	0.255	0.010	mg/kg	0.300	Not Detected	85.0			
Matrix Spike	Chrysene	0.238	0.010	mg/kg	0.300	<0.010	79.3			
Matrix Spike	Dibenz(a,h)anthracene	0.212	0.010	mg/kg	0.300	Not Detected	70.7			
Matrix Spike	Fluoranthene	0.308	0.010	mg/kg	0.300	Not Detected	103			
Matrix Spike	Fluorene	0.307	0.010	mg/kg	0.300	Not Detected	102			
Matrix Spike	Indeno(1,2,3-cd)pyrene	0.217	0.010	mg/kg	0.300	Not Detected	72.3			
Matrix Spike	Naphthalene	0.271	0.010	mg/kg	0.300	Not Detected	90.3			
Matrix Spike	Phenanthrene	Not Detected		mg/kg						
Matrix Spike	Pyrene	0.310	0.010	mg/kg	0.300	Not Detected	103			

AA13715

MB	1-methylnaphthalene	<0.010	0.010	mg/kg
MB	2-methylnaphthalene	<0.010	0.010	mg/kg
MB	Acenaphthene	Not Detected	0.010	mg/kg
MB	Acenaphthylene	Not Detected		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 Detected		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

**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 :** 18:48**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	Fluoranthene	Not Detected	0.010	mg/kg						
MB	Fluorene	Not Detected	0.010	mg/kg						
MB	Indeno(1,2,3-cd)pyrene	Not Detected	0.010	mg/kg						
MB	Naphthalene	Not Detected	0.010	mg/kg						
MB	Phenanthrene	Not Detected		mg/kg						
MB	Pyrene	Not Detected	0.010	mg/kg						

AA13716

LCS	1-methylnaphthalene	0.270	0.010	mg/kg			90.0			
LCS	2-methylnaphthalene	0.281	0.010	mg/kg			93.7			
LCS	Acenaphthene	0.264	0.010	mg/kg			88.0			
LCS	Acenaphthylene	Not Detected		mg/kg						
LCS	Anthracene	0.258	0.010	mg/kg			86.0			
LCS	Benz(a)anthracene	0.231	0.010	mg/kg			77.0			
LCS	Benzo(a)pyrene	0.268	0.010	mg/kg			89.3			
LCS	Benzo(b)fluoranthene	0.260	0.010	mg/kg			86.7			
LCS	Benzo(g,h,i)perylene	Not Detected		mg/kg						
LCS	Benzo(k)fluoranthene	0.255	0.010	mg/kg			85.0			
LCS	Chrysene	0.231	0.010	mg/kg			77.0			
LCS	Dibenz(a,h)anthracene	0.234	0.010	mg/kg			78.0			
LCS	Fluoranthene	0.273	0.010	mg/kg			91.0			
LCS	Fluorene	0.261	0.010	mg/kg			87.0			
LCS	Indeno(1,2,3-cd)pyrene	0.239	0.010	mg/kg			79.7			
LCS	Naphthalene	0.255	0.010	mg/kg			85.0			
LCS	Phenanthrene	Not Detected		mg/kg						
LCS	Pyrene	0.288	0.010	mg/kg			96.0			

AA13717

LCS	1-methylnaphthalene	0.239	0.010	mg/kg			79.7			
LCS	2-methylnaphthalene	0.255	0.010	mg/kg			85.0			
LCS	Acenaphthene	0.244	0.010	mg/kg			81.3			
LCS	Acenaphthylene	Not Detected		mg/kg						
LCS	Anthracene	0.251	0.010	mg/kg			83.7			
LCS	Benz(a)anthracene	0.230	0.010	mg/kg			76.7			
LCS	Benzo(a)pyrene	0.270	0.010	mg/kg			90.0			
LCS	Benzo(b)fluoranthene	0.260	0.010	mg/kg			86.7			
LCS	Benzo(g,h,i)perylene	Not Detected		mg/kg						
LCS	Benzo(k)fluoranthene	0.244	0.010	mg/kg			81.3			
LCS	Chrysene	0.236	0.010	mg/kg			78.7			
LCS	Dibenz(a,h)anthracene	0.222	0.010	mg/kg			74.0			
LCS	Fluoranthene	0.271	0.010	mg/kg			90.3			
LCS	Fluorene	0.243	0.010	mg/kg			81.0			
LCS	Indeno(1,2,3-cd)pyrene	0.232	0.010	mg/kg			77.3			
LCS	Naphthalene	0.225	0.010	mg/kg			75.0			
LCS	Phenanthrene	Not Detected		mg/kg						
LCS	Pyrene	0.274	0.010	mg/kg			91.3			

VOC S-5427**AA13450**

**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 :** 18:48**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	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	
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**

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FINAL RESULTS REPORT**Report Date :** 10/31/2024**Report Time :** 18:48**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