



June 2, 2025

Mr. Blair Rollins
QB Energy Operating LLC
143 Diamond Avenue
Parachute, CO 81635

via email

**Subject: Love Ranch 8 Off-Location Flowline Release
Report of Work Completed – 2025 Q2
CECMC Facility ID: 335717
CECMC Release ID: 484391
CECMC Remediation ID: 31518
Rio Blanco County, Colorado**

Mr. Rollins,

Entrada Consulting Group, Inc. (Entrada) was contracted by QB Energy Operating, LLC (QB), to conduct site investigation, surface water monitoring, and groundwater monitoring in response to a release from an off-location flowline associated with the Love Ranch 8 (Site) beginning in May of 2024.

The Site is in the Cross Timbers unit of QB's Piceance operations area in the southwest quarter of the northwest quarter and the northwest quarter of the southwest quarter of section 9, township 2 south, range 67 west of the 6th principal meridian in Rio Blanco County, CO.

The off-site flowline is identified in the Colorado Energy and Carbon Management Commission (CECMC) database by facility ID 335717. The release is documented in the CECMC database as spill/release 484391 and work is proceeding under CECMC remediation project number 31518.

The following narrative summarizes field activities and analytical results for surface water monitoring and groundwater monitoring in the second quarter of 2025. A site diagram showing all surface water and groundwater monitoring locations is included in the attachments as **Figure 1**.

SURFACE WATER MONITORING

On October 18, 2024, the ECMC approved Caerus' request (Doc #403953946) to reduce the surface water sampling program to one up-gradient location, ST-PC-UG02, and one down-gradient location, ST-PC-DG14, to be sampled quarterly. Surface water sample locations are shown on **Figure 1**.

Entrada personnel collected samples from both locations on May 1, 2025. No indications of hydrocarbon impacts (e.g. sheen, odor) were observed.

Surface water samples were collected in containers appropriate to the specified analyses, sealed, labelled, placed into an ice-filled cooler for preservation, and submitted to Elevation Diagnostics in Aurora, CO, for the following reduced analyte suite per Doc #403953946:

- Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) by EPA Method 8260B

SURFACE WATER ANALYTICAL RESULTS

Analytical results for the two (2) surface water samples are presented in **Table 1** along with CECMC Table 915-1 Groundwater Cleanup Concentrations for comparison.

All results were in compliance with Table 915-1. Laboratory analytical reports with chain of custody documentation are included with this report as attachments to the supplemental form 27.

GROUNDWATER MONITORING

Entrada personnel collected groundwater samples from all twenty-four (24) monitoring wells at the Site on April 17 and May 1, 2025. The locations of all monitoring wells are shown on **Figure 1**.

Groundwater levels in each well were gauged prior to sampling to monitor hydraulic characteristics at the site. Measurements were taken from the top of casing (TOC) on the north side to the nearest 0.01-foot. TOC elevation data were used to convert the depth to groundwater in each well into groundwater elevation (GWE) in feet above mean sea level (ft-amsl). A groundwater potentiometric surface diagram generated from this data is included as **Figure 2**.

Three well casing volumes of water were purged at each well prior to sample collection using a disposable high-density polyethylene (HDPE) bailer. Groundwater samples were collected in containers appropriate to the specified analyses, sealed, labelled, placed into an ice-filled cooler for preservation, and submitted to Elevation Diagnostics in Aurora, CO, for the following reduced analyte suite per Doc #404033800:

- Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) by EPA Method 8260B
- Sulfate by EPA Method 9056A

GROUNDWATER ANALYTICAL RESULTS

Analytical results for the twenty-four (24) groundwater samples are presented in **Table 2** along with CECMC Table 915-1 Groundwater Cleanup Concentrations and background concentrations for TDS and sulfate for comparison. Results in exceedance of these standards or background concentrations are summarized below.

- Benzene was reported in exceedance of the cleanup concentration of 0.005 milligrams per liter (mg/L) in three (3) samples:
 - 20250417-XTWP-(LR8-MW09) at 0.01659 mg/L
 - 20250501-XTWP-(LR8-MW10) at 0.00989 mg/L
 - 20250417-XTWP-(LR8-MW15) at 0.0062 mg/L

All other results were in compliance with Table 915-1 or below background concentrations. Analytical results are summarize in map view in **Figure 3** along with an estimated outline of the

subsurface dissolved phase hydrocarbon plume where concentrations are in exceedance of CECMC Table 915-1.

Laboratory analytical reports with chain of custody documentation are included with this report as attachments to the supplemental form 27.

CONCLUSIONS AND RECOMMENDATIONS

Groundwater analytical results show benzene in exceedance of the Table 915-1 Cleanup Concentration at MW09, MW10, and MW15.

Based on field observations and analytical results presented herein, Entrada recommends that QB continue quarterly groundwater and surface water monitoring.

We appreciate the opportunity to assist QB Energy Operating, LLC. Please contact us at (970) 270-2986 if you have any questions.

Sincerely,

ENTRADA CONSULTING GROUP



Christopher Mace
Senior Geologist



Tim Dobransky
Principal Scientist

Attachments:

Figure 1 – Surface Water and Ground Water Monitoring Locations

Figure 2 – Potentiometric Surface Diagram

Figure 3 – Analytical Results and Estimated Plume Diagram

Table 1 – Surface Water Analytical Results

Table 2 – Ground Water Analytical Results

FIGURES



Monitoring Well



Spill Origin

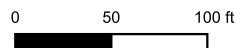


Water Sample Location

--- Pipeline (Gas & Condensate, Shut-in)

— Pipeline (Gas & Water, Active)

— Pipeline (Gas, Active)



1:1,200

NAD83(2011) / UTM zone 12N

Location ID: N/A
Release ID: 484391
Remediation ID: 31518
Project No: 024-194
Author: C. Mace
Date: 2025-06-26

Love Ranch 8 Off-Location Flowline Release Site Diagram

SWNW & NWSW Sec 9, T2S, R97W, 6th PM
Rio Blanco County, CO



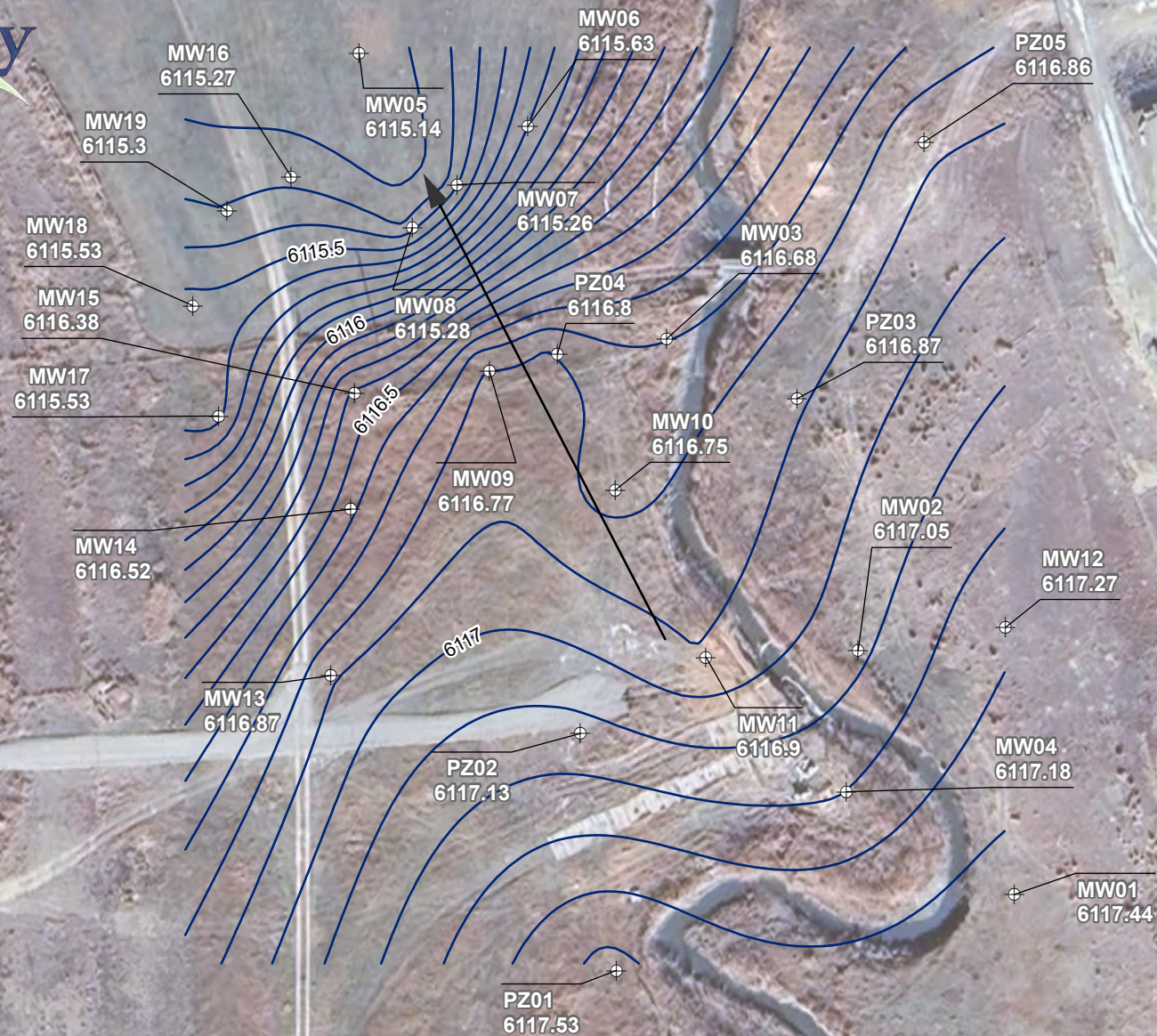
330 Grand Avenue, Suite C
Grand Junction, CO 81501
970-549-1015






143 Diamond Avenue
Parachute, CO 81635
970-285-2600



Fig. 1



LEGEND

-  Potentiometric Surface Contours (ci=0.1)
  Monitoring Well
-  Flow Direction

0 70 140
Feet
1 inch = 140 ft



Project No: 024-194

Map By: RRM

Date: 5/18/2025

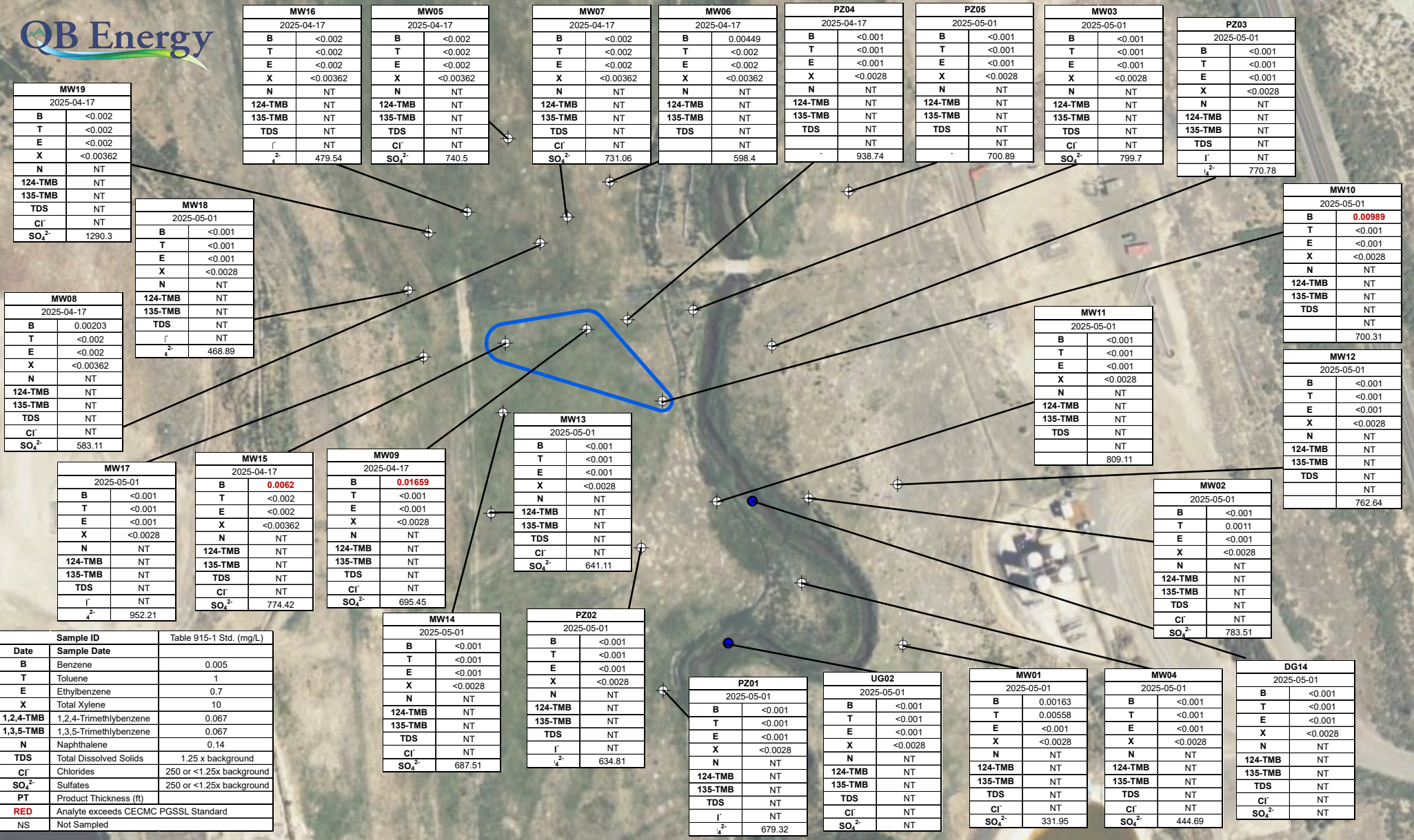
2025 Q2 Love Ranch 8 Potentiometric Surface Diagram
 QB Energy Operating LLC
 SWNW & NWSW; Section 9 T2S R97W; 6th Prime Meridian
 Rio Blanco County, CO



330 Grand Avenue, Unit C
 Grand Junction, CO 81501
 970-549-1015

Figure

2



LEGEND

- Monitoring Well
- Estimated Dissolved Hydrocarbon Plume Exceeding CECMC Allowable Concentrations
- Water Sample Location

0 90 180
Feet
1 inch = 180 ft



Project No: 024-194

Map By: RRM

Date: 6/2/2025

2025 Q2 Analytical Diagram Love Ranch 8

QB Energy Operating LLC
SWNW & NWSW; Section 9 T2S R97W; 6th Prime Meridian
Rio Blanco County, CO



330 Grand Avenue, Unit C
Grand Junction, CO 81501
970-549-1015

Figure

3

TABLES

TABLE 1

**LOVE RANCH 8 OFFSITE FLOWLINE RELEASE
QB ENERGY OPERATING, LLC
RIO BLANCO COUNTY, COLORADO**

**CECMC TABLE 915-1
GROUND WATER ANALYTICAL RESULTS**

ANALYTE					Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1,2,4-TMB	1,3,5-TMB	TDS	Chloride	Sulfate
915-1 WATER					0.005	1	0.7	10	0.14	0.067	0.067	5110	250	2375.4875
UNITS					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Location	Sample Name	Type	Date	Report										
MW01	20250501-XTWP-(LR8-MW01)	Monitoring Well	2025-05-01	4695	0.00163	0.00558	<0.001	<0.0028	NT	NT	NT	NT	NT	331.95
MW02	20250501-XTWP-(LR8-MW02)	Monitoring Well	2025-05-01	4695	<0.001	0.0011	<0.001	<0.0028	NT	NT	NT	NT	NT	783.51
MW03	20250501-XTWP-(LR8-MW03)	Monitoring Well	2025-05-01	4695	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	799.7
MW04	20250501-XTWP-(LR8-MW04)	Monitoring Well	2025-05-01	4695	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	444.69
MW05	20250417-XTWP-(LR8-MW05)	Monitoring Well	2025-04-17	4335	<0.002	<0.002	<0.002	<0.00362	NT	NT	NT	NT	NT	740.5
MW06	20250417-XTWP-(LR8-MW06)	Monitoring Well	2025-04-17	4335	0.00449	<0.002	<0.002	<0.00362	NT	NT	NT	NT	NT	598.4
MW07	20250417-XTWP-(LR8-MW07)	Monitoring Well	2025-04-17	4335	<0.002	<0.002	<0.002	<0.00362	NT	NT	NT	NT	NT	731.06
MW08	20250417-XTWP-(LR8-MW08)	Monitoring Well	2025-04-17	4335	0.00203	<0.002	<0.002	<0.00362	NT	NT	NT	NT	NT	583.11
MW09	20250417-XTWP-(LR8-MW09)	Monitoring Well	2025-04-17	4335	0.01659	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	695.45
MW10	20250501-XTWP-(LR8-MW10)	Monitoring Well	2025-05-01	4695	0.00989	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	700.31
MW11	20250501-XTWP-(LR8-MW11)	Monitoring Well	2025-05-01	4695	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	809.11
MW12	20250501-XTWP-(LR8-MW12)	Monitoring Well	2025-05-01	4695	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	762.64
MW13	20250501-XTWP-(LR8-MW13)	Monitoring Well	2025-05-01	4695	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	641.11
MW14	20250501-XTWP-(LR8-MW14)	Monitoring Well	2025-05-01	4695	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	687.51
MW15	20250417-XTWP-(LR8-MW15)	Monitoring Well	2025-04-17	4335	0.0062	<0.002	<0.002	<0.00362	NT	NT	NT	NT	NT	774.42
MW16	20250417-XTWP-(LR8-MW16)	Monitoring Well	2025-04-17	4335	<0.002	<0.002	<0.002	<0.00362	NT	NT	NT	NT	NT	479.54
MW17	20250501-XTWP-(LR8-MW17)	Monitoring Well	2025-05-01	4695	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	952.21
MW18	20250501-XTWP-(LR8-MW18)	Monitoring Well	2025-05-01	4695	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	468.89
MW19	20250417-XTWP-(LR8-MW19)	Monitoring Well	2025-04-17	4335	<0.002	<0.002	<0.002	<0.00362	NT	NT	NT	NT	NT	1290.3
PZ01	20250501-XTWP-(LR8-PZ01)	Monitoring Well	2025-05-01	4695	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	679.32
PZ02	20250501-XTWP-(LR8-PZ02)	Monitoring Well	2025-05-01	4695	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	634.81
PZ03	20250501-XTWP-(LR8-PZ03)	Monitoring Well	2025-05-01	4695	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	770.78
PZ04	20250417-XTWP-(LR8-PZ04)	Monitoring Well	2025-04-17	4335	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	938.74
PZ05	20250501-XTWP-(LR8-PZ05)	Monitoring Well	2025-05-01	4695	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	700.89

Threshold concentrations for 1-methylnaphthalene and 2-methylnaphthalene are based on EPA RSL for Tapwater per Doc #403479868

Background concentration for TDS and Sulfate based on results from the 2024-11-25 sample from MW19

	TDS	Sulfate
20241125-XTWP-(LR8-MW19) :	4088	1900.39
1.25x :	5110	2375.4875

Notes:

Bold with blue highlight: Exceeds Water Standards
 "<" (as in, less than laboratory reporting detection limit)

TABLE 2

LOVE RANCH 8 OFFSITE FLOWLINE RELEASE
QB ENERGY OPERATING, LLC
RIO BLANCO COUNTY, COLORADO

CECMC TABLE 915-1
SURFACE WATER ANALYTICAL RESULTS

					Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1,2,4-TMB	1,3,5-TMB	TDS	Chloride	Sulfate
ANALYTE					0.005	1	0.7	10	0.14	0.067	0.067	2287.5	250	958.75
915-1 WATER					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Location	Sample Name	Type	Date	Report										
ST-PC-UG02	20250501-XTWP-(LR8-ST-PC-UG02)	Stream	2025-05-01	4695	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	NT
ST-PC-DG14	20250501-XTWP-(LR8-ST-PC-DG14)	Stream	2025-05-01	4695	<0.001	<0.001	<0.001	<0.0028	NT	NT	NT	NT	NT	NT

Threshold concentrations for 1-methylnaphthalene and 2-methylnaphthalene are based on EPA RSL for Tapwater per Doc #403479868

Background concentration for TDS and Sulfate based on results from 2024-03-27 sample from PZ01

	TDS	Sulfate
20240327-XTWP-(LR8-PZ01) :	1830	767
1.25x :	2287.5	958.75

Notes:

Bold with blue highlight: Exceeds Water Standards
"<" (as in, less than laboratory reporting detection limit)