

REPORT OF WORK COMPLETION (ROWC)

Property:

**L3E Condensate Release
QB Energy Operating, LLC
Garfield County, Colorado
Remediation Project Number : NA**

December 26, 2024
Ensolum Project No. 09D2436025

Prepared for:

**QB Energy Operating, LLC
1001 17th Street #1600
Denver, Colorado 80202
Attention: Mr. Derek Horn**

Prepared by:



Garrett Green
Project Scientist
575-637-1752
ggreen@ensolum.com



Tanna Lyon
Senior Scientist/Biologist
970-509-0947
tlyon@ensolum.com

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1.0 INTRODUCTION

Ensolum, LLC (Ensolum) was contracted by QB Energy Operating (QB Energy) to complete soil assessment activities at the L3E Site located in Garfield County, Colorado. The soil assessment screening and sampling was conducted in accordance with Colorado Energy & Carbon Management Commission (ECMC) guidelines.

1.1 Site Description

The L3E site is located approximately 4.29 miles south-southeast of Rifle, CO situated within the Mamm Creek Field. The predominant land use in this area consists of rangeland alongside oil and gas operations. The site is located to the west of Dry Hollow Creek, with topography sloping towards the north-northeast. The nearest surface water feature is an unnamed stream, approximately 1,056 feet North of the site. Data from the Division of Water Resources (DWR) shows the nearest water well (Permit # 64881) with available construction data is located approximately 739 feet Northeast of the point of release (POR) and approximately 40 feet lower in elevation. The construction report indicates that the well was drilled to a maximum depth of 68 feet below ground surface (bgs) with groundwater encountered at 20 feet bgs. The depth to water is estimated to range between 50 – 100 feet bgs.

1.2 Site Background

On November 23, 2024, the operator discovered a hammer union that had become separated on an above-ground flowline as a result of freezing conditions at the L3E location as documented in Initial Form 19, Document Number 404008376 and Supplemental Form 19, Document Number 404009235. The flowline was immediately isolated and shut in. The estimated volume of the release is between 1 to 5 barrels.

2.0 FIELD ACTIVITIES

2.1 Initial Assessment

On December 2, 2024, an initial assessment was conducted via hand auger. One (1) soil sample was collected from the point of release (POR) (L3E-(POR)@0.5) at a depth of approximately 0.5 feet bgs. The soil sample was field screened for volatile organic compound (VOC) concentrations using a photoionization detector (PID) and exhibited a reading of 1,597 parts per million (ppm). The soil sample was submitted to Elevation Diagnostics for analysis of the full Table 915-1 analytical suite with a standard turnaround request.

Additionally, on December 4, 2024, two (2) background soil samples (MCBG-(L3E-E)@0.5 and MCBG-(L3E-S)@1) were collected off location in native soil at depths ranging from 0.5 feet to 1 foot bgs. The soil samples were field screened for VOC concentrations using a PID with both exhibiting readings of 0.0 ppm. The two (2) soil samples were submitted to Elevation Diagnostics for Table 915-1 metals and soil suitability with a standard turnaround request.

Based on the December 2, 2024, analytical results, soil sample L3E-(POR)@0.5 exceeded Table 915-1 protection of groundwater standards for TPH (ORO, GRO, DRO), benzene, toluene, ethylbenzene, total xylenes, 1,2,4 trimethylbenzene, 1,3,5 trimethylbenzene, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, SAR, pH, arsenic, barium and selenium.

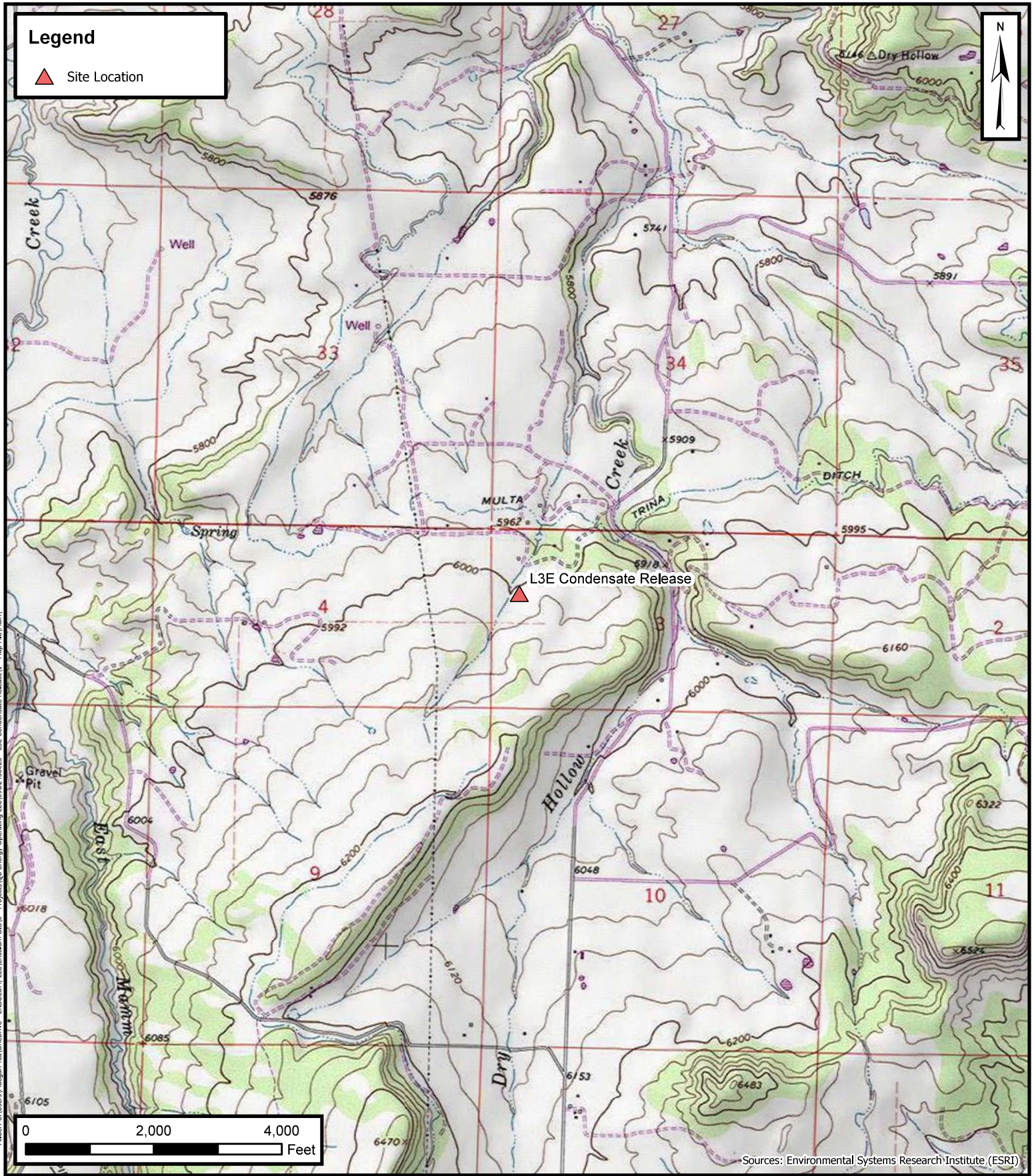
A general site location map is included as Figure 1, the Site Map displaying the location of the Site on aerial imagery is included as Figure 2, and all sample locations are included as Figure 3. The photographic log is included as Appendix C.

3.0 FINDINGS AND CONCLUSIONS.

Based on the assessment data, additional soil samples are necessary to define the extent of impacts vertically and laterally. It is proposed that six soil borings be completed, one in the vicinity of the POR, four around the POR in all cardinal directions, and one offsite to assess soil suitability for reclamation standards at depth. The soil borings will be completed to a depth of 5 feet or greater to assess soil impacts. Subsequent, confirmation soil samples will be analyzed for the approved suite of analytes set forth by applicable COAs.

Ensolum concludes there is no reasonable pathway for groundwater within the investigation area. According to data from the Division of Water Resources (DWR), the nearest water well (Permit # 64881) with construction data is located approximately 0.14 miles Northeast of the POR and approximately 40 feet lower in elevation. The construction report indicates the well was drilled to a maximum depth of 68 feet below ground surface (bgs) with groundwater encountered at 20 feet bgs. The depth to water is estimated to be between 50 – 100 feet bgs. Ensolum recommends submitting a request to the ECMC to utilize Table 915-1 Residential SSL cleanup concentrations, contingent upon the approved use of RSSLs concentrations of TPH-GRO, TPH-DRO, TPH-ORO, Ethylbenzene, Total Xylenes, pH, SAR and Arsenic remain at the site. Additionally, Ensolum recommends a reduced analytical suite to include the exceedances left in place when compared to RSSL concentrations only.

Ensolum recommends submitting an ECMC Initial Form 27 in accordance with Rule 913. Remediation activities will continue until impacts above ECMC standards are not encountered, a Supplemental Form 27 will be submitted on a quarterly basis until a no further action (NFA) determination is attained. Field screening and applicable laboratory analytical results will be reported in all submittals.



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ENSOLUM
 Environmental, Engineering and
 Hydrogeologic Consultants

Topographic Map
 L3E Condensate Release
 QB Energy Operating LLC
 39.4738125, -107.6605449

Project Number: 09D2436025

FIGURE
 1

Legend

▲ Site Location



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Sources: Environmental Systems Research Institute (ESRI)



Site Vicinity Map

L3E Condensate Release
QB Energy Operating LLC
39.4738125, -107.6605449

Project Number: 09D2436025

FIGURE
2

Legend

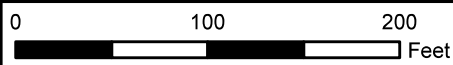
- ▲ Background Soil Sample
- Soil Sample



L3E-(POR)@0.5

MCBG-(L3E-S)

MCBG-(L3E-E)



Sources: Environmental Systems Research Institute (ESRI)

Soil Sample Location Map

L3E Condensate Release
QB Energy Operating LLC
39.4738125, -107.6605449

FIGURE

3




Project Number: 09D2436025


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SOIL ANALYTICAL RESULTS TABLE
USE

Sample Name	Sample Type	Sample Date	Lab Report	Analyte		EC	SAR	pH	HWS Boron	Arsenic	Barium	Cadmium	Chromium VI	Copper	Lead	Nickel	Selenium	Silver	Zinc
				915-1 PROTECTION OF GOW	915-1 RESIDENTIAL SOIL														
				Units	Units	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
20241202AL3E-PCN-0015	PCR	12/02/2024	3196	3.8	0.95	4.36	16.65	8.78	0.95	366.81	0.22	< 0.08	12.84	10.2	11.18	1.65	< 0.25	60.95	
20241202MH3B-C-13E-6	Background	12/04/2024	3173	1.12	0.82	4.03	0.05	8.05	0.82	89.61	0.23	0.11	9.84	5.03	6.46	1.1	< 0.25	41.75	
20241202MH3B-C-13E-5	Background	12/04/2024	3173	5.17	5.17	158.68	10.51	8.11	5.17	158.68	0.28	< 0.08	14.89	10.55	11.23	2.51	> 0.25	39.18	

Notes:
 BBL with value highlight: Exceeds RSLs
 <: Less than laboratory reporting detection limit
 >: Greater than laboratory reporting detection limit

PHOTOGRAPHIC LOG		
QB Energy, LLC	L3E Garfield County, Colorado	Sample ID: L3E-(POR)@0.5
Date: 12/02/2024	Photo No. 1	Coordinates Lat/Long: 39.473698, -107.660532
 <p>2024-12-02 13:57 39.473690N 107.660468W 269° W Silt, Garfield County 81652 United States</p>		
View facing west at POR.		

PHOTOGRAPHIC LOG		
QB Energy, LLC	L3E Garfield County, Colorado	Sample ID: L3E-(POR)@0.5
Date: 12/02/2024	Photo No. 2	Coordinates Lat/Long: 39.473698, -107.660532
 <p>2024-12-02 13:58 39.473755N 107.660502W 184° S Silt, Garfield County 81652 United States</p>		
View facing south at the POR.		

PHOTOGRAPHIC LOG

QB Energy, LLC	L3E Garfield County, Colorado	Sample ID: MCBG-(L3E-E)
Date: 12/04/2024	Photo No. 3	Coordinates Lat/Long: 39.473698, -107.660532



View facing northeast at MCBG-(L3E-E).

PHOTOGRAPHIC LOG

QB Energy, LLC	L3E Garfield County, Colorado	Sample ID: MCBG-(L3E-S)
Date: 12/04/2024	Photo No. 2	Coordinates Lat/Long: 39.473698, -107.660532



View facing east at the MCBG-(L3E-S).