

State of Colorado  
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:  
404344265  
Receive Date:  
09/15/2025

Report taken by:  
John Heil

Site Investigation and Remediation Workplan (Supplemental Form)

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. However, this shall not preclude the Operator from taking immediate action to protect public health or safety, the environment, wildlife, or livestock.

This Form 27 describes site conditions as currently understood by the Operator; approval of this Form 27 by ECOM is based on the site conditions accurately described herein; any changes in site conditions identified during or subsequent to the performance of the approved workplan may necessitate additional investigation or remediation which shall be described on a supplemental Form 27. This Form 27 is intended to provide basic information regarding the proposed site investigation and remediation actions, but the workplan may be more fully described in attached documentation.

Closure request is not available for an Initial Site Investigation and Remediation Workplan.

OPERATOR INFORMATION

Name of Operator: <u>QB ENERGY OPERATING LLC</u>	Operator No: <u>10844</u>	Phone Numbers Phone: <u>(970) 778-2314</u> Mobile: <u>(970) 778-2314</u>
Address: <u>1001 17TH STREET SUITE 1600</u>		
City: <u>DENVER</u>	State: <u>CO</u>	Zip: <u>80202</u>
Contact Person: <u>Jake Janicek</u>	Email: <u>jjanicek@qb-energy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 35478 Initial Form 27 Document #: 403770903

PURPOSE INFORMATION

- Rule 913.c.(1): Pit or Cuttings Trench closure.
- Rule 913.c.(2): Buried or partially buried vessel closure, which will be by removal.
- Rule 913.c.(3): Remediation of Spill and Releases pursuant to Rule 912.
- Rule 913.c.(4): Land treatment of Oily Waste pursuant to Rule 905.e.
- Rule 913.c.(5): Closure of Centralized E&P Waste Management Facilities pursuant to Rule 907.h.
- Rule 913.c.(6): Remediation of impacted Groundwater pursuant to Rule 915.e.(3).D, and the contaminant concentrations in Table 915-1.
- Rule 913.c.(7): Investigation and remediation of natural gas in soil or Groundwater.
- Rule 913.c.(8): When requested by the Director due to any potential risk to soil, Groundwater, or surface water.
- Rule 913.c.(9): Decommissioning of Oil and Gas Facilities.
- Rule 913.g: Changes of Operator.
- Rule 915.b: Request to leave elevated inorganics in situ.
- Other: Third Quarter (Q3) of 2025 Status Update to Remediation Project Number (RPN) 35478

SITE INFORMATION

Yes  Multiple Facilities

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>486871</u>	API #: _____	County Name: <u>GARFIELD</u>
Facility Name: <u>Puckett 44C-25 Historical Impacts</u>	Latitude: <u>39.488369</u>	Longitude: <u>-108.161608</u>	
** correct Lat/Long if needed: Latitude: <u>39.488410</u>		Longitude: <u>-108.161592</u>	
QtrQtr: <u>SESE</u>	Sec: <u>25</u>	Twp: <u>6S</u>	Range: <u>97W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications OH Most Sensitive Adjacent Land Use Rangeland  
Is domestic water well within 1/4 mile? No Is surface water within 1/4 mile? No  
Is groundwater less than 20 feet below ground surface? No

**Other Potential Receptors within 1/4 mile**

--

# SITE INVESTIGATION PLAN

## TYPE OF WASTE:

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste      | <input type="checkbox"/> Other E&P Waste             | <input type="checkbox"/> Non-E&P Waste |
| <input checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids             | _____                                  |
| <input type="checkbox"/> Oil                       | <input type="checkbox"/> Tank Bottoms                |  |
| <input type="checkbox"/> Condensate                | <input type="checkbox"/> Pigging Waste               |  |
| <input type="checkbox"/> Drilling Fluids           | <input type="checkbox"/> Rig Wash                    |  |
| <input type="checkbox"/> Drill Cuttings            | <input type="checkbox"/> Spent Filters               |  |
|  | <input type="checkbox"/> Pit Bottoms                 |  |
|  | <input type="checkbox"/> Other (as described by EPA) | _____                                  |

## DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	GROUNDWATER	To be Determined	Field Observations and Lab Analysis
Yes	SOILS	To be Determined	Field Observations and Lab Analysis

## INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

Please reference the State of Colorado Energy and Carbon Management Commission (ECMC) Remediation Project Number (RPN) 35478 for information on activities completed prior to Q3 of 2025.

Between July and August of 2025, four soil borings [SB02, SB03, SB04, and SB05] were advanced to depths of approximately 40 to 45 feet below ground surface (bgs) and were subsequently converted into groundwater monitoring wells [MW-06, MW-05, MW-03, and MW-01, respectively]. Confirmation soil samples were collected from every 10-foot interval and/or at the most impacted interval, based on field screening results, and each boring terminus. One five-point aliquot composite sample was collected from the stockpiled material on July 28, 2025. All confirmation soil samples were submitted for the reduced suite of gasoline range organics (GRO), arsenic, and hexavalent chromium approved via ECMC Document 404080467. On July 28, 2025, one groundwater sample was collected from MW-01 and submitted for laboratory analysis of the full ECMC Table 915-1 groundwater analytes.

On August 18, 2025, one additional monitoring well [MW-02] was drilled and installed to a depth of approximately 40 feet bgs between the Site location and a nearby downgradient unnamed ephemeral drainage to the east. Confirmation soil samples were collected from every 10-foot interval and were submitted for laboratory analysis of the approved reduced suite listed above. One groundwater sample was collected from MW-06 on August 25, 2025 and was submitted for laboratory analysis of the full ECMC Table 915-1 groundwater analytes.

Discussion continued in the "Operator Comments" section.

## PROPOSED SAMPLING PLAN

### Proposed Soil Sampling

Will soil samples be collected as part of this investigation? ( Number, type (grab/composite), analyses, and locations of samples ):

### Proposed Groundwater Sampling

Will groundwater samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

Please see the "Operator Comments" section below.

### Proposed Surface Water Sampling

Will surface water samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

### Additional Investigative Actions

Additional alternative investigative actions described in attached Site Investigation Plan ( summary ):

Please see the "Operator Comments" section below.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 21

Number of soil samples exceeding 915-1 21

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 5250

### NA / ND

-- Highest concentration of TPH (mg/kg) 38.68

NA Highest concentration of SAR \_\_\_\_\_

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 41

### Groundwater

Number of groundwater samples collected 1

Was extent of groundwater contaminated delineated? Yes

Depth to groundwater (below ground surface, in feet) 33

Number of groundwater monitoring wells installed 6

Number of groundwater samples exceeding 915-1 1

-- Highest concentration of Benzene (µg/l) 1730.24

-- Highest concentration of Toluene (µg/l) 199.91

-- Highest concentration of Ethylbenzene (µg/l) 198.81

-- Highest concentration of Xylene (µg/l) 4476.81

NA Highest concentration of Methane (mg/l) \_\_\_\_\_

### Surface Water

3 Number of surface water samples collected

0 Number of surface water samples exceeding 915-1

If surface water is impacted, other agency notification may be required.

## OTHER INVESTIGATION INFORMATION

Were impacts to adjacent property or offsite impacts identified?

Were background samples collected as part of this site investigation?

Please see ECMC DN 403868883 for more information regarding the collection of the site-specific background samples, a discussion of analytical results, and supporting figures.

Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) \_\_\_\_\_

Volume of liquid waste (barrels) \_\_\_\_\_

Is further site investigation required?

Please see the "Operator Comments" section of this form.

## REMEDIAL ACTION PLAN

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? No

### SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Since the impacts are being considered historical, a source cannot be identified.

### REMEDIATION SUMMARY

Describe how remediation of existing impacts to soil and groundwater is to be accomplished (i.e. summarize remedial action plan). Provide a brief narrative description including: technical justification, schedule for implementation, estimated time to attain NFA status, plus plans and specifications for the selected remedial action technology.

Once impacts are delineated, a remediation plan will be presented to the ECMC.

## Soil Remediation Summary

In Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )  
\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Air sparge / Soil vapor extraction  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ Other \_\_\_\_\_

Ex Situ

\_\_\_\_\_ Excavate and offsite disposal  
\_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_  
\_\_\_\_\_ Name of Licensed Disposal Facility or ECMC Facility ID # \_\_\_\_\_  
\_\_\_\_\_ Excavate and onsite remediation  
\_\_\_\_\_ Land Treatment  
\_\_\_\_\_ Bioremediation (or enhanced bioremediation)  
\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Other \_\_\_\_\_

## Groundwater Remediation Summary

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )  
\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Air sparge / Soil vapor extraction  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ Other \_\_\_\_\_

## GROUNDWATER MONITORING

If groundwater has been impacted, describe proposed monitoring plan, including # of wells or sample points, monitoring schedule, analytical methods, points of compliance. Attach a groundwater monitoring location diagram.

# REMEDIATION PROGRESS UPDATE

## PERIODIC REPORTING

### Approved Reporting Schedule:

Quarterly  Semi-Annually  Annually  Other

Q3 2025 Status Update to Remediation Project Number (RPN)  
35478

### Request Alternative Reporting Schedule:

Semi-Annually  Annually  Other

### Rule 913.e:

After initial approval of a Form 27, the Operator will provide quarterly update reports in a Supplemental Form 27 to document progress of site investigation and remediation, unless an alternative reporting schedule has been requested by the Operator and approved by the Director. The Director may request a more frequent reporting schedule based on site-specific conditions.

**Report Type:**  Groundwater Monitoring  Land Treatment Progress Report  O&M Report

Other Q3 2025 Status Update to RPN 35478

## Adequacy of Operator's General Liability Insurance and Financial Assurance

Describe the adequacy of the Operator's general liability insurance and Financial Assurance to fully address the anticipated costs of Remediation, including the estimated remaining cost for this project (below).

If this information has been provided on a Form 27 within the last 12 months, provide the Document Number of that form.

Per Rule 705.b, and in line with guidance laid out in the SBAP, QB Energy has general liability insurance in the amount of \$5M, and QB Energy has umbrella insurance, which sits over the general liability insurance in the amount of \$65M. The umbrella and general liability insurance covers property damage, bodily injury to third parties, and sudden or accidental pollution under a combined \$70M.

Operator anticipates the remaining cost for this project to be: \$ 100000

## WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? Yes

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

None

Volume of E&P Waste (solid) in cubic yards 852

E&P waste (solid) description Hydrocarbon-impacted soils/bedrock

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-ECMC Disposal Facility: Greenleaf Environmental Services LLC

Volume of E&P Waste (liquid) in barrels 0

E&P waste (liquid) description \_\_\_\_\_

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-ECMC Disposal Facility: \_\_\_\_\_

# REMEDIATION COMPLETION REPORT

## REMEDIATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? No

If YES:

Compliant with Rule 913.h.(1).

Compliant with Rule 913.h.(2).

Compliant with Rule 913.h.(3).

Do all soils meet Table 915-1 standards? \_\_\_\_\_

Does the previous reply indicate consideration of background concentrations? \_\_\_\_\_

Does Groundwater meet Table 915-1 standards? \_\_\_\_\_

Is additional groundwater monitoring to be conducted? \_\_\_\_\_

Operator shall comply with the ECMC 1000-Series Reclamation Requirements for all impacted and disturbed areas.

## RECLAMATION PLAN

### RECLAMATION PLANNING

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing.

Any excavation associated with this project will be backfilled to match existing pad elevation.

Is the described reclamation complete? \_\_\_\_\_

Does the reclamation described herein constitute interim or final reclamation of the Oil and Gas Location?

Interim

Final

Did the Surface Owner provide the seed mix? \_\_\_\_\_

If YES, does the seed mix comply with local soil conservation district recommendations? \_\_\_\_\_

Did the local soil conservation district provide the seed mix? \_\_\_\_\_

### SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. \_\_\_\_\_

Proposed date of completion of Reclamation. \_\_\_\_\_

## IMPLEMENTATION SCHEDULE

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

### PRIOR DATES

Date of Surface Owner notification/consultation, if required. \_\_\_\_\_

Actual Spill or Release date, or date of discovery. \_\_\_\_\_

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/15/2024

Proposed site investigation commencement. 05/15/2024

Proposed completion of site investigation. 10/31/2025

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/23/2024

Proposed date of completion of Remediation. \_\_\_\_\_

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

Change from approved implementation schedule per Rule 913.d.(2).

Basis for change in implementation schedule:

\_\_\_\_\_

**OPERATOR COMMENT**

Discussion continued from the "Initial Action Summary" section:

On August 14, 2025, three surface water samples were collected from the drainage approximately 780 feet south of the Site to determine the presence or absence of impacts from groundwater. Each sample was submitted for laboratory analysis of the full ECMC Table 915-1 groundwater analytes.

Please see the attached Report of Work Completed (ROWC) provided by WSP for details regarding all investigative activities, accompanying figures, drill logs, and a discussion of the analytical results.

Per ECMC Rule 915.e.(2).C (site-specific waste characterization), QB requests relief of hexavalent chromium as a contaminant of concern (COC). The historical confirmation soil sample hexavalent chromium concentrations ranged from 0.689 to 1.38 mg/kg. Please refer to the figures included as attachments to ECMC Document Numbers 404080467 and 403868883 for more details on these samples. These values are greater than the hexavalent chromium concentration (0.000164 mg/L) that was documented in produced water sample [20240709-LMSOURCE-(238-25-T)], which was collected from the Puckett 238-25 pad [Facility ID: 324200]. Additionally, the confirmation sample values were also greater than the concentration [less than 0.000150 mg/L] that was documented in produced water sample [20240807-LMSOURCE-(MESA6-T)], which was collected from the Mesa 6 pad [Facility ID: 335463]. The confirmation sample concentrations were also higher than the concentration [less than 0.01 mg/L] documented in produced water sample [20250321-LMSOURCE-(MESA16-SEP)], which was collected from the Mesa 16 location [Facility ID: 335519]. These produced water samples are representative of any emulsion affiliated with the Puckett 44C-24 PBV and tank battery decommissioning covered under Remediation Project Number (RPN) 35478. The production wells associated with the referenced produced water samples were drilled into the Coal Mesa member of the Williams Fork formation, as was the Puckett 44C-25 well at the Site. Given that each well was completed and sourced produced water from the same formation, impacts at the Site resulting from a produced water release to soils surrounding the PBV and tank battery would be expected to exhibit similar hexavalent chromium values as the produced water samples. This indicates that potential impacts from the decommissioned PBV and tank battery would decrease, not increase, the soil hexavalent chromium to levels greater than 0.000164 mg/kg and that the elevated hexavalent chromium concentrations observed in the historical confirmation soil samples are instead representative of the parent soil material. Please refer to Figure 10 included as an attachment to this form to review these source water locations.

QB believes that the localized groundwater around the Site does not represent a continuous water table but is instead a perched groundwater body stored within the void space of the bedrock. This is based on the documented dry monitoring wells at the Site and the analytical results of the groundwater and surface water samples collected during Q3 of 2025. The laboratory analytical results also indicate that the surface water has not been impacted by the perched groundwater. However, QB will continue to monitor groundwater conditions at the Site through quarterly gauging and sampling activities.

QB will conduct age date sampling of a representative site-specific deep produced water sample. The sample will be submitted for laboratory analysis of radiocarbons, stable isotopes, and tritium of water by both liquid scintillation counter and electrolyte enrichment. These analytical results will be compared to the respective concentrations from a shallow groundwater sample collected from the localized perched groundwater body to verify that the groundwater is not the result of a release from the Site.

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: Jake Janicek

Title: EH&S Specialist

Submit Date: 09/15/2025

Email: jjanicek@qb-energy.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with ECMC Rules and applicable orders and is hereby approved.

ECMC Approved: John Heil

Date: 09/30/2025

Remediation Project Number: 35478

**COA Type**

**Description**

0 COA	
-------	--

**ATTACHMENT LIST**

Upon approval, the approved Form 27 and all listed attachments will be indexed to the Remediation Project file. Only the approved Form 27 will also be indexed to the related Facilities.

**Att Doc Num**

**Name**

404344265	FORM 27-SUPPLEMENTAL-SUBMITTED
404344268	LABORATORY ANALYTICAL REPORT
404344269	LABORATORY ANALYTICAL REPORT
404344271	LABORATORY ANALYTICAL REPORT
404344277	LABORATORY ANALYTICAL REPORT
404344282	LABORATORY ANALYTICAL REPORT
404347904	LABORATORY ANALYTICAL REPORT
404347906	LABORATORY ANALYTICAL REPORT
404347907	LABORATORY ANALYTICAL REPORT
404349331	SITE INVESTIGATION REPORT

404353584	LABORATORY ANALYTICAL REPORT
404353585	LABORATORY ANALYTICAL REPORT
404353586	LABORATORY ANALYTICAL REPORT
404353588	LABORATORY ANALYTICAL REPORT
404353590	LABORATORY ANALYTICAL REPORT
404353592	LABORATORY ANALYTICAL REPORT
404353594	LABORATORY ANALYTICAL REPORT
404353596	LABORATORY ANALYTICAL REPORT
404353597	LABORATORY ANALYTICAL REPORT

Total Attach: 19 Files

### **General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Environmental	ECMC approves the request for relief of hexavalent chromium as a contaminant of concern (COC).	09/30/2025

Total: 1 comment(s)