

**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:  
404168047  
Receive Date:  
04/16/2025

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>	<b>Phone Numbers</b>
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>	Phone: <u>(970) 778-2314</u>
		Mobile: <u>(970) 778-2314</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: \_\_\_\_\_

**SITE INFORMATION**

No  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

## 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	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.

Following the removal of the partially buried vault (PBV), four sidewall soil samples and one base soil sample were collected from the excavation footprint on June 11, 2024. When preparing the location for PBV sampling impacts were observed at the base of the tank battery (TB). Additionally, four sidewall soil samples and one base soil sample were collected from the TB excavation footprint on June 12, 2024. A five-point composite sample was collected from each of the two stockpiles of the soils removed to access the PBV and TB locations.

Based on the analytical results during the June 11 and 12, 2024 initial investigation, mechanical excavation of documented impacts occurred between August 12 and October 3, 2024. The footprints of the former PBV and TB were excavated to a current extent of approximately 70 feet by 75 feet laterally and 11.5 feet vertically. A total of 7 investigative soil samples were collected from the base and sidewalls of the expanded excavation.

A minimum of six inches of soil was first scraped back prior to all sample collection to assure a representative sample was gathered for screening. The headspace of each soil sample was field screened using a photo-ionization detector (PID) to detect for the presence or absence of volatile organic compounds (VOCs). Soils/bedrock were also field characterized by a geologist for hydrocarbon odors or staining via visual and olfactory senses. A total of 19 confirmation soil and/or bedrock samples were submitted for laboratory analysis of Table 915-1 constituents between June 11 and October 3, 2024. All samples were evaluated under ECMC Protection of Groundwater Soil Screening Level Concentrations (PGSSLCs).

Please see the attached report of work completed (ROWC) for details regarding soil sampling activities, accompanying figures, and a discussion of the analytical results.

### 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 ):

Caerus plans to complete a subsurface investigation using an environmental drill rig in an effort to vertically and horizontally define the impacts associated with the tank battery. A minimum of eight soil borings are proposed; two in the base of the excavation footprint, two around/along each long sidewall, and two along each short sidewall as surface access allows (Figure 8). All borings will be advanced to the same vertical depth as the center borings. Total depth of the soil borings is not expected to exceed 40 feet below ground surface (bgs). Soils and bedrock will be field screened and logged in 5-foot intervals and samples will be submitted at each 10-foot interval, most impacted interval (s), and terminus.

A request for a reduced sampling suite and relief of barium and pH can be found in the "Operator Comments" section.

Please see ROWC for more details regarding the proposed sampling plan and supporting figures.

#### Proposed Groundwater Sampling

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

#### 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 ):

**SITE INVESTIGATION REPORT**

**SAMPLE SUMMARY**

**Soil**

**NA / ND**

Number of soil samples collected 19

-- Highest concentration of TPH (mg/kg) 2081.45

Number of soil samples exceeding 915-1 19

-- Highest concentration of SAR 1.03

Was the areal and vertical extent of soil contamination delineated? No

BTEX > 915-1 Yes

Approximate areal extent (square feet) 5250

Vertical Extent > 915-1 (in feet) 11

**Groundwater**

Number of groundwater samples collected 0

Highest concentration of Benzene (µg/l) \_\_\_\_\_

Was extent of groundwater contaminated delineated? No

Highest concentration of Toluene (µg/l) \_\_\_\_\_

Depth to groundwater (below ground surface, in feet) \_\_\_\_\_

Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_

Number of groundwater monitoring wells installed \_\_\_\_\_

Highest concentration of Xylene (µg/l) \_\_\_\_\_

Number of groundwater samples exceeding 915-1 \_\_\_\_\_

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

**Surface Water**

0 Number of surface water samples collected

       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?

For comparison to background soil conditions, a total of four site specific background soil samples were collected from four nearby, undisturbed native areas in accordance with ECMC 915.e.(2).D. These background samples were submitted for analysis of Electrical Conductivity (EC), Sodium Adsorption Ratio (SAR), pH, hot water soluble Boron, and ECMC Table 915-1 constituents.

Please see the attached ROWC 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) 825

Volume of liquid waste (barrels) 0

Is further site investigation required?

Please see the "Proposed Soil Sampling" 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**

**Ex Situ**

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

\_\_\_\_\_ Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation

\_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_

\_\_\_\_\_ Air sparge / Soil vapor extraction

\_\_\_\_\_ Name of Licensed Disposal Facility or ECMC Facility ID # \_\_\_\_\_

\_\_\_\_\_ Natural Attenuation

\_\_\_\_\_ Excavate and onsite remediation

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ 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 2024 Status Update to 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   Change of Operator

## 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. \_\_\_\_\_

### 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**

This form is being submitted to request change of operator from #10456 to #10844.

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

Signed: Jake Janicek

Title: EHS Specialist

Submit Date: 04/16/2025

Email: jjanicek@qb-energy.com

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

ECMC Approved: John Heil

Date: 04/16/2025

Remediation Project Number: 35478

**COA Type****Description**

COA Type	Description
1 COA	Approval of this Form is only for change of Operator from 10456 to 10844.

**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**

Att Doc Num	Name
404168047	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 1 Files

**General Comments****User Group****Comment****Comment Date**

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)