

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
404139481  
Receive Date:  
07/08/2025

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 ECMC 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: CAERUS PICEANCE LLC | Operator No: 10456         | <b>Phone Numbers</b>   |
| Address: 1001 17TH STREET #1600       |                            | Phone: (720) 830-7549  |
| City: DENVER State: CO Zip: 80202     |                            | Mobile: (720) 830-7549 |
| Contact Person: Derek Horn            | Email: dhorn@qb-energy.com |                        |

**PROJECT, PURPOSE & SITE INFORMATION**

**PROJECT INFORMATION**

Remediation Project #: 38101 Initial Form 27 Document #: 403979925

**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: SPILL OR RELEASE                | Facility ID: 487889 | API #: _____           | County Name: GARFIELD                      |
| Facility Name: D32NEB DUMP LINE FAILURE        | Latitude: 39.489257 | Longitude: -107.698556 |  |
| ** correct Lat/Long if needed: Latitude: _____ |                     | Longitude: _____       |  |
| QtrQtr: NWNW                                   | Sec: 32             | Twp: 6S                | Range: 92W Meridian: 6 Sensitive Area? Yes |

**SITE CONDITIONS**

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Non-Cropland  
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**

Freshwater Emergent Wetland 715 feet East, Elk Severe Winter Range (HPH), Mule Deer Severe Winter Range (HPH)

**SITE INVESTIGATION PLAN**

**TYPE OF WASTE:**

- E&P Waste**                       **Other E&P Waste**                       **Non-E&P Waste**
- Produced Water                       Workover Fluids
- Oil     Tank Bottoms
- Condensate                                       Pigging Waste
- Drilling Fluids                                       Rig Wash
- Drill Cuttings                                       Spent Filters
- Pit Bottoms
- Other (as described by EPA)

**DESCRIPTION OF IMPACT**

| Impacted? | Impacted Media | Extent of Impact | How Determined                |
|-----------|----------------|------------------|-------------------------------|
| Yes       | SOILS          | Undetermined     | Sampling, Laboratory 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 refer to document number 403921257 (Initial Form 19) for initial actions taken in support of this project. As described in the attached Site Investigation report, on September 19, 2024, one (1) soil sample was collected at the POR at a depth of approximately 4 feet bgs, as part of the initial investigation. Additionally, three (3) background soil samples were collected off location in native soil at depths ranging from 1.0 - 1.5 feet bgs for comparison to soil suitability and metals at the Site. A produced fluid sample was also collected from a tank on location for comparison to pH and metals at the Site. On October 3, 2024, Ensolum personnel returned to the Site to further delineate the POR vertically and laterally. One (1) soil sample was collected at the POR at a depth of approximately 19 feet bgs and three (3) soil samples were collected to the north and east of the POR at depths ranging from approximately 4.0 – 17 feet bgs. Between December 09, 2024, and January 31, 2025, delineation soil sampling activities were conducted at the Site. Four (4) soil samples were collected at the POR at depths ranging from 22 feet to 30 feet bgs. Six (6) soil samples were collected around the POR in all cardinal directions at depths ranging from 10 feet to 30 feet bgs. The sample was submitted to Elevation Diagnostics for analysis of the TPH, Boron, EC, SAR, pH with a standard turnaround request. Additionally, one (1) background soil sample was collected at a depth of 30 feet bgs. The sample was submitted to Elevation Diagnostics for analysis of the Boron, EC, SAR, and pH with a standard turnaround request.

**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 ):

Based on the analytical results all samples were below ECMC standards for TPH (GRO/DRO/ORO) delineating the site fully for organics. Additional soil samples are necessary to define the vertical and lateral extent of the inorganic impacts. It is proposed that five soil borings be completed, one in the vicinity of the POR, four surrounding the POR in all cardinal directions. The soil borings will be completed to a depth of 40 feet or greater to assess soil impacts.

**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 ):

On October 3, 2024, one source water sample was collected for comparison to pH and metals at the Site.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 20

Number of soil samples exceeding 915-1 16

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

Approximate areal extent (square feet) 1

### NA / ND

-- Highest concentration of TPH (mg/kg) 1037.51

-- Highest concentration of SAR 26.12

BTEX > 915-1 Yes

Vertical Extent > 915-1 (in feet) 30

### Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet)         

Number of groundwater monitoring wells installed         

Number of groundwater samples exceeding 915-1         

Highest concentration of Benzene (µg/l)         

Highest concentration of Toluene (µg/l)         

Highest concentration of Ethylbenzene (µg/l)         

Highest concentration of Xylene (µg/l)         

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?

Four (4) background soil samples were collected off location in native soil outside interim reclamation areas and analyzed for the following constituents: 915-1 Metals and Soil Suitability.

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?

Based on the analytical results all samples were below ECMC standards for TPH (GRO/DRO/ORO) delineating the site fully for organics. Additional soil samples are necessary to define the vertical and lateral extent of the inorganic impacts. It is proposed that five soil borings be completed, one in the vicinity of the POR, four surrounding the POR in all cardinal directions. The soil borings will be completed to a depth of 40 feet or greater to assess soil impacts.

## 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.

The line was isolated and shut in.

### 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.

Following additional soil assessment activities, a remedial approach will be proposed in a forthcoming Form 27. Remedial approach may include in-situ or ex-situ approach based on assessment results.

## 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

### 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 Q1 2025 REM Status Update \_\_\_\_\_

## 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: \$ \_\_\_\_\_

## WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? No

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

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

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

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

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

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_

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.

Once remediation is complete, QB Energy proposes to return the excavation to the active working surface grade for continued operation.

Is the described reclamation complete? No

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. 09/15/2024

Actual Spill or Release date, or date of discovery. 09/15/2024

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 09/19/2024

Proposed site investigation commencement. 09/19/2024

Proposed completion of site investigation. 11/28/2025

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 09/19/2027

Proposed date of completion of Remediation. 09/19/2027

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**

Based on the analytical results all samples were below ECMC standards for TPH (GRO/DRO/ORO) delineating the site fully for organics. Additional soil samples are necessary to define the vertical and lateral extent of the inorganic impacts. It is proposed that five soil borings be completed, one in the vicinity of the POR, four surrounding the POR in all cardinal directions. The soil borings will be completed to a depth of 40 feet or greater to assess soil impacts.

This form was originally submitted on 03/26/2025. Following the data integrity NTO issued on 04/08/2025, this form was returned to draft on 04/25/2025, and is now being resubmitted on 05/01/2025 with secured laboratory reports included.

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

Signed: Derek Horn

Title: EHS Specialist

Submit Date: 07/08/2025

Email: dhorn@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: 12/15/2025

Remediation Project Number: 38101

**COA Type****Description**

|       |  |
|-------|--|
|       | The approval of this Form 27 is at the request of the Operator. See Priority Review Request doc 2573207 for more information. Approval of this form does not imply any agreement with comments on completion of site investigation. All ongoing/unaddressed comments/COAs from previous Forms remain applicable. |
| 1 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**

|           |                                |
|-----------|--------------------------------|
| 404139481 | FORM 27-SUPPLEMENTAL-SUBMITTED |
| 404141093 | SITE INVESTIGATION REPORT      |
| 404185869 | LABORATORY ANALYTICAL REPORT   |
| 404185870 | LABORATORY ANALYTICAL REPORT   |
| 404185884 | LABORATORY ANALYTICAL REPORT   |

Total Attach: 5 Files

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

|  |  |                     |
|--|--|---------------------|
|  |  | Stamp Upon Approval |
|--|--|---------------------|

Total: 0 comment(s)