

**State of Colorado**  
**Energy & Carbon Management Commission**

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403998102

Receive Date:  
12/23/2024

Report taken by:  
Steven Arauza

**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: <u>CAERUS PICEANCE LLC</u>	Operator No: <u>10456</u>	<b>Phone Numbers</b>
Address: <u>1001 17TH STREET #1600</u>		Phone: <u>(970) 902-3598</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>(970) 902-3598</u>
Contact Person: <u>Andy Verbonitz</u>	Email: <u>averbonitz@qb-energy.com</u>	

**PROJECT, PURPOSE & SITE INFORMATION**

**PROJECT INFORMATION**

Remediation Project #: 34380 Initial Form 27 Document #: 403709318

**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: 4Q 2024 Status Update to Remediation Project Number (RPN) 34380

**SITE INFORMATION**

Yes  Multiple Facilities

Facility Type: <u>GAS COMPRESSOR STATION</u>	Facility ID: <u>419752</u>	API #: _____	County Name: <u>GARFIELD</u>
Facility Name: <u>BULL FORK COMPRESSOR STATION</u>	Latitude: <u>39.695594</u>	Longitude: <u>-108.283333</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWSE</u>	Sec: <u>16</u>	Twp: <u>4S</u>	Range: <u>97W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>485683</u>	API #: _____	County Name: <u>RIO BLANCO</u>
Facility Name: <u>Bullfork Tank Bullplug Freeze</u>	Latitude: <u>39.696385</u>	Longitude: <u>-108.282971</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWSE</u>	Sec: <u>16</u>	Twp: <u>4S</u>	Range: <u>97W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

## SITE CONDITIONS

General soil type - USCS Classifications SM

Most Sensitive Adjacent Land Use East Willow Creek, located approximately 200' west of location

Is domestic water well within 1/4 mile? No

Is surface water within 1/4 mile? Yes

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 checked="" 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
No	GROUNDWATER	NA	Not encountered
Yes	SOILS	TBD	Laboratory Analytical
No	SURFACE WATER	NA	Not currently present/frozen

### 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 ECMC Form 19 for Spill/Release Point ID Number 48563 DN 403620883 for emergency response measures taken. Reference RPN 34380 for initial liner integrity inspection and initial characterization details.

Between September 3 and December 9, 2024, four separate investigations were conducted. On September 3, 2024, one pothole was advanced within the secondary containment at the POR and four potholes were advanced in each direction of the secondary containment using a hydro-vacuum truck. Due to shallow bedrock, total depth of the borings ranged from 8 to 12 ft below ground surface (bgs). Each boring was advanced in 2-ft intervals with discrete samples collected at each interval and boring terminus.

On October 25, 2024, one pothole was advanced in 3-ft intervals to a depth of 10 ft bgs to install a safe path for vertical delineation drilling to be completed at a later date. All four interval samples were field screened by a geologist for the presence or absence of hydrocarbons via visual and olfactory senses and a PID. No samples were submitted for laboratory analysis.

On November 22, 2024, three potholes were advanced via hydro-vacuum to set PVC conduits within the pothole for future site assessment. Each pothole was advanced in 3-ft intervals to a total depth of approximately 10 ft below ground surface (bgs). Discrete samples were collected at each interval and boring terminus. Two soil samples were submitted for laboratory analysis due to elevated PID readings.

On December 9, 2024, the subsurface drilling investigation was initiated via an environmental drill rig. One soil boring was advanced via solid stem auger drilling in 5-ft intervals to a total depth of 40 ft bgs, where refusal was encountered. Two soil samples were collected from the boring, representing the most impacted material. One groundwater grab sample was also collected.

Please see the continued discussion 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 ):

QB plans to continue with subsequent subsurface investigation using an environmental drill to define the vertical and horizontal extent of exceedances. One soil boring will be advanced west adjacent of the POR immediately outside the secondary containment and two perimeter soil borings will be completed north and south of the POR to an approximate depth of 40 ft bgs. The eastern boring was installed on 12/9/2024. Soils will be field screened in 2-3-foot intervals until the boring terminus. If soil impacts are observed within any of the perimeter soil borings, a 10-foot lateral step-out soil boring will be advanced as well. From each soil boring, one sample will be submitted from the screening interval exhibiting the greatest degree of impacts and one sample will be submitted from the boring terminus. All samples will be analyzed for the reduced suite per DN 403864739.

Please see ROWC for more in-depth information regarding the proposed soil sampling plan and proposed boring locations.

**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 ):

Please refer to the above "Proposed Soil Sampling" section for these details.

**SITE INVESTIGATION REPORT**

**SAMPLE SUMMARY**

**Soil**

Number of soil samples collected 12  
 Number of soil samples exceeding 915-1 7  
 Was the areal and vertical extent of soil contamination delineated? No  
 Approximate areal extent (square feet) 100

**NA / ND**

-- Highest concentration of TPH (mg/kg) 1340  
 NA Highest concentration of SAR \_\_\_\_\_  
 BTEX > 915-1 Yes  
 Vertical Extent > 915-1 (in feet) 12

**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) \_\_\_\_\_  
 NA 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?

Please see ECOM DN 403864739 for information regarding the previously collected site-specific background samples.

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

Volume of solid waste (cubic yards) 0 Volume of liquid waste (barrels) 6

Is further site investigation required?

Please refer to the above "Proposed Soil Sampling" section for these details.

## 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.

Approximately 6 bbls of release liquid was vacuumed up from the containment prior to it freezing.

### 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 have been delineated, a remediation plan will be developed and presented to the ECMC in a future Form 27.

### 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 4Q 2024 Status Update to RPN 34380

### 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

## 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: \$ 20000

## 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 0

E&P waste (solid) description

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility:

Volume of E&P Waste (liquid) in barrels 6

E&P waste (liquid) description Hydro-vac rinseate mixed with impacted water

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility: Greenleaf Environmental

## 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.

If intrusive assessment or remediation is required, any disturbed areas will be reclaimed in accordance with 1000 series rules if offsite, or returned to active pad working surface if onsite.

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. 12/10/2023

Actual Spill or Release date, or date of discovery. 12/10/2023

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 12/10/2023

Proposed site investigation commencement. 05/29/2024

Proposed completion of site investigation. 04/30/2025

### REMEDIAL ACTION DATES

Proposed start date of Remediation. \_\_\_\_\_

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**

Carried over from "Initial Action Summary" section:

For each event, all collected soils were field screened by a geologist for the presence or absence of hydrocarbons via visual and olfactory senses and a photoionization detector (PID) to screen for volatile organic compounds (VOCs). From each pothole, the interval exhibiting the greatest degree of impacts and the terminus interval were submitted for laboratory analysis of constituents listed in the previously approved reduced suite [DN 403864739]. Analytical results were evaluated under both ECMC Protection of Groundwater Soil Screening Level Concentrations (PGSSLCs) and Residential Soil Screening Level Concentrations (RSSLCs), in accordance with the COA issued in ECMC DN 403709318. The grab groundwater sample will be analyzed for the full Table 915-1 suite of water constituents.

Please see the attached ROWC for more details regarding the potholing activity, supporting figures, and a discussion of the analytical results.

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

Signed: Andy Verbonitz

Title: EHS Specialist

Submit Date: 12/23/2024

Email: averbonitz@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: Steven Arauza

Date: 02/07/2025

Remediation Project Number: 34380

**COA Type****Description**

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
403998102	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403998393	ANALYTICAL RESULTS
404038538	SITE INVESTIGATION REPORT
404038539	ANALYTICAL RESULTS
404086740	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 5 Files

**General Comments**

User Group	Comment	Comment Date
Environmental	Comply with outstanding COAs.	02/07/2025

Total: 1 comment(s)