

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
403967920

Receive Date:

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Report taken by:

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: (970) 640-6919  |
| City: DENVER State: CO Zip: 80202     |                               | Mobile: (970) 640-6919 |
| Contact Person: Blair Rollins         | Email: brollins@qb-energy.com |                        |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 24190 Initial Form 27 Document #: 403087301

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: Full removal of the 0.5 mile gas line which flows from the OP15 to the G15OU facility.

SITE INFORMATION

No Multiple Facilities

|                                                |                     |                        |                                           |
|------------------------------------------------|---------------------|------------------------|-------------------------------------------|
| Facility Type: GAS GATHERING PIPELINE SYSTEM   | Facility ID: 334356 | API #: _____           | County Name: MESA                         |
| Facility Name: HYRUP-68S96W 15SESE             | Latitude: 39.344374 | Longitude: -108.086994 |                                           |
| ** correct Lat/Long if needed: Latitude: _____ |                     | Longitude: _____       |                                           |
| QtrQtr: SESE                                   | Sec: 15             | Twp: 8S                | Range: 96W Meridian: 6 Sensitive Area? No |

SITE CONDITIONS

General soil type - USCS Classifications GC Most Sensitive Adjacent Land Use Rangeland

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:

- 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)      Impacts associated with this project have not been identified

#### DESCRIPTION OF IMPACT

| Impacted?    | Impacted Media | Extent of Impact | How Determined      |
|--------------|----------------|------------------|---------------------|
| UNDETERMINED | SOILS          | To be determined | 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 ECMC Document Number 403087301 for initial actions taken in support of this project.

#### 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 Energy will continue to delineate impacts associated with the project through field investigation and laboratory analysis. QB Energy will report findings to the investigation and sampling on supplemental documentation for ECMC review and approval.

##### 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 31

NA Highest concentration of TPH (mg/kg) \_\_\_\_\_

Number of soil samples exceeding 915-1 31

-- Highest concentration of SAR 42.3

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

BTEX > 915-1 No

Approximate areal extent (square feet) 150

Vertical Extent > 915-1 (in feet) 8

**Groundwater**

Number of groundwater samples collected 0

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

Was extent of groundwater contaminated delineated? No

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

Depth to groundwater (below ground surface, in feet) 100

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

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

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

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

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

**Surface Water**

0 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?

Nine (9) total background soil samples were collected within undisturbed locations adjacent to the project area.

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?

QB Energy will continue to delineate impacts associated with the project through field investigation and laboratory analysis. QB Energy will report findings to the investigation and sampling on supplemental documentation for ECMC review and approval.

**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 only impacts identified as part of the project to date are considered historical impacts. Since they are 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.

In order to address the arsenic and pH exceedances in the sample locations described in the Initial Site Assessment section, QB Energy requests consideration of Rule 915.e.(2) C to remove pH as a constituent of concern in the site assessment soil samples. A sample of produced fluid from a tank on the H16OU Pad (Location ID 334148) was utilized for comparison of pH and arsenic values of fluids present in the OP15 to G15OU pipeline. Fluids obtained from the tank exhibited pH levels of 7.29 and arsenic levels of <0.0100 (see Table 2 in the attached Site Investigation Report). QB Energy believes that a release of fluids from this formation would not lead to elevated pH and arsenic values exhibited in the site assessment soil samples associated with this project.

In order to address the SAR exceedances at the sample locations [20230721-OP15-(PL06-EW)@9] and [20230721-OP15-(PL06)@9], QB Energy requests an alternative allowable range of 0.0437 to 11.9 for SAR per ECMC Table 915-1 Footnote 1 based on the SAR concentrations demonstrated in the background soil samples. Please see Table 2 in the attached Site Investigation Report. The SAR concentrations exhibited in [20230721-OP15-(PL06-EW)@9] and [20230721-OP15-(PL06)@9] are within the background range for SAR.

**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**

- No \_\_\_\_\_ Bioremediation ( or enhanced bioremediation )
- No \_\_\_\_\_ Chemical oxidation
- No \_\_\_\_\_ Air sparge / Soil vapor extraction
- No \_\_\_\_\_ Natural Attenuation
- No \_\_\_\_\_ 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.

In the event that groundwater is encountered during investigation or remediation of this project, QB Energy will notify the ECMC and attempt to collect a representative sample for laboratory analysis.

# 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 2024 Q2 Q3 Q4 REM 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: \$ 15000

## WASTE DISPOSAL INFORMATION

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

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.

All excavation areas will be returned to grade with suitable material in preparation for final reclamation activities pursuant to the ECMC 1000 Series Rules.

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? Yes

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

Did the local soil conservation district provide the seed mix? Yes

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

Proposed site investigation commencement. 06/28/2022

Proposed completion of site investigation. 07/01/2025

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 07/01/2025

Proposed date of completion of Remediation. 10/01/2025

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 field assessment and desktop review, it is believed there is no reasonable pathway for groundwater within the investigation area. A tributary to Alkali Creek crosses the pipeline ROW approximately 200 feet north of the PL01 sample locations. The nearest registered water wells (permit #46651-MH and 46809-MH) have a static water level of 61 feet and 45 feet below ground surface (bgs), respectively. The deepest soil samples to date were collected from 10 feet bgs. Caerus requests approval to compare site soil samples to ECMC RSSLs.

In order to address the arsenic and pH exceedances in the sample locations described in the Initial Site Assessment section, QB Energy requests consideration of Rule 915.e.(2) C to remove pH as a constituent of concern in the site assessment soil samples. A sample of produced fluid from a tank on the H16OU Pad (Location ID 334148) was utilized for comparison of pH and arsenic values of fluids present in the OP15 to G15OU pipeline. Fluids obtained from the tank exhibited pH levels of 7.29 and arsenic levels of <0.0100 (see Table 2 and Appendix B in the attached Site Investigation Report). QB Energy believes that a release of fluids from this formation would not lead to elevated pH and arsenic values exhibited in the site assessment soil samples associated with this project.

In order to address the SAR exceedances at the sample locations [20230721-OP15-(PL06-EW)@9] and [20230721-OP15-(PL06)@9], QB Energy requests an alternative allowable range of 0.0437 to 11.9 for SAR per ECMC Table 915-1 Footnote 1 based on the SAR concentrations demonstrated in the background soil samples. Please see Table 2 in the attached Site Investigation Report. The SAR concentrations exhibited in [20230721-OP15-(PL06-EW)@9] and [20230721-OP15-(PL06)@9] are within the background range for SAR.

This form was originally submitted on 01/08/2025. 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 and laboratory reports removed from the report of work completed.

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

Signed: Blair Rollins

Title: Environmental Specialist

Submit Date: \_\_\_\_\_

Email: brollins@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: \_\_\_\_\_

Date: \_\_\_\_\_

Remediation Project Number: 24190

**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**

|           |                              |
|-----------|------------------------------|
| 404184169 | SITE INVESTIGATION REPORT    |
| 404185871 | LABORATORY ANALYTICAL REPORT |
| 404185872 | LABORATORY ANALYTICAL REPORT |
| 404185873 | LABORATORY ANALYTICAL REPORT |
| 404185874 | LABORATORY ANALYTICAL REPORT |
| 404185875 | LABORATORY ANALYTICAL REPORT |
| 404185877 | LABORATORY ANALYTICAL REPORT |
| 404185878 | LABORATORY ANALYTICAL REPORT |
| 404185879 | LABORATORY ANALYTICAL REPORT |
| 404185881 | LABORATORY ANALYTICAL REPORT |
| 404185882 | LABORATORY ANALYTICAL REPORT |
| 404185883 | LABORATORY ANALYTICAL REPORT |

Total Attach: 12 Files

**General Comments**

| <u>User Group</u> | <u>Comment</u>                                                                                                                                                                                             | <u>Comment Date</u> |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Environmental     | ECMC has returned this form to Draft (RTD) due to the laboratory report not being secured. Laboratory reports shall be separated from the site investigation report and submitted as separate attachments. | 04/25/2025          |

Total: 1 comment(s)