

State of Colorado
Energy & Carbon Management Commission

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Document Number:
403967920
Receive Date:
05/01/2025

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: CAERUS PICEANCE LLC	Operator No: 10456	Phone Numbers
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: 05/01/2025

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: John Heil

Date: 05/21/2025

Remediation Project Number: 24190

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

403967920	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
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
404211988	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 14 Files

General Comments

User Group

Comment

Comment Date

Environmental	ECMC approves the request to compare site soil samples to ECMC RSSLs.	05/21/2025
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Environmental	ECMC approves the request for 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.	04/25/2025
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Total: 2 comment(s)