

State of Colorado
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203
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Document Number:

403919833

Receive Date:

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	Phone Numbers
Address: 1001 17TH STREET #1600		Phone: (720) 830-7549
City: DENVER	State: CO	Zip: 80202
Contact Person: Derek Horn	Email: dhorn@qb-energy.com	Mobile: ()

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 30042 Initial Form 27 Document #: 403368299

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: 483962	API #: _____	County Name: RIO BLANCO
Facility Name: J14-496 (15D-14) Flowline Release	Latitude: 39.700728	Longitude: -108.136451	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NESW	Sec: 14	Twp: 4S	Range: 96W Meridian: 6 Sensitive Area? No

SITE CONDITIONS

General soil type - USCS Classifications GM 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

Other Potential Receptors within 1/4 mile

Division of Water Resources (DWR) well permit 56839, located 0.12 miles north of the Location, lists a depth to water of 74 feet below ground surface (bgs) and sits approximately 150 feet lower in elevation than the Location. Based on this data, depth to groundwater at the Location is estimated to be greater than 100 feet bgs.

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	To be determined	Soil sampling and 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.

No investigation has been completed since the second quarter of 2023 due to safety concerns associated with interim reclamation and drill cuttings management activities. Please see Initial Form 27 Document 403368299 for a description of activities completed to date. On 7/3/2023, the Form and associated request for a reduced suite of total petroleum hydrocarbons (TPH), sodium adsorption ratio (SAR), and hexavalent chromium was approved, as well as a request to compare all future analytical results to Table 915-1 Residential Soil Screening Levels (RSSLs). Form 27 Document 403576754 was submitted in the third quarter of 2023 to request an annual reporting schedule, which was approved on 11/22/2023.

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):

Excavation is planned to remove impacted soil. An appropriate number of confirmation soil samples will be collected to confirm successful remediation. All samples will be submitted for TPH and SAR. Caerus is requesting to remove hexavalent chromium as a contaminant of concern. See Remediation Summary section and the attached Report of Work Completed (ROWC) for additional details.

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

Number of soil samples collected 6
Number of soil samples exceeding 915-1 6
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 50

NA / ND

-- Highest concentration of TPH (mg/kg) 4280
-- Highest concentration of SAR 21.8
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 4

Groundwater

Number of groundwater samples collected 0
Was extent of groundwater contaminated delineated? Yes
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?

☐ 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?

See Proposed Sampling section.

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 source was a failed flowline which has been replaced.

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.

Due to safety concerns associated with interim reclamation and drill cuttings disposal activities, additional site investigation has been on hold since third quarter of 2023. Investigation and remediation is planned to resume during third and fourth quarters of 2024. All impacted soil will be removed via excavation and transported to a licensed facility for disposal. An appropriate number of confirmation soil samples will be collected to confirm successful remediation. All samples will be submitted for TPH and SAR.

In order to address the hexavalent chromium result detected during the initial investigation that exceeds Table 915-1 RSSLs, Caerus is requesting removal of hexavalent chromium as a contaminant of concern for this remediation project in accordance with Table 915-1 Footnote 9. Sample 20230314_J14-496_SWALL@4' indicated a value of 0.401 milligrams per kilogram (mg/kg). For hexavalent chromium analyses, the laboratory has a method detection limit (MDL) of 0.255 mg/kg and a reporting detection limit (RDL) of 1.0 mg/kg. Due to limitations of laboratory equipment and subsequent reporting, results detected between the MDL and RDL are designated as estimated values. Additionally, all other samples did not detect hexavalent chromium above the laboratory MDL. Therefore, Caerus is requesting an alternative screening level for hexavalent chromium of 1.0 mg/kg.

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 Annual 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, Caerus has general liability insurance in the amount of \$1M, and Caerus has umbrella insurance, which sits over the general liability insurance in the amount of \$75M. The umbrella and general liability insurance covers property damage, bodily injury to third parties, and sudden or accidental pollution under a combined \$76M.

Operator anticipates the remaining cost for this project to be: \$ 25000

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.

Any disturbance will be returned to grade of active working surface of the well pad for continued operation. When the site is decommissioned at a later date, it will be reclaimed in accordance with 1000 Series regulations.

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. 03/06/2023

Actual Spill or Release date, or date of discovery. 03/06/2023

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/14/2023

Proposed site investigation commencement. 03/14/2023

Proposed completion of site investigation. _____

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

This form is being submitted to comply with the approved annual reporting requirement, to notify ECMC of intent to resume remediation for this project, and to request an alternative screening level for hexavalent chromium of 1.0 mg/kg per Table 915-1 Footnote 9. Assuming the request is approved, all samples are compliant with the proposed alternative screening level. Therefore, Caerus is requesting an updated reduced analytical suite to include TPH and SAR only for all future investigation.

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: _____

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: _____

Date: _____

Remediation Project Number: 30042

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**

403919897	SITE INVESTIGATION REPORT
403996084	ANALYTICAL RESULTS

Total Attach: 2 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)