

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

1120 Lincoln Street, Suite 801, Denver, Colorado 80203

Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

404051807

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: (720) 830-7549

PROJECT, PURPOSE & SITE INFORMATION**PROJECT INFORMATION**

Remediation Project #: 25510 Initial Form 27 Document #: 403140056

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: 482310	API #: _____	County Name: GARFIELD
Facility Name: RA11 Dumpline Release	Latitude: 39.458841	Longitude: -107.847325	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENE	Sec: 11	Twp: 7S	Range: 94W
Meridian: 6	Sensitive Area? Yes		

SITE CONDITIONS

General soil type - USCS Classifications CL

Most Sensitive Adjacent Land Use Rangeland/grazing

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

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	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 see documents associated with ECMC Remediation Project # 25510 for a list of activities completed prior to the fourth quarter of 2024.

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):

When season site conditions allow, additional background samples will be collected from comparable depths to the site assessment samples to determine natural SAR concentrations within the project area.

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 41

-- Highest concentration of TPH (mg/kg) 684.6
4

Number of soil samples exceeding 915-1 33

-- Highest concentration of SAR 22.9

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

BTEX > 915-1 Yes

Approximate areal extent (square feet) 1423

Vertical Extent > 915-1 (in feet) 0

Groundwater

Number of groundwater samples collected 0

Highest concentration of Benzene (µg/l)

Was extent of groundwater contaminated delineated? No

Highest concentration of Toluene (µg/l)

Depth to groundwater (below ground surface, in feet)

Highest concentration of Ethylbenzene (µg/l)

Number of groundwater monitoring wells installed

Highest concentration of Xylene (µg/l)

Number of groundwater samples exceeding 915-1

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?

Throughout the duration of the project, 23 total background samples were collected ranging from 1-13 feet bgs north, south, east, and west of the facility.

☐ 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?

Please see Proposed Soil Sampling section for additional details.

REMEDIAL ACTION PLAN

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? Yes

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

The failed dumpline will be 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.

On 9/23/24, one (1) grab soil sample [20240923-RA11-(SB01)@15] was collected from SB01 which was centered approximately 2 feet south offset of the previous point of release (POR) sample in order to achieve vertical delineation of impacts.

On 9/24/24, one (1) grab soil sample [20240924-RA11-(SB01)@25] was collected from SB01 to continue vertical delineation of impacts.

On 10/2/24, three (3) grab soil samples [20241002-RA11-(SB02)@5], [20241002-RA11-(SB02)@15], and [20241002-RA11-(SB02)@25] were collected from SB02 for horizontal delineation south of the POR. Additionally, three (3) grab soil samples [20241002-RA11-(SB03)@5], [20241002-RA11-(SB03)@15], and [20241002-RA11-(SB03)@25] were collected from SB03 for horizontal delineation east of the POR.

All samples collected on 9/23/24, 9/24/24, and 10/2/24 were submitted for analysis of the approved reduced analyte suite of TPH and SAR.

Excluding SAR, the 9/23/24, 9/24/24, and 10/2/24 sample analytical results did not exceed the ECMC Table 915-1 within the investigation area (see Table 2 and Table 3 in the attached site investigation report). SAR was detected at concentrations above ECMC Table 915-1 at soil samples [20241002-RA11-(SB02)@5], [20241002-RA11-(SB02)@15], [20241002-RA11-(SB02)@25], [20241002-RA11-(SB03)@15], and [20241002-RA11-(SB03)@25].

Soil Remediation Summary

☐ In Situ

☒ Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes _____ Excavate and offsite disposal

_____ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) _____ 475

_____ 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

No _____ 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 Q4 2024 Semi-Annual 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: \$ 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 51

E&P waste (liquid) description hydrocarbon impacted soil mixed with hydrovac water

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility: Greenleaf Environmental Services

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.

Caerus plans to return the disturbed area to the active working surface of the well pad 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? 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? _____

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. 06/09/2022

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/10/2022

Proposed site investigation commencement. 10/01/2024

Proposed completion of site investigation. _____

REMEDIAL ACTION DATES

Proposed start date of Remediation. 10/01/2023

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

QB Energy requests approval from ECMC for a reduced analyte suite of SAR only for future delineation soil sampling associated with this project.

This form was originally submitted on 01/10/2025. 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 05/05/2025 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: _____

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: 25510

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**

404186957	LABORATORY ANALYTICAL REPORT
404186959	LABORATORY ANALYTICAL REPORT
404186960	LABORATORY ANALYTICAL REPORT
404189347	SITE INVESTIGATION REPORT

Total Attach: 4 Files

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

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
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Total: 1 comment(s)