

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:
404013183

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 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) 285.2739
City: DENVER State: CO Zip: 80202		Mobile: (970) 987.4650
Contact Person: Brett Middleton	Email: bmiddleton@qb-energy.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 37501 Initial Form 27 Document #: 403963003

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: LOCATION	Facility ID: 334263	API #: _____	County Name: MESA
Facility Name: DIVIDE CREEK UNIT-68S91W 26SWNE	Latitude: 39.332554	Longitude: -107.516847	
** correct Lat/Long if needed: Latitude: 39.332928		Longitude: -107.516751	
QtrQtr: SWNE	Sec: 26	Twp: 8S	Range: 91W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications OH Most Sensitive Adjacent Land Use Forest Service land

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

The nearest surface water feature is Brook Creek, located approximately 0.26 miles to the south of the Site at an elevation of approximately 10200 feet amsl.

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) No impacts identified

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
No	SOILS	No impacts identified	Field Investigation and Soil Sampling

INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

A third-party consultant visited the DCU2 well pad (Site) on October 22, 2024, to collect samples to evaluate for the presence of contaminants in soil as part of the upgrade of the Site's secondary containment. Upon arrival, it was observed that the upgraded secondary containment system had been installed, featuring a high-density polyethylene (HDPE) liner and steel walls. The footprint of the new containment system is smaller than the original secondary containment area. During field activities, the consultant collected four total soil samples. Two soil samples were collected from within the boundaries of the historic secondary containment but outside the limits of the newly installed system. Sample "20241022-DCU2-(FC-T)@0.5" was collected immediately east of the new containment, and sample "20241022-DCU2-(FC-T02)@0.5" was collected immediately west. Laboratory analytical results indicate compliance for all samples with Table 915-1 Residential Soil Screening Limits (RSSLs) except arsenic in all samples. All samples exhibit compliance with respect to Table 915-1 Soil Suitability for Reclamation (SSR) standards. Analytical results indicate that all investigation samples contain chromium (VI) concentrations of less than 1.0 mg/kg, but laboratory detection limits were not low enough to determine if concentrations meet RSSL allowable concentrations.

Additionally, two background soil samples were taken from undisturbed locations southwest and southeast of the well pad. Due to local topography and the need to cut into the hillside during construction of the well pad's working surface, background samples were collected from a depth consistent with the constructed surface. Roadcuts near the site were utilized to access subsurface soils for these background samples. A map showing the background soil sample locations is included as an attachment to the included report.

Continued in 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):

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 4

Number of soil samples exceeding 915-1 4

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 0

NA / ND

-- Highest concentration of TPH (mg/kg) 42.68
6

-- Highest concentration of SAR 1.79

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 0

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)

 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?

Two background soil samples were taken from undisturbed locations southwest and southeast of the well pad. Due to local topography and the need to cut into the hillside during construction of the well pad's working surface, background samples were collected from a depth consistent with the constructed surface. Roadcuts near the site were utilized to access subsurface soils for these background samples. A map showing the background soil sample locations is included as an appendix to the attached report.

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?

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.

No impacts have been identified for the site. Therefore, no source removal is required.

REMEDICATION 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.

A review of available records revealed that the nearest documented groundwater well is located at an elevation of approximately 7320 feet above mean sea level (amsl) and has a documented depth to water of 4 feet below ground surface (bgs), resulting in a computed groundwater elevation of 7,316 feet amsl. This is approximately 3,084 feet lower than the Site. Considering the significant depth to groundwater in the vicinity of the location and the absence of groundwater encountered in excavations during this assessment, QB seeks approval to apply Table 915-1 Residential Soil Screening Limits (RSSLs) to the evaluation of project success, as no path to groundwater appears to exist.

QB requests approval for the application of ECMC Table 915-1, Footnote 9, to substitute the analytical laboratory's Reported Detection Limit (RDL) of 1.0 mg/kg as an alternative screening level for chromium (VI). Although chromium (VI) concentrations exceeding ECMC Table 915-1 RSSLs may be present in the investigation area, they are below the laboratory RDL for chromium (VI) in all samples.

QB requests approval for the application of ECMC Table 915-1, Footnotes 1 and 11, to modify the acceptable arsenic concentration used to evaluate project success to 5.26 mg/kg, and thereby to remove arsenic as a constituent of concern.

Pending approval of the above requests, all investigation samples fall below ECMC Table 915-1 RSSL standards or alternative limits. QB therefore requests closure of Remediation Project 37501 with a No Further Action (NFA) determination.

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

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 \$1M, and QB Energy 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: \$ 0 _____

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? Yes

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? Yes

Does the previous reply indicate consideration of background concentrations? Yes

Does Groundwater meet Table 915-1 standards? Yes

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.

No reclamation is required, samples were collected from the pad working surface. Full site reclamation will occur after well P&A activities are complete and all location equipment has been removed.

Is the described reclamation complete? Yes

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. _____

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/22/2024

Proposed site investigation commencement. 10/22/2024

Proposed completion of site investigation. 10/22/2024

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

Continued from INITIAL ACTION SUMMARY section:

Laboratory analytical results indicate that background arsenic concentrations exceed ECMC Table 915-1 RSSL standards, with concentrations ranging from 3.29 to 4.21 mg/kg applying Footnote 11 - 1.25 x background the allowable maximum concentration is 5.26 mg/kg. Additionally, laboratory analytical results indicate that all background soil samples contain chromium (VI) concentrations of less than 1.0 mg/kg, but laboratory detection limits were not low enough to determine if concentrations meet RSSL allowable concentrations.

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

Signed: Brett Middleton

Title: EHS Lead

Submit Date: _____

Email: bmiddleton@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: 37501

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

404013380	SITE INVESTIGATION REPORT
404013385	ANALYTICAL RESULTS
404013388	ANALYTICAL RESULTS

Total Attach: 3 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
--	--	---------------------

Total: 0 comment(s)