

State of Colorado  
Energy & Carbon Management Commission

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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 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 #: 12690 Initial Form 27 Document #: 401835704

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

Yes Multiple Facilities

Facility Type: SPILL OR RELEASE	Facility ID: 457575	API #: _____	County Name: GARFIELD
Facility Name: K22 596 3C-27 well flowline release	Latitude: 39.599025	Longitude: -108.159530	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NESW	Sec: 22	Twp: 5S	Range: 96W Meridian: 6 Sensitive Area? No
Facility Type: SPILL OR RELEASE	Facility ID: 473128	API #: _____	County Name: GARFIELD
Facility Name: K22 596: Well 13D-22 Flowline	Latitude: 39.599303	Longitude: -108.158915	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NESW	Sec: 22	Twp: 5S	Range: 96W Meridian: 6 Sensitive Area? No

Facility Type: SPILL OR RELEASE Facility ID: 478368 API #: County Name: GARFIELD  
Facility Name: K22-596 (16D-21) Flowline Release Latitude: 39.599193 Longitude: -108.159059  
\*\* correct Lat/Long if needed: Latitude: Longitude:  
QtrQtr: NESW Sec: 22 Twp: 5S Range: 96W Meridian: 6 Sensitive Area? No

Facility Type: SPILL OR RELEASE Facility ID: 481706 API #: County Name: GARFIELD  
Facility Name: N PARACHUTE #WF11D K22 596 Flowline Latitude: 39.599175 Longitude: -108.158807  
\*\* correct Lat/Long if needed: Latitude: Longitude:  
QtrQtr: NESW Sec: 22 Twp: 5S Range: 96W Meridian: 6 Sensitive Area? No

Facility Type: SPILL OR RELEASE Facility ID: 487033 API #: County Name: GARFIELD  
Facility Name: 4A-27 Flowline Latitude: 39.598932 Longitude: -108.159508  
\*\* correct Lat/Long if needed: Latitude: Longitude:  
QtrQtr: NESW Sec: 22 Twp: 5S Range: 96W Meridian: 6 Sensitive Area? No

### **SITE CONDITIONS**

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Non-Crop Land:  
Shrub and Brush

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:

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste      | <input type="checkbox"/> Other E&P Waste             | <input type="checkbox"/> Non-E&P Waste |
| <input checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids             | _____                                  |
| <input type="checkbox"/> Oil                       | <input type="checkbox"/> Tank Bottoms                |  |
| <input checked="" type="checkbox"/> Condensate     | <input type="checkbox"/> Pigging Waste               |  |
| <input type="checkbox"/> Drilling Fluids           | <input type="checkbox"/> Rig Wash                    |  |
| <input type="checkbox"/> Drill Cuttings            | <input type="checkbox"/> Spent Filters               |  |
|  | <input type="checkbox"/> Pit Bottoms                 |  |
|  | <input type="checkbox"/> Other (as described by EPA) | _____                                  |

## DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	SOILS	Undetermined	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 document number 402351375 for this information.

## 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 ):

An appropriate number of confirmation soil samples will be collected to demonstrate vertical and horizontal compliance with ECMC Table 915-1 Residential Soil Screening Level standards.

### Proposed Groundwater Sampling

Will groundwater samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

QB Energy continues to monitor SVE05 for the presence of groundwater. The SVE well was developed with a total depth of 42 feet below ground surface and groundwater has never been identified in the well.

### Proposed Surface Water Sampling

Will surface water samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

Monitoring of the West Fork of Parachute Creek will occur through the continued collection of quarterly water samples at North Parachute Ranch (NPR) Baseline locations NPR2SP and NPR6ST.

## Additional Investigative Actions

Additional alternative investigative actions described in attached Site Investigation Plan ( summary ):

Please refer to document number 402094835 for this information.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

### NA / ND

Number of soil samples collected     0    

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

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

\_\_\_\_\_ Highest concentration of SAR \_\_\_\_\_

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

BTEX > 915-1   No  

Approximate areal extent (square feet)     200    

Vertical Extent > 915-1 (in feet)     9

**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  
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?

\_\_\_\_\_

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?

Vertical and horizontal compliance will be required following successful remediation of the project through SVE or removal during operational upgrades or reclamation activities.

**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.

QB Energy conducts seasonal solar-powered SVE and quarterly powered trailer SVE events from existing remediation wells on the location to remediate impacts associated with REM 12690. When SVE trailer exhaust conditions indicate remediation is nearing completion, QB Energy will collect representative samples to demonstrate vertical and horizontal compliance with ECMC Table 915-1 standards.

**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.

When SVE trailer exhaust conditions indicate remediation is nearing completion, QB Energy will collect representative samples to demonstrate vertical and horizontal compliance with ECMC Table 915-1 standards.

**Soil Remediation Summary**

**In Situ**

**Ex Situ**

Yes Bioremediation ( or enhanced bioremediation )

\_\_\_\_\_ Excavate and offsite disposal

No Chemical oxidation

\_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_

Yes Air sparge / Soil vapor extraction

\_\_\_\_\_ Name of Licensed Disposal Facility or ECMC Facility ID # \_\_\_\_\_

Yes Natural Attenuation

\_\_\_\_\_ Excavate and onsite remediation

No Other \_\_\_\_\_

\_\_\_\_\_ Land Treatment

\_\_\_\_\_ Bioremediation (or enhanced bioremediation)

\_\_\_\_\_ Chemical oxidation



# 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 Annual 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: \$ 100000 \_\_\_\_\_

## 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.

All disturbances were backfilled to match the preexisting grade of the working pad surface.

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). 09/18/2018

Proposed site investigation commencement. 07/08/2019

Proposed completion of site investigation. 07/12/2019

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/01/2019

Proposed date of completion of Remediation. 09/01/2026

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 will continue to conduct SVE events on a quarterly basis in support of remediation for this project, and will provide results to the ECMC on the continued annual reporting frequency.

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: 01/10/2025

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: 05/13/2025

Remediation Project Number: 12690

**COA Type****Description**

	Comply with all outstanding COAs.
1 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**

404054080	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404054089	REMEDATION PROGRESS REPORT
404054093	REMEDATION PROGRESS REPORT
404054094	REMEDATION PROGRESS REPORT
404054099	MAP
404054100	MAP
404202707	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 7 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)