

# State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

402796347

Receive Date:

08/30/2021

Report taken by:

ALEX FISCHER

## Site Investigation and Remediation Workplan (Initial 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 COGCC 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) 285-2925
City: DENVER State: CO Zip: 80202		Mobile: (970) 640-6919
Contact Person: Blair Rollins	Email: brollins@caerusoilandgas.com	

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 20098 Initial Form 27 Document #: 402796347

#### 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: 316614	API #: _____	County Name: RIO BLANCO
Facility Name: FEDERAL-62S95W 15SENE	Latitude: 39.877758	Longitude: -108.034847	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SENE	Sec: 15	Twp: 2S	Range: 95W Meridian: 6 Sensitive Area? Yes

#### SITE CONDITIONS

General soil type - USCS Classifications GC Most Sensitive Adjacent Land Use Non-crop land  
rangeland

Is domestic water well within 1/4 mile? Yes 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 water well outlined above is located adjacent to the well pad in support of mining of minerals.

## 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 associated with this project have 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.

This form is being submitted to comply with COGCC Rule 911.a.(4) and COAs requiring the removal of unused equipment on location. This form serves as the initial notification to remove the dehy unit and partially buried tank at the location.

### 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 ):

As part of the partially buried tank removal process, Caerus will visually inspect and field screen the base and side walls of the tank removal excavation. Caerus will also visually inspect and field screen the area below the dehy unit. If field screening indicates impacts to soil in any of these locations, sample (s) will be collected from the areas exhibiting the highest degree of impacts to be analyzed for the full list of constituents listed in COGCC Table 915-1. Any impacted soil will be segregated, stockpiled on location, and the vertical and horizontal extent of impacts will be investigated through additional excavation and confirmation soil sampling. Continued in "Additional Investigative Actions" below.

#### Proposed Groundwater Sampling

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

Groundwater is not expected to be encountered during the proposed activities. In the event that groundwater is encountered during the removal of the partially buried tank and dehy unit, the COGCC will be notified, and a representative sample will be collected and submitted for laboratory analysis for constituents listed on COGCC Table 915-1.

#### 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 ):

Continuing from "Proposed Soil Sampling": If no impacts are observed, one sample will be collected from the base of the excavation for the partially buried tank, and one sample will be collected from the base below the dehy unit. All samples will be submitted for laboratory analysis of the full list of constituents listed in COGCC Table 915-1.

## SITE INVESTIGATION REPORT

### SAMPLE SUMMARY

**Soil**

Number of soil samples collected \_\_\_\_\_ 0  
Number of soil samples exceeding 915-1 \_\_\_\_\_  
Was the areal and vertical extent of soil contamination delineated? \_\_\_\_\_  
Approximate areal extent (square feet) \_\_\_\_\_

**NA / ND**

\_\_\_\_\_ Highest concentration of TPH (mg/kg) \_\_\_\_\_  
\_\_\_\_\_ Highest concentration of SAR \_\_\_\_\_  
\_\_\_\_\_ BTEX > 915-1 \_\_\_\_\_  
\_\_\_\_\_ Vertical Extent > 915-1 (in feet) \_\_\_\_\_

**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?

☐ 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****SOURCE REMOVAL SUMMARY**

Describe how source is to be removed.

No source removal is warranted at this time as no impacts associated with the partially buried tank or dehy unit have been identified. If impacts are identified, an assessment will be made to determine the appropriate strategy for impact removal.

**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.

A remediation plan will be presented to the COGCC if impacts are observed during the proposed activities.

**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 COGCC Facility ID # \_\_\_\_\_

\_\_\_\_\_ Natural Attenuation

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ 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.

Groundwater is not expected to be encountered during the proposed activities. In the event that groundwater is encountered during the removal of the partially buried tank or dehy unit, the COGCC will be notified, and a representative sample will be collected and submitted for laboratory analysis for constituents listed in COGCC Table 915-1.

## **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 \_\_\_\_\_

### **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 \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_

E&P waste (liquid) description \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

# 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 disturbance and excavation areas will be returned to the active working surface for continued operation. At the end of the life of the facility, Caerus will conduct reclamation of the facility in accordance with the COGCC 1000 series rules.

Is the described reclamation complete? \_\_\_\_\_

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). \_\_\_\_\_

Proposed site investigation commencement. 09/13/2021

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**

If historic impacts are discovered, Caerus will provide notification to the COGCC via an eForm 19.

Background soil samples will be collected from comparable, nearby non-impacted native soil for establishing background soil conditions including pH, EC, and SAR, per Rule 915.e.(2).D.

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

Signed: Blair Rollins

Title: EHS Specialist

Submit Date: 08/30/2021

Email: brollins@caerusoilandgas.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: ALEX FISCHER

Date: 09/24/2021

Remediation Project Number: 20098

**Condition of Approval****COA Type****Description**

	Per Rule 913.b.(2), the Operator will conduct sampling and analysis of soil, and groundwater--if encountered, to determine the horizontal and vertical extent of any contamination in excess of the cleanup concentrations in Table 915-1 for soil and groundwater. The Operator shall analyze samples for the complete Table 915-1 list and shall delineate the extent of impacts using the Table 915-1 Protection of Groundwater Soil Screening Level Concentrations.
	Guidance Documents for 911.a.(4). indicate that Operator may submit field screening results and photo documentation only. Operator shall collect a discrete sample from each facility and analyze for Table 915-1 Clean Up Concentrations using the Protection of Groundwater Screening Level Concentrations. Operator shall comply with Rule 915.e.(2).B by collecting samples from areas most likely to have been impacted and by collecting an appropriate number of representative soil samples to delineate the horizontal and vertical extents of contamination
2 COAs	

**Attachment Check 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**

402796347	FORM 27-INITIAL-SUBMITTED
402796442	SITE INVESTIGATION PLAN

Total Attach: 2 Files

**General Comments**

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
	Comply with COGCC Rule 1105 flowline abandonment requirements, including notification and verification requirements.	09/24/2021
Environmental	Location ID: 316614 is FED/FED Doc #40244740 Is a BLM Sundry for Interim Reclamation. Open Gulch is located app 535 feet west of the Location. Location is within a High Priority Habitat Area.	09/23/2021
Environmental	Inspection Doc #679704814 and photo log Doc #679704816 shows some alleged apparent discoloration of soil and gravel near the separator and dehy unit. Above ground piping observed going to the the PBV. Inspection Doc #700402288, states "No berm present. Top of tank flush to ground level." Inspection Doc #700702815, states "dehy is disconnected and not in use (see unused equipment)" "op,en top ground tank is open to Atmosphere," and under Venting, "open top ground tank is open to Atmosphere"	09/23/2021
Environmental	REM 5012 if for Reserve, flare, fresh water and cuttings - Pit Closure - Federal 2S-95-15-42BP with the following COA: "Based on review of data presented, it appears that no further action is necessary at this time at this site. However, should future conditions at the site be discovered of contaminant concentrations in soils exceeding COGCC standards or if groundwater is found to be significantly impacted, COGCC may require that further investigation and/or remediation be conducted."  REM 7451 is for the closure of a Partially Buried Tank closure and the Notice of Completion (see Doc #s2231456 and 2231519) with the following COA: " Based on review of data presented, it appears that no further action is necessary at this time at this site. However, should future conditions at the site be discovered of contaminant concentrations in soils exceeding COGCC standards or if groundwater is found to be significantly impacted, COGCC may require that further investigation and/or remediation be conducted."  IT SHOULD BE NOTED THAT EXCEEDANCE OF pH AND ARSENIC WERE LEFT IN PLACE AT THE TIME OF CLOSURE/	09/23/2021

Total: 4 comment(s)