

State of Colorado  
Oil and Gas Conservation Commission

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Report taken by:  
Steven Arauza

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 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) 778-2314
City: DENVER State: CO Zip: 80202		Mobile: (970) 778-2314
Contact Person: Jake Janicek	Email: jjanicek@caerusoilandgas.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 9489 Initial Form 27 Document #: 2211269

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: NONFACILITY	Facility ID: 444666	API #: _____	County Name: GARFIELD
Facility Name: UNOCAL-ENCANA-66S96W "Unocal 5" 335618		Latitude: 39.551093	Longitude: -108.114113
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: NESW	Sec: 4	Twp: 6S	Range: 96W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications OH Most Sensitive Adjacent Land Use RANGELAND  
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:**

- 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	30' x 70' x 42' deep	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.

Please see documents associated with COGCC Remediation Project 5631 and 9489 for activities completed prior to the second quarter of 2022.

Please see the attached Report of Work Completed (ROWC) which details recent site investigation and soil sampling activities.

**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 ):

All future soil samples will be analyzed for TPH and benzene only per a COA listed on COGCC Document 402571462. As per the attached ROWC, additional assessment is warranted to the northeast to delineate total petroleum hydrocarbon (TPH) impacts.

**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 26

-- Highest concentration of TPH (mg/kg) 1638

Number of soil samples exceeding 915-1 5

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

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

BTEX > 915-1 No

Approximate areal extent (square feet) 2100

Vertical Extent > 915-1 (in feet) 42

**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?

See the attached ROWC detailing background sampling efforts.

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?

The horizontal extent needs to be defined to the northeast.

**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 compromised production tank which has been removed.

**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.

This blower and remediation approach mentioned in previous Form 27s will continue to be operated during prime sunlight hours to maximize power use. Please see the attached report that details SVE operation.  
  
The attached ROWC details recent site investigation and soil sampling results. Based on these results additional delineation of TPH impacts is warranted to the northeast of the release area. The schedule will depend on site access and drill rig availability.

**Soil Remediation Summary**

In Situ

Ex Situ

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

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

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

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

Yes  Air sparge / Soil vapor extraction

Natural Attenuation

Other \_\_\_\_\_

Name of Licensed Disposal Facility or COGCC 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 2rd Quarter 2022 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: \$ 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 \_\_\_\_\_

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: \_\_\_\_\_

# 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 COGCC 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 warranted at this time.

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. 07/27/2009

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 07/27/2009

Proposed site investigation commencement. 10/23/2009

Proposed completion of site investigation. \_\_\_\_\_

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 07/27/2009

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**

Between June 23 and 27, 2022, five soil borings were advanced using hollow-stem auger to total depths ranging from 53 to 62 feet bgs. Soil samples were collected every 5 to 10 feet using a split spoon. Based on the analytical results of historical and recent site investigation efforts, soil impacts remain in the remediation area, and horizontal definition of soil impacts has not been achieved to the northeast of the former produced water tank location. The attached ROWC details the findings of this investigation.

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

Signed: Chris McKisson

Title: Managing Partner

Submit Date: 08/09/2022

Email: chris.mckisson@confluence-cc.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: Steven Arauza

Date: 09/09/2022

Remediation Project Number: 9489

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

	Provide a revised Implementation Schedule with proposed start and completion dates for Site Investigation and Remediation on the next Supplemental Form 27, per Rule 913.d
1 COA	

**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**

403129873	FORM 27-SUPPLEMENTAL-SUBMITTED
403130164	REMEDATION PROGRESS REPORT
403130197	SITE INVESTIGATION REPORT

Total Attach: 3 Files

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

Environmental	Comply with outstanding COAs.	09/09/2022
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Total: 1 comment(s)