

**State of Colorado**  
**Oil and Gas Conservation Commission**

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Receive Date:  
11/11/2022  
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 #: 24102 Initial Form 27 Document #: 403085558

**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: 482178	API #: _____	County Name: GARFIELD
Facility Name: 34F tank 9395	Latitude: 39.397288	Longitude: -107.983817	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: senw	Sec: 34	Twp: 7s	Range: 95w Meridian: 6 Sensitive Area? Yes

**SITE CONDITIONS**

General soil type - USCS Classifications OL 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? Yes

Other Potential Receptors within 1/4 mile

None

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- X 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

Table with 4 columns: Impacted?, Impacted Media, Extent of Impact, How Determined. Row 1: Yes, SOILS, Areal Extent: ~200 sq. ft., SAMPLING AND LAB 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.

Initial actions following the tank failure are documented in Form 19 (Doc #403048941) and the initial assessment in Form 27 (Doc #403085558).

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

X Will soil samples be collected as part of this investigation? ( Number, type (grab/composite), analyses, and locations of samples ):

Soil removal via excavation is proposed at the location of impacted soils below the liner damage found during the initial assessment. Confirmation soil sampling will be completed to determine source removal. All samples will will be analyzed according to the approved reduced analyte suite of TPH, BTEX, SAR, pH, arsenic, barium, hexavalent chromium, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 1-methylnaphthalene, and naphthalene.

Proposed Groundwater Sampling

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

Proposed Surface Water Sampling

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

Continued monitoring of the spring from the French Drain outlet onsite is proposed on a quarterly basis for all Table 915-1 constituents.

Additional Investigative Actions

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

Four soil samples will be collected from comparable nearby, non-impacted native soil for purposes of establishing background soil conditions including pH, electrical conductivity (EC), and sodium adsorption ratio (SAR), per Rule 915.e.(2).D.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 10

-- Highest concentration of TPH (mg/kg) 62.5

Number of soil samples exceeding 915-1 10

-- Highest concentration of SAR 2.6

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

BTEX > 915-1 No

Approximate areal extent (square feet) 200

Vertical Extent > 915-1 (in feet) 5

**Groundwater**

Number of groundwater samples collected 0

ND Highest concentration of Benzene (µg/l) \_\_\_\_\_

Was extent of groundwater contaminated delineated? No

ND Highest concentration of Toluene (µg/l) \_\_\_\_\_

Depth to groundwater (below ground surface, in feet) \_\_\_\_\_

ND Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_

Number of groundwater monitoring wells installed \_\_\_\_\_

ND Highest concentration of Xylene (µg/l) \_\_\_\_\_

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

NA 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?

Soil removal is proposed at the location of impacted soils below the liner damage found during the initial assessment. Confirmation soil samples will be completed and analyzed according to the approved reduced analyte suite. Background samples will be collected for comparison to Table 915-1 soil suitability conditions. Continued monitoring of the spring from the French Drain outlet onsite is proposed on a quarterly basis for all Table 915-1 constituents.

**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.

Upon discovery of the failed tank, it was emptied and removed from service. Repair or replacement is planned.

**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.

Once impacted soil has been removed, confirmation soil samples will be collected and analyzed according the approved reduced analyte suite to determine source removal. Excavated soils will be landfarmed onsite. A Remediation Workplan is included as an attachment.

**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  
Yes \_\_\_\_\_ Land Treatment  
No \_\_\_\_\_ Bioremediation (or enhanced bioremediation)  
No \_\_\_\_\_ Chemical oxidation  
Yes \_\_\_\_\_ Other \_\_\_\_\_ Aeration will be completed as needed

**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 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: \$ 25000 \_\_\_\_\_

## 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 \_\_\_\_\_

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

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

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_ 25

E&P waste (liquid) description hydrovac rinsate mixed with soil impacted with E&P waste \_\_\_\_\_

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

Non-COGCC 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 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.

Reclamation is not required at this time. Once impacted soils have been removed, the excavation will be backfilled with suitable material to return the pad to a working surface.

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. 05/06/2022

Actual Spill or Release date, or date of discovery. 05/06/2022

### SITE INVESTIGATION DATES

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

Proposed site investigation commencement. 07/01/2022

Proposed completion of site investigation. 09/30/2022

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/01/2023

Proposed date of completion of Remediation. 06/30/2023

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**

Due to winter conditions, remediation is planned for the Spring or Summer of 2023 when ground conditions are conducive. A proposed remediation workplan is included as an attachment that details proposed landfarm activities.

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

Signed: Steve Sivigliano

Title: Environmental Project Mgr

Submit Date: 11/11/2022

Email: steve.sivigliano@camposepc.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: 12/12/2022

Remediation Project Number: 24102

**COA Type****Description**

	Comply with COGCC Rule 608 requirements for Oil and Gas Facilities during proposed relocation of the tank battery. Coordinate with COGCC OGLA to ensure proper reporting of the new tank battery configuration.
	Approval of this Form 27 does not constitute approval for the Operator to reuse treated oily waste at this time.  Operator will comply with Rule 905.a.(3) requirements by submitting a Beneficial Reuse plan on a Form 4 Sundry for COGCC approval prior to any reuse of treated material.
	Comply with Land Treatment Requirements outlined under COGCC Rule 905.e.(2),
3 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**

403152959	FORM 27-SUPPLEMENTAL-SUBMITTED
403153857	SITE INVESTIGATION REPORT
403226122	REMEDIAL ACTION PLAN

Total Attach: 3 Files

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

Environmental	Comply with outstanding COAs.	12/12/2022
Environmental	Under Proposed Soil Sampling, Operator lists an approved reduced analyte suite that fails to include 2-methylnaphthalene.	12/12/2022

Total: 2 comment(s)