

State of Colorado
Energy & Carbon Management Commission

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403681576
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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 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) 285-2925
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 #: 7966 Initial Form 27 Document #: 2146043

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: LINED EARTHEN PIT CLOSURE

SITE INFORMATION

No Multiple Facilities

Facility Type: PIT	Facility ID: 433716	API #: _____	County Name: GARFIELD
Facility Name: H29A 433716	Latitude: 39.588380	Longitude: -108.070600	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SENE	Sec: 29	Twp: 5S	Range: 95W Meridian: 6 Sensitive Area? No

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

There are two streams and one monitoring well (Permit #50041) within a 1/4 mile of the well pad. East Fork Parachute Creek is located 0.1 miles south, and an unnamed ephemeral tributary is adjacent to the east side of the location.

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	To be determined	Soil sampling and 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 ECMC Document # 402583267 for initial actions taken in support of this project.

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):

Caerus will continue the advancement of soil borings to characterize the historic pit and associated impacts. Potential pathways to groundwater will be evaluated once soil impacts are fully delineated vertically.

Proposed Groundwater Sampling

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

Groundwater has not been encountered during any activities conducted in support of this project.

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 76

-- Highest concentration of TPH (mg/kg) 8574

Number of soil samples exceeding 915-1 76

-- Highest concentration of SAR 89.5

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

BTEX > 915-1 No

Approximate areal extent (square feet) 10000

Vertical Extent > 915-1 (in feet) 92

Groundwater

Number of groundwater samples collected 0

NA Highest concentration of Benzene (µg/l) _____

Was extent of groundwater contaminated delineated? Yes

NA Highest concentration of Toluene (µg/l) _____

Depth to groundwater (below ground surface, in feet) 0

NA Highest concentration of Ethylbenzene (µg/l) _____

Number of groundwater monitoring wells installed 0

NA Highest concentration of Xylene (µg/l) _____

Number of groundwater samples exceeding 915-1 0

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?

Additional soil borings are required to complete vertical and horizontal delineation of the project area.

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.

Caerus is in the process of determining the extent of contamination associated with the historic pit. A source removal plan for this project will be developed and the information will be provided to the ECMC once full extent of contamination is known.

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.

Between June 13 and 17, 2022, additional investigation activities were completed associated with the pits at the Location. 12 soil borings were advanced using a truck mounted drill rig to delineate soil impacts. One soil sample was collected every 10 vertical feet from each soil boring, totaling 76 soil samples, to delineate soil impacts associated with the pit. Soil borings were logged using 2-foot stainless steel split-spoons every 10 vertical feet. Based on the analysis of data collected to date, organic and inorganic exceedances of ECMC Table 915-1 Residential Soil Screening Levels remain undelineated in the pit area. Soil impacts have not been delineated vertically or horizontally at the Location.

Soil Remediation Summary

In Situ

Ex Situ

No Bioremediation (or enhanced bioremediation)

____ Excavate and offsite disposal

No Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) _____

No Air sparge / Soil vapor extraction

_____ Name of Licensed Disposal Facility or COGCC Facility ID # _____

 No Natural Attenuation

 Excavate and onsite remediation

 Yes Other A plan will be submitted following delineation of impacts.

 No Land Treatment

 No Bioremediation (or enhanced bioremediation)

 No Chemical oxidation

 No Other _____

Groundwater Remediation Summary

 No Bioremediation (or enhanced bioremediation)

 No Chemical oxidation

 No Air sparge / Soil vapor extraction

 No Natural Attenuation

 No 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 has not been encountered during site investigation activities to date. If groundwater is encountered during future site investigation activities, Caerus will attempt to collect a sample for characterization.

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 Q4 2023 SVE 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, 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: \$ 150000

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.

The footprint for the backfill pit occurs within the pad boundary for this location. During reclamation, the backfill pit may be part of the pad's working surface and/or covered by recontoured and reseeded slopes installed to meet reclamation objectives. Interim and final reclamation activities will be carried out in accordance with ECMC 1000 Series requirements and will be documented accordingly.

Is the described reclamation complete? No

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. 02/04/2013

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 02/04/2013

Proposed site investigation commencement. 06/01/2022

Proposed completion of site investigation. _____

REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/01/2015

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

This form has been submitted to provide a 4th quarter status update to Remediation Project 7966. Caerus will continue to conduct quarterly SVE events but requests a change in required reporting schedule from quarterly to annually.

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: 03/15/2024

Email: brollins@caerusoilandgas.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: Steven Arauza

Date: 03/27/2024

Remediation Project Number: 7966

COA Type**Description**

	<p>The Operator's request to use an annual reporting schedule is NOT approved at this time.</p> <p>Project update from 11/22/2023 (doc #403590419) states that "Caerus is in the process of preparing a plan for additional investigation to include vertical and horizontal delineation of impacts exceeding Table 915-1."</p> <p>Additional work is required to delineate the horizontal and vertical extent of impacts.</p>
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**

403681576	FORM 27-SUPPLEMENTAL-SUBMITTED
403681893	REMEDATION PROGRESS REPORT

Total Attach: 2 Files

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

Environmental	Comply with outstanding COAs.	03/27/2024
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Total: 1 comment(s)