

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	Phone Numbers Phone: (970) 285-2925 Mobile: (970) 640-6919
Address: 1001 17TH STREET #1600		
City: DENVER	State: CO	Zip: 80202
Contact Person: Blair Rollins	Email: brollins@caerusoilandgas.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 15310 Initial Form 27 Document #: 402330404

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: SPILL OR RELEASE	Facility ID: 436984	API #: _____	County Name: MESA
Facility Name: SPILL/RELEASE POINT	Latitude: 39.174408	Longitude: -108.100545	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SWN	Sec: 22	Twp: 10S	Range: 96W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications GM Most Sensitive Adjacent Land Use Agricultural Operation
Is domestic water well within 1/4 mile? Yes 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	Surficial	Laboratory analytical results

INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

The site was excavated the failed section of pipeline was replaced and soils were sampled to determine if impacts existed.

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):

Additional sampling will be necessary for vertical delineation of SAR and EC, Caerus is requesting continue remediation under 915.f.

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 16 -- Highest concentration of TPH (mg/kg) 107
 Number of soil samples exceeding 915-1 6 -- Highest concentration of SAR 35.8
 Was the areal and vertical extent of soil contamination delineated? Yes BTEX > 915-1 No
 Approximate areal extent (square feet) 4750 Vertical Extent > 915-1 (in feet) 3

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) 100' 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?
 Area background samples have previously been collected for Arsenic. Caerus requests Arsenic concentration of comparable background which have been identified at (4.5-6.8mg/kg) see previously submitted document #402591029, #402574382, and #402574381.

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?
 Per COGCC verbal request, additional sampling will be necessary for vertical delineation of SAR and EC. Under COGCC Rule 915.f, Caerus requests the Director's permission to comply with the version of Table 910-1 that was previously in effect if Remediation is completed by January 15, 2022. Caerus proposes 2 soil borings within the triangular area identified with 910-1 exceedances for SAR and EC to determine vertical delineation. See attached map. The number of spill investigation points may vary based on onsite assessment. As part of the historic spill project review and document preparation, Caerus will be implementing a phased approach to prioritize sampling and investigation projects. This Remediation Workplan includes a proposed site investigation plan. With approval and weather permitting, investigation activities will be conducted, and results will be reported in a supplemental Form 27.

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 remediation plan is on hold pending vertical definition sampling. (Caerus proposed to excavate and stockpile the top six inches of soil for post remediation reclamation and excavate approximately 52 c.u. yard of SAR impacted soils see figure 2. the top 6" will be blended with imported topsoil and recontoured to meet pre-excavation grade, refer to Document # 402529576.)

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 reduced analyte suite was approved on 11/19/2020 doc # 402529576. pending 915.f. approval vertical delineation will occur for SAR and EC analytes.

Soil Remediation Summary

In Situ Ex Situ
 _____ Bioremediation (or enhanced bioremediation) _____ Excavate and offsite disposal

_____ Chemical oxidation
_____ Air sparge / Soil vapor extraction
_____ Natural Attenuation
_____ Other _____

If Yes: Estimated Volume (Cubic Yards) _____
Name of Licensed Disposal Facility or COGCC Facility ID # _____
_____ Excavate and onsite remediation
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.

If groundwater is encountered at any of the proposed sampling locations, Caerus will attempt to collect a representative groundwater sample for laboratory analysis of table 915-1 with findings reported in a supplemental Form 27.

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? 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.

Caerus will recontour and seed the site and install stormwater controls to prevent erosion and reclamation further details will be provided when site closure is requested.

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? Yes _____

If YES, does the seed mix comply with local soil conservation district recommendations? Yes _____

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. 05/14/2020 _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/14/2014 _____

Proposed site investigation commencement. 04/30/2014 _____

Proposed completion of site investigation. 08/26/2014 _____

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:

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OPERATOR COMMENT

Caerus is providing this Form 27 as the required quarterly status update for the project. Caerus is in the process of completing field assessment to demonstrate vertical delineation of the project area. Caerus will provide results from field activities within the third quarter 2021 Form 27.

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: 08/13/2021 _____

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: Steven Arauza _____

Date: 09/21/2021 _____

Remediation Project Number: 15310 _____

Condition of Approval

COA Type

Description

1 COA	Throughout this Form 27, Operator indicates a request to proceed under Rule 915.f. The Operator's request to proceed under Rule 915.f was denied under previous F27 submittal (doc #402643150). Operator shall remove the denied Rule 915.f request from future F27 submittals unless the Operator's F27 includes a new Rule 915.f request based on new information.
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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

402779207	FORM 27-SUPPLEMENTAL-SUBMITTED
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Total Attach: 1 Files

General Comments

User Group

Comment

Comment Date

Environmental	Comply with outstanding COAs.	09/21/2021
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Total: 1 comment(s)