

State of Colorado
Oil and Gas Conservation Commission

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402408071
Receive Date:
05/28/2020
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. Refer to Rules 340, 905, 906, 907, 908, 909, and 910

OPERATOR INFORMATION

Name of Operator: CAERUS PICEANCE LLC	Operator No: 10456	Phone Numbers
Address: 1001 17TH STREET #1600		Phone: (970) 285.2739
City: DENVER State: CO Zip: 80202		Mobile: (970) 987.4650
Contact Person: Brett Middleton	Email: bmiddleton@caerusoilandgas.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION
Remediation Project #: 11786 Initial Form 27 Document #: 401756576

PURPOSE INFORMATION

<input type="checkbox"/> 901.e. Sensitive Area Determination	<input type="checkbox"/> 909.c.(5), Rule 910.b.(4): Remediation of impacted ground water
<input type="checkbox"/> 909.c.(1), Rule 905: Pit or PW vessel closure	<input type="checkbox"/> Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b.
<input checked="" type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation	<input checked="" type="checkbox"/> Rule 909.e.(2)B.: Closure of remediation project
<input type="checkbox"/> 909.c.(3), Rule 907.e.: Land treatment of oily waste	<input type="checkbox"/> Rule 906.c.: Director request
<input type="checkbox"/> 909.c.(4), Rule 908.g.: Centralized E&P Waste Management Facility closure	<input type="checkbox"/> Other _____

SITE INFORMATION N Multiple Facilities (in accordance with Rule 909.c.)

Facility Type: SPILL OR RELEASE	Facility ID: 457002	API #: _____	County Name: GARFIELD
Facility Name: SPILL/RELEASE POINT	Latitude: 39.458186	Longitude: -107.906388	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENE	Sec: 8	Twp: 7S	Range: 94W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications GC Most Sensitive Adjacent Land Use grazing land

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

groundwater data based on reported data from the closest permitted water well

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste | <input type="checkbox"/> Other E&P Waste | <input type="checkbox"/> Non-E&P Waste |
| <input checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids | _____ |
| <input type="checkbox"/> Oil | <input type="checkbox"/> Tank Bottoms | |
| <input checked="" type="checkbox"/> Condensate | <input type="checkbox"/> Pigging Waste | |
| <input type="checkbox"/> Drilling Fluids | <input type="checkbox"/> Rig Wash | |
| <input type="checkbox"/> Drill Cuttings | <input type="checkbox"/> Spent Filters | |
| | <input type="checkbox"/> Pit Bottoms | |
| | <input type="checkbox"/> Other (as described by EPA) | _____ |

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	SOILS	soils at release	sampled when spill was discovered

INITIAL ACTION SUMMARY

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

When the leak was discovered the dumphine was shut in, the site was sampled to determine the extent of impacts. see attached narrative for remedial approach.

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):

see attached narrative

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

Number of soil samples collected 17

Number of soil samples exceeding 910-1 8

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

Approximate areal extent (square feet) 200

NA / ND

-- Highest concentration of TPH (mg/kg) 4015

-- Highest concentration of SAR 48.9

BTEX > 910-1 Yes

Vertical Extent > 910-1 (in feet) 10

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 910-1

-- Highest concentration of Benzene (µg/l)

-- Highest concentration of Toluene (µg/l)

-- Highest concentration of Ethylbenzene (µg/l)

-- Highest concentration of Xylene (µg/l)

NA Highest concentration of Methane (mg/l)

Surface Water

0 Number of surface water samples collected

 Number of surface water samples exceeding 910-1

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

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 separators will be moved and excavation will occur to excavate the impacted soils.

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.

see attached narrative

Soil Remediation Summary

In Situ

_____ Bioremediation (or enhanced bioremediation)
_____ Chemical oxidation
_____ Air sparge / Soil vapor extraction
_____ Natural Attenuation
_____ Other _____

Ex Situ

Yes _____ Excavate and offsite disposal
If Yes: Estimated Volume (Cubic Yards) _____ 18
Name of Licensed Disposal Facility or COGCC Facility ID # _____
Yes _____ Excavate and onsite remediation
No _____ Land Treatment
No _____ Bioremediation (or enhanced bioremediation)
No _____ Chemical oxidation
Yes _____ Other _____ soils were compliant post remediation

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.

Ground water was not encountered

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: Quarterly Semi-Annually Annually Other closure

Report Type: Groundwater Monitoring Land Treatment Progress Report O&M Report

Other closure

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:

excavaed soils were placed back in the excavation after determining hydrocarbon compliance.

Volume of E&P Waste (solid) in cubic yards 300

E&P waste (solid) description excavaed materials

COGCC Disposal Facility ID #, if applicable: 0

Non-COGCC Disposal Facility:

Volume of E&P Waste (liquid) in barrels 0

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? Yes

Do all soils meet Table 910-1 standards? No

Does the previous reply indicate consideration of background concentrations?

Are the only residual soil impacts pH, SAR, or EC at depths greater than 3 feet below ground surface? Yes

Does Groundwater meet Table 910-1 standards? Yes

Is additional groundwater monitoring to be conducted? No

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 release occurred within the pad boundry, the site will be covered with gravel and remain part of the working surface. Full reclamation will occur upon P&A of the last producing well.

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 approve the seed mix? Yes

If NO, does the seed mix comply with local soil conservation district recommendations? Yes

IMPLEMENTATION SCHEDULE

PRIOR DATES

Date of Surface Owner notification/consultation, if required. 08/29/2018

Actual Spill or Release date, if known. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/29/2018

Date of commencement of Site Investigation. 08/29/2018

Date of completion of Site Investigation. _____

REMEDIAL ACTION DATES

Date of commencement of Remediation. 09/10/2018

Date of completion of Remediation. 09/26/2018

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

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

Signed: Brett Middleton

Title: Environmental Lead

Submit Date: 05/28/2020

Email: bmiddleton@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: 08/12/2020

Remediation Project Number: 11786

COA Type

Description

	Based on review of information presented it appears that no further action is necessary at this time, and COGCC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards or if surface and/or ground water is found to be impacted, then further investigation and/or remediation activities will be required at the site. In addition, the non-working surface area disturbed by the remediation activity shall be reclaimed in accordance with the 1000 Series Reclamation Rules including the establishment of vegetative cover on non-cropland and successful growth on cropland. Landowner must approve reclamation of cropland.
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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.

<u>Att Doc Num</u>	<u>Name</u>
402408071	FORM 27-SUPPLEMENTAL-SUBMITTED
402408096	ANALYTICAL RESULTS
402408097	ANALYTICAL RESULTS
402408098	ANALYTICAL RESULTS
402408099	ANALYTICAL RESULTS
402408100	MAP
402408101	RECLAMATION PLAN
402408106	CORRESPONDENCE

402408183	DISPOSAL MANIFESTS
402408215	REMEDIATION PROGRESS REPORT

Total Attach: 10 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	<p>Under Waste Disposal Information, operator states that "excavated soils were placed back in the excavation after determining hydrocarbon compliance."</p> <p>The COGCC does not approve of the practice of backfill of open excavations with materials that exceed Table 910-1 for any of the listed constituents without explicit prior approval from the COGCC. For future projects, the operator shall ensure communication with the COGCC Environmental unit and shall make explicit requests (via eForms 19 or 27, as appropriate) for permission to use material with exceedances for Table 910-1 as backfill in advance of backfill operations.</p>	08/12/2020
Environmental	Based on the information provided, the operator's request for consideration of arsenic and EC exceedances under FAQ 31 and FAQ 32 are conditionally approved.	08/11/2020
Environmental	<p>Approval of the form 27 NFA request is not an endorsement of the reclamation plan that has been attached; Location will need to meet 1000 series reclamation requirements in order to pass final reclamation. A field inspection will be conducted at a future date to evaluate compliance with reclamation standards.</p> <p>Operator's eForm 4 Sundry Reclamation Plan can be found under doc #402455674.</p>	07/28/2020

Total: 3 comment(s)