

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:
401756576
Receive Date:
09/07/2018

Report taken by:
Steven Arauza

Site Investigation and Remediation Workplan (Initial 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 INFORMATON

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

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

SITE INFORMATION

N Multiple Facilites (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	undetermined	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 will be sampled to determine the extent of impacts. After the impacts are delineated a comprehensive remediation plan will be submitted through a supplemental for 27.

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):

Soil samples will be collected from the excavated area to provide clearance for sidewalls and the excavation bottom. 4 sidewalls will be collected and 1 bottom will be collected as grab analysis and analyzed for table 910-1 if additional excavation is required another round of sample will occur from the areas tha exceed table 910-1 until compliance is achieved.

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 1

Number of soil samples exceeding 910-1 1

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

Approximate areal extent (square feet) 100

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) 6

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

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

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

REMEDICATION 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.

Excavation will occur at the point of release. If all impacted soils can be removed clearance samples will be collected and the closure report will be submitted. If impacts go beyond the are which can be excavated a new remediation approach will be submitted through a supplemental form 27.

Soil Remediation Summary

In Situ

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

Ex Situ

_____ Excavate and offsite disposal
_____ If Yes: Estimated Volume (Cubic Yards) _____
_____ 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

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 is not expected to be encountered based on the permitted well data, if groundwater is encountered a sampling plan will be included in the supplement form 27

REMEDATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: Quarterly Semi-Annually Annually Other _____

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? _____

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: _____

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 boundary, 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. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

Attn: Steven Arauza

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

Signed: Brett Middleton

Title: Sr. EHS Specialist

Submit Date: 09/07/2018

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: 09/13/2018

Remediation Project Number: 11786

COA Type**Description**

	If groundwater is encountered during Site Investigation and/or Remediation, operator shall collect a grab sample for analysis of TPH (DRO-GRO), BTEX, PAHs, pH, EC, and SAR prior to submittal of sampling plan described in Groundwater Monitoring section of this workplan.
	Submit a Supplemental eForm 27 for this remediation project that includes the following: 1) Soil sample results and a sample location diagram for the soil sample described in this Initial eForm 27. 2) Identification of root cause of dump line failure and how recurrence on this flowline and other flowlines associated with the 17 wells on this pad will be prevented under Source Removal Summary with necessary attachments. 3) Horizontal and vertical delineation of soil and groundwater impacts with necessary attachments. 4) Comprehensive remediation plan, as described in Initial Action Summary.
	Remediation Project #11661 was approved on 8/10/2018 for a dump line release (Spill ID #11661) on the same well pad. Operator has not provided an update to Remediation Project #11661. Submit an eForm 27 Supplemental to provide a project update to Remediation Project #11661. If operator intends to address impacts from both spills under a single remediation project, this Supplemental eForm 27 may include a closure request indicating that work is to proceed under the new Remediation Project number.
	Submit an eForm 19 Supplemental Spill Report for Spill ID #457002 that includes the following: 1) Indication of whether or not any fluid was recovered during initial spill response. 2) Identification of the root cause of the failure 3) Explanation of how reoccurrence on this flowline and the other flowlines associated with 17 wells on this pad will be prevented. 4) Request for closure of spill record indicating that work is to proceed under assigned Remediation Project Number.

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**

401756576 | FORM 27-INITIAL-SUBMITTED

Total Attach: 1 Files

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

Environmental	Updated Site Investigation Sample Summary to remove BTEX results for soil sample from groundwater section.	09/13/2018
---------------	--	------------

Total: 1 comment(s)