

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:  
402490446  
Receive Date:  
09/16/2020  
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 INFORMATION

|                                       |                                     |                        |
|---------------------------------------|-------------------------------------|------------------------|
| Name of Operator: CAERUS PICEANCE LLC | Operator No: 10456                  | <b>Phone Numbers</b>   |
| 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 #: 15973 Initial Form 27 Document #: 402490446

**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 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: 477097 | API #: _____           | County Name: GARFIELD                      |
| Facility Name: Unocal 1 dumpline release       | Latitude: 39.519440 | Longitude: -108.122330 |  |
| ** correct Lat/Long if needed: Latitude: _____ |                     | Longitude: _____       |  |
| QtrQtr: NWSW                                   | Sec: 16             | Twp: 6S                | Range: 96W Meridian: 6 Sensitive Area? Yes |

**SITE CONDITIONS**

General soil type - USCS Classifications SC      Most Sensitive Adjacent Land Use Non-crop land

Is domestic water well within 1/4 mile? No      Is surface water within 1/4 mile? No

Is groundwater less than 20 feet below ground surface? No

**Other Potential Receptors within 1/4 mile**

The nearest dry drainage is located adjacent to the well pad to the north. The nearest surface water is approximately 2,320 feet west of the site. Nearest downgradient groundwater well is located approximately 5,830 feet south of the site.

# 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          | TBD              | 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.

Upon discovery of the spill, Caerus shut in the wells to stop the release. Caerus utilized manual excavation to determine if the extents of contamination could be identified for the release. Soil samples were collected to verify compliance with COGCC Table 910-1 standards for the 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 ):

Additional sampling activities will be conducted as grab samples during vertical and horizontal delineation of the site. Based on teh results from samples collected on the attached laboratory analytical spreadsheet, Caerus requests a reduced analyte suite for the project to include TPH (GRO and DRO), BTEX, SAR, and pH.

### 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 ):

In the event that groundwater is encountered during the spill impact delineation process, Caerus will attempt to collect a representative groundwater sample for COGCC Table 910-1 analysis.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 7  
Number of soil samples exceeding 910-1 5  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square feet) 250

### NA / ND

-- Highest concentration of TPH (mg/kg) 4560  
-- Highest concentration of SAR 14.8  
BTEX > 910-1 Yes  
Vertical Extent > 910-1 (in feet) 14

### Groundwater

Number of groundwater samples collected 0  
Was extent of groundwater contaminated delineated? Yes  
Depth to groundwater (below ground surface, in feet) 100'  
Number of groundwater monitoring wells installed 0  
Number of groundwater samples exceeding 910-1 0

NA Highest concentration of Benzene (µg/l) \_\_\_\_\_  
NA Highest concentration of Toluene (µg/l) \_\_\_\_\_  
NA Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_  
NA Highest concentration of Xylene (µg/l) \_\_\_\_\_  
NA Highest concentration of Methane (mg/l) \_\_\_\_\_

### Surface Water

0 Number of surface water samples collected  
0 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?

Background samples were utilized from the E09 well pad (Location ID 335856) located approximately 1.38 miles away to determine background arsenic concentrations found within the area.

Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) 15      Volume of liquid waste (barrels) 0

Is further site investigation required?

The limits of safe excavation and characterization have been reached for this project. Caerus proposes to backfill the excavation with clean native fill material and the stockpiled material (Stock) and install three soil borings to determine the extent of contamination associated with the spill. The proposed soil boring locations are outlined on the attached Unocal 1 Proposed Soil Boring Map. Caerus will collect soil samples in five foot intervals to delineate the extent of contamination. Based on the results from samples collected on the attached laboratory analytical spreadsheet, Caerus requests a reduced analyte suite for the project to include TPH (GRO and DRO), BTEX, SAR, and pH.

Approximately 15 cubic yards of impacted soil was transported to the NPR Solidification Facility (COGCC Location ID 428910) for handling and offsite disposal at Greenleaf Environmental Services near DeBeque, Colorado. This volume of soil will be replaced with native clean backfill to allow for the proposed installation of soil borings and continued operation of the well pad.



# 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.

Caerus anticipates the extent of contamination will be contained to the active well pad surface. Caerus plans to backfill the excavation to the active working surface of the well pad for continued operation.

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. \_\_\_\_\_

Actual Spill or Release date, if known. \_\_\_\_\_

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). \_\_\_\_\_

Date of commencement of Site Investigation. 07/22/2020

Date of completion of Site Investigation. 08/24/2020

### REMEDIAL ACTION DATES

Date of commencement of Remediation. \_\_\_\_\_

Date of completion of Remediation. \_\_\_\_\_

### 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: Blair Rollins \_\_\_\_\_

Title: EHS Specialist \_\_\_\_\_

Submit Date: 09/16/2020 \_\_\_\_\_

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: 09/23/2020 \_\_\_\_\_

Remediation Project Number: 15973 \_\_\_\_\_

**COA Type****Description**

|  |   |
|--|---|
|  | Submit Supplemental eForm 19 to request closure of Spill/Release ID #477097. Supplemental report shall comply with outstanding COAs, indicate that work is proceeding under an approved eForm 27, and shall reference the Remediation Project number assigned upon approval of this report. |
|--|---|

**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**

|           |                           |
|-----------|---------------------------|
| 402490446 | FORM 27-INITIAL-SUBMITTED |
| 402490577 | ANALYTICAL RESULTS        |
| 402490578 | ANALYTICAL RESULTS        |
| 402490580 | ANALYTICAL RESULTS        |
| 402490581 | ANALYTICAL RESULTS        |
| 402490582 | ANALYTICAL RESULTS        |
| 402490584 | SOIL SAMPLE LOCATION MAP  |

Total Attach: 7 Files

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

|               |   |            |
|---------------|---|------------|
| Environmental | Based on the information provided for POR, excavation, and arsenic background samples (doc #402490581), the Operator's request for a reduced analyte suite (TPH-DRO, TPH-GRO, BTEX, SAR, and pH) is conditionally approved. | 09/23/2020 |
|---------------|---|------------|

Total: 1 comment(s)