

State of Colorado  
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
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Document Number:

403685297

Receive Date:

03/07/2024

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 ECMC 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) 778-2314
City: DENVER	State: CO	Zip: 80202
Contact Person: Jake Janicek	Email: jjanicek@caerusoilandgas.com	Mobile: (970) 778-2314

## PROJECT, PURPOSE &amp; SITE INFORMATION

## PROJECT INFORMATION

Remediation Project #: 34374 Initial Form 27 Document #: 403685297

## 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: N36NWB Dumpline Release Status update - quarter 1 2024

## SITE INFORMATION

No Multiple Facilities

Facility Type: SPILL OR RELEASE	Facility ID: 485969	API #:	County Name: GARFIELD
Facility Name: N36NWB Dumpline Release	Latitude: 39.478109	Longitude: -107.727602	
** correct Lat/Long if needed: Latitude: 39.478109		Longitude: -107.727602	
QtrQtr: SESW	Sec: 36	Twp: 6S	Range: 93W Meridian: 6 Sensitive Area? Yes

## SITE CONDITIONS

General soil type - USCS Classifications OH

Most Sensitive Adjacent Land Use Agriculture

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**

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## 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	Undetermined	Soil sampling

### 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 reference the State of Colorado Energy and Carbon Management Commission (ECMC) Form 19 for Spill/Release Point ID Number 485969 for initial emergency response measures taken.

On January 30, 2024 Caerus contracted Western Slope Field Services, Inc. (WCO) to hydro-excavate overburden material from the known point of release (POR) location associated with the dumphine release. Following the daylighting of the POR location, one confirmation soil sample [20240130-N36NWB-(POR)@7.5] was collected directly beneath the POR location at 7.5 feet below ground surface (bgs). The release occurred at a longitude and latitude location of 39.478109°, -107.727602°. The POR confirmation soil sample was submitted for analysis of ECMC full list Table 915-1 constituents.

See the attached report of work completed (ROWC) for further information regarding the initial investigative sampling activities.

### 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 plans to conduct delineation investigative activities to define identified hydrocarbon impacts beneath the POR location. These activities will include using a hydrovac to confirm vertical delineation below the POR. Once vertical delineation has been achieved at the POR location, one boring will be advanced in each cardinal direction of the center of the POR impacts to achieve horizontal delineation. All horizontal delineation boreholes will be advanced to the same depth as the central borehole to confirm vertical delineation. Sampling/soil screening will be conducted in five-foot increments. Impact extents will be determined through visual, olfactory observations, and field screening soil samples for volatile organic compounds using a photoionization detector (PID). Soil samples will be submitted at each 10-foot interval including the boring terminus.

Please see the "Operator Comments" Section of this form for a continuance of this section.

#### 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 ):

Please refer to the "Proposed Soil Sampling" and "Remediation Summary" sections of this form for additional details on future delineation activities at the site.

## SITE INVESTIGATION REPORT

## **SAMPLE SUMMARY**

### **Soil**

Number of soil samples collected 1  
Number of soil samples exceeding 915-1 1  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square feet) 600

### **NA / ND**

-- Highest concentration of TPH (mg/kg) 7588  
-- Highest concentration of SAR 44.8  
BTEX > 915-1 Yes  
Vertical Extent > 915-1 (in feet) 7

### **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 915-1

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

### **Surface Water**

0 Number of surface water samples collected  
 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?

Please refer to the "Proposed Soil Sampling" and "Remediation Summary" sections of this form for additional details on future delineation activities at the site.

## **REMEDIAL ACTION PLAN**

### **SOURCE REMOVAL SUMMARY**

Describe how source is to be removed.

The source is a failed dumphine. The dumphine will be replaced and brought back online.

### **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.

Once the impacts have been delineated, a remediation plan will be developed and presented in a future Form 27.

Per ECMC Rule 915-1, Footnote 1, Caerus requests the ECMC Director for relief of arsenic as a contaminant of concern (COC). Although documented as an exceedance in the POR sample, 4.65 milligrams per kilogram (mg/kg) these concentrations are within the arsenic range (19.3 mg/kg) of site-specific background soil sample [20220613-H7(BG-01)@10-12] collected from nearby location KRK-67S92W7SENE (H7) (Facility ID: 334864). Although these background samples were collected approximately 1.73 miles from the Site, they were collected within the same mapped Natural Resources Conservation Service (NRCS) soil unit potts loam. A geographic proximity location map showing the referenced H7 [Facility ID: 334864] background soil boring location with respect to the Site is included as Figure 5 of the attached ROWC.

### **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**

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )  
\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Air sparge / Soil vapor extraction  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ 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.

## 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

### 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 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: \$ 80000

### 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:

# 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.

There is currently nothing to reclaim.

Is the described reclamation complete? \_\_\_\_\_

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. 01/30/2024

## **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). 02/01/2024

Proposed site investigation commencement. 04/22/2024

Proposed completion of site investigation. \_\_\_\_\_

## **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:

## **OPERATOR COMMENT**

Continued from the "Proposed Soil Sampling" section:

Caerus requests the ECMC Director for a reduced analyte suite for all future samples collected as part of this project based on analytical results of the sample collected at the POR per ECMC Rule 915.e.(2).C. The reduced suite includes barium, sodium adsorption ratio (SAR), total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, total xylenes, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene.

See the attached ROWC for further information regarding the proposed soil sampling.

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

Signed: Jake Janicek

Title: EHS Specialist

Submit Date: 03/07/2024

Email: jjanicek@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: 03/13/2024

Remediation Project Number: 34374

## **COA Type**

## **Description**

	Submit Supplemental eForm 19 to request closure of Spill/Release ID #485969. 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.
	Operator shall collect soil samples from areas most likely to be impacted and shall collect an appropriate number of representative soil samples to delineate the horizontal and vertical extents of contamination, per Rule 915.e.(2).B.
	Per Rule 913.b.(2), the Operator will conduct sampling and analysis of soil, and groundwater--if encountered, to determine the horizontal and vertical extent of any contamination in excess of the cleanup concentrations in Table 915-1 for soil and groundwater. The Operator shall analyze samples for the approved analyte list and shall compare analytical results for site investigation samples to both the Table 915-1 Residential Soil Screening Level Concentrations and the Protection of Groundwater Soil Screening Level Concentrations. Submit an assessment of potential pathways to groundwater via a Supplemental Form 27.
3 COAs	

## **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**

403685297	INVESTIGATION/REMEDIATION WORKPLAN (INITIAL)
403691756	SITE INVESTIGATION REPORT
403717813	FORM 27-INITIAL-SUBMITTED

Total Attach: 3 Files

## **General Comments**

## **User Group**

## **Comment**

## **Comment Date**

Environmental	Based on the information provided for soil samples (doc #403691756), the Operator's request for a reduced analyte suite of barium, sodium adsorption ratio (SAR), total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, total xylenes, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene is conditionally approved.	03/13/2024
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Total: 1 comment(s)