

# State of Colorado Oil and Gas Conservation Commission

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05/10/2023

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: CANFIELD DRILLING COMPANY | Operator No: 100382            | <b>Phone Numbers</b><br>Phone: (970) 903-4072<br>Mobile: ( ) |
| Address: BOX 453                            |                                |  |
| City: FT MORGAN                             | State: CO Zip:                 |  |
| Contact Person: Jim Hughes                  | Email: jimo.hughes@state.co.us |  |

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 23846 Initial Form 27 Document #: 403093750

#### 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: WELL                      | Facility ID:        | API #: 077-10548       | County Name: MESA                          |
| Facility Name: Canfield (OWP) 1          | Latitude: 39.360293 | Longitude: -108.245882 |  |
| ** correct Lat/Long if needed: Latitude: |                     | Longitude:             |  |
| QtrQtr: SENW                             | Sec: 17             | Twp: 8S                | Range: 97W Meridian: 6 Sensitive Area? Yes |

#### SITE CONDITIONS

General soil type - USCS Classifications CL  
 Most Sensitive Adjacent Land Use Livestock grazing  
 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**

Roan Ditch No. 2 is ~140 ft. northeast, Roan Creek is ~825 ft. southwest.

**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                         |
|--------------|----------------|------------------|--|
| UNDETERMINED | SOILS          | TBD              | Field screening and analytical results |
| UNDETERMINED | SURFACE WATER  | TBD              | Field screening and 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 COGCC Orphan Well Program plugged the Canfield (OWP) #1 well in October 2022. There was not any production equipment associated with this orphaned well.

**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 were collected for laboratory analysis of Table 915-1 constituents from areas most likely to have been impacted. Discrete soil samples were collected for confirmation of compliance with Table 915-1 from the well excavation and the stock piled material.

**Proposed Groundwater Sampling**

☐ Will groundwater samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

No pathway to groundwater was observed during the PA operations.

**Proposed Surface Water Sampling**

☒ Will surface water samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

A sample of the fluid on the surface near the wellhead was analyzed for Rule 615.e.(2) and Table 915-1 constituents.

**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 2

Number of soil samples exceeding 915-1 1

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

Approximate areal extent (square feet) 0

**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

**NA / ND**

Highest concentration of TPH (mg/kg)

Highest concentration of SAR

BTEX &gt; 915-1 No

Vertical Extent &gt; 915-1 (in feet) 0

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?

Background soil conditions were determined by the analysis of a sample collected from nearby, non-impacted native soil to establish background concentrations.

☐ 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 Canfield (OWP) #1 well was plugged and abandoned in October 2022. There was not any production equipment associated with this well on the Oil and Gas Location.

**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.

Excavated material was disposed of at an approved facility. Clean fill dirt was used to backfill the area around the PA well.

**Soil Remediation Summary**☐ In Situ☒ Ex Situ

Bioremediation ( or enhanced bioremediation )

Yes Excavate and offsite disposal

Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) 10

\_\_\_\_\_ Air sparge / Soil vapor extraction

\_\_\_\_\_ Natural Attenuation

\_\_\_\_\_ Other \_\_\_\_\_

Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_

0

\_\_\_\_\_ 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 Facility closure

### 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.

The scope of work described in this Initial Site Investigation and Remediation Workplan will be completed by the COGCC Orphaned Well Program. The COGCC is not an oil and gas operator. This document will be used, in part, to bid out various phases of this facility closure.

Operator anticipates the remaining cost for this project to be: \$

### 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:

## REMEDIATION COMPLETION REPORT

### REMEDIATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project?

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.

Reclamation will be in accordance with COGCC 1000 Series Rules, and will be addressed during a separate phase of the OWP work. Final reclamation will be conducted per COGCC reclamation rules and prioritized based on OWP funding and staff availability. Scope of reclamation planning will include a plan to address and avoid any effect on reclamation from 915-1 inorganic exceedances that are documented on this form; and will be accessible upon request once developed.

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? \_\_\_\_\_

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. 05/22/2023

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. \_\_\_\_\_

### SITE INVESTIGATION DATES

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

Proposed site investigation commencement. 07/11/2022

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**

This Site Investigation and Remediation Work Plan is being submitted by the COGCC Orphaned Well Program. The inorganic exceedance of pH from the well head sample, taken at a depth of ~5' has been shared with the OWP Reclamation Specialist. A plan to address this exceedance, should it affect successful reclamation, will be implemented. Arsenic concentrations from the well head sample are in line with other nearby project concentration levels of native arsenic this area, namely the Curtis Mann (OWP) #1. The background sample taken at this location was 4.38 mg/kg. This location is approximately 1 mile to the southeast. The stock piled material, sampled on 9/30/22, and the water that was sampled on 7/11/22 have been removed from the location and disposed of at an approved facility. There is no longer water present at this location. The five samples summarized on the Table 915-1 Summary Table, attached, are the only samples that pertain to this project. Lab reports contain sample results from other projects as well as this one.

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

Signed: Jim Hughes

Title: OWP West EPS

Submit Date: 05/10/2023

Email: jimo.hughes@state.co.us

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: 06/26/2023

Remediation Project Number: 23846

**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. |
| 1 COA |   |

**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**

|           |                                |
|-----------|--------------------------------|
| 403346079 | FORM 27-SUPPLEMENTAL-SUBMITTED |
| 403346126 | SOIL SAMPLE LOCATION MAP       |
| 403346128 | ANALYTICAL RESULTS             |
| 403346129 | ANALYTICAL RESULTS             |
| 403346130 | ANALYTICAL RESULTS             |
| 403346132 | ANALYTICAL RESULTS             |

Total Attach: 6 Files

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

|  |  |                     |
|--|--|---------------------|
|  |  | Stamp Upon Approval |
|--|--|---------------------|

Total: 0 comment(s)