

State of Colorado  
Oil and Gas Conservation Commission

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Document Number:  
402724628  
Receive Date:  
06/29/2021  
Report taken by:  
ALEX FISCHER

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.

Closure request is not available for an Initial Site Investigation and Remediation Workplan.

OPERATOR INFORMATION

Name of Operator: <u>CM PRODUCTION LLC</u>	Operator No: <u>10352</u>	<b>Phone Numbers</b>
Address: <u>390 UNION BLVD SUITE 620</u>		Phone: <u>(970) 946 3761</u>
City: <u>LAKEWOOD</u> State: <u>CO</u> Zip: <u>80228</u>		Mobile: <u>( )</u>
Contact Person: <u>Jacob Harter</u>	Email: <u>jharter@cottonwoodconsulting.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 19198 Initial Form 27 Document #: 402724628

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: <u>WELL</u>	Facility ID: _____	API #: <u>057-06011</u>	County Name: <u>JACKSON</u>
Facility Name: <u>MARGARET SPAULDING (OWP) 2</u>	Latitude: <u>40.725967</u>	Longitude: <u>-106.498523</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWNE</u>	Sec: <u>28</u>	Twp: <u>9N</u>	Range: <u>81W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications OL Most Sensitive Adjacent Land Use Agriculture/Ranching and Rangeland

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? Yes

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

Water well permit #180306 is located approximately 1/3 mile northeast of the subject well. Additionally, irrigation ditches and other surface water resources are located approximately 150 feet east and down gradient of the subject well site.

**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	GROUNDWATER	TBD	Field Screening and Analytical Results
UNDETERMINED	SOILS	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 will be plugging the Margaret Spaulding (OWP) #2 well and decommissioning the associated flow lines and production equipment. Soil samples will be collected in accordance with COGCC Rule 915.e(2)B. Samples will be collected from the wellhead excavation, flow line path(s), as well as any other area likely to have been impacted. Samples will be submitted for laboratory analysis of Table 915-1 constituents.

**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 for laboratory analysis of Table 915-1 constituents from areas most likely to have been impacted. Visual inspection and field screening of soils will be conducted in the areas surrounding the well head, flow line, and production equipment (if present) on location. Based on these observations, discrete soil samples may be collected and submitted for laboratory analysis of Table 915-1 constituents. See attached map for proposed soil sampling locations.

**Proposed Groundwater Sampling**

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

If a pathway to groundwater is discovered or groundwater is encountered during remediation activities, a sample(s) will be collected and analyzed for Table 915-1 constituents.

**Proposed Surface Water Sampling**

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

No surface water sampling is anticipated at this time.

**Additional Investigative Actions**

Additional alternative investigative actions described in attached Site Investigation Plan ( summary ):

Field personnel will perform a visual inspection of the site. If the presence of hydrocarbons is expected based on visual or olfactory observations, field personnel will field screen soils and evaluate hydrocarbon impacts in the field prior to sampling at each location.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 0  
Number of soil samples exceeding 915-1 \_\_\_\_\_  
Was the areal and vertical extent of soil contamination delineated? \_\_\_\_\_  
Approximate areal extent (square feet) \_\_\_\_\_

### NA / ND

\_\_\_\_\_ Highest concentration of TPH (mg/kg) \_\_\_\_\_  
\_\_\_\_\_ Highest concentration of SAR \_\_\_\_\_  
BTEX > 915-1 \_\_\_\_\_  
Vertical Extent > 915-1 (in feet) \_\_\_\_\_

### 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?

Background soil conditions will be determined by the analysis of a sample(s) collected from nearby, non-impacted native soil to establish background concentrations. Background sample(s) will be collected and analyzed for Table 915-1 constituents.

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.

Initial site investigation will include field screening of soils near the wellhead, flow line path(s), and any other area likely to have been impacted using a PID and visual/olfactory observations. Additionally, discrete soil samples will be collected in these areas to profile any potential impacts. Depending on results from the initial site investigation, a remediation plan will be created to address site impacts and will be documented on a supplemental Form 27.

### 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.

Impacted material discovered during the scope of this work plan will be removed and disposed of as E&P waste at an approved facility. Any additional remediation activities will be documented on a supplemental Form 27.

### Soil Remediation Summary

In Situ  Ex Situ

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

Yes \_\_\_\_\_ Excavate and offsite disposal  
If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 12  
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.



## 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). 06/01/2021

Proposed site investigation commencement. 07/15/2021

Proposed completion of site investigation. 09/30/2021

### **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**

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

Signed: Jacob Harter

Title: Consultant

Submit Date: 06/29/2021

Email: jharter@cottonwoodconsulting.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: ALEX FISCHER

Date: 07/23/2021

Remediation Project Number: 19198

### **Condition of Approval**

<b><u>COA Type</u></b>	<b><u>Description</u></b>
	Upon discovery of flowline release during the PA and removal, the operator must investigate the extent of release and provide form 19 and a supplemental form 27 with proposed investigation sample sites for COGCC staff approval.
	If groundwater is encountered during any excavation, a minimum of one surface/groundwater sample shall be collected per Rule 913.c.(6) for those constituents listed in Table 915-1.
	Since the on location flowline is still present a discrete soil samples shall be collected and analyzed for Table 915-1 Cleanup Concentrations using the Protection of Groundwater Screening Level Concentrations.  Additionally, a discrete sample should be collected in the vicinity of Soil Boring 1 found the the Fremont report, Doc # 1313053 and analyzed for Table 915-1 Cleanup Concentrations using the Protection of Groundwater Screening Level Concentrations.

	057-06011 has been PAed in 1019 or 2020. Comply with COGCC Rule 435.a Notice of Intent to Abandon and Rule 435.b. Subsequent Report of Abandonment.
	Guidance Documents for 911.a.(4). indicate that Operator may submit field screening results and photo documentation only. Operator shall collect a discrete sample from each facility and analyze for Table 915-1 Clean Up Concentrations.
	A supplemental Form 27 will be submitted within 45 days of the completion of the actions described in this submission.
	Operator shall submit a Supplemental F19 requesting closure for Spill ID: 453792 and work is proceeding under the remediation # generated with F27 Doc #402724628.
	Form 42 not found in well file. Comply with COGCC Rule 1105 flowline abandonment requirements, including notification and verification requirements.
8 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.

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
402724628	FORM 27-INITIAL-SUBMITTED
402731927	SOIL SAMPLE LOCATION MAP

Total Attach: 2 Files

### **General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Environmental	AFischer reviewed for Kris Neidel.	07/23/2021
Environmental	Spill ID: 453327 has been closed with the following COA: TPH is in exceedance of Table 910-1 concentrations. At the time the well is PAd and final reclamation of the location, impacted surficial materials will be remediated and confirmation samples shall be collected to demonstrate compliance with Table 910-1.  Spill ID: 453792 remains open. Doc # 1313053 is a site investigation report completed in May 2020 to delineate the magnitude and extent of subsurface impacts from the two (2) Spills. Impacts were detected in soil boring 1 but were below Table 910-1.	07/23/2021
Environmental	Could not open Doc #2452963.	07/23/2021
Environmental	Groundwater is present at approximately 30 feet below ground surface (bgs). Spring Gulch Ditch is approximately 148 feet east of the wellhead and Spill ID: 453792	07/23/2021
Environmental	Inspection Doc #690900122 shows well PA.	07/23/2021

Total: 5 comment(s)