FORM 27 Rev 3/16

State of Colorado
Oil and Gas Conservation Commission

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Document Number: 402673506
Receive Date:

Report taken by: KRIS NEIDEL

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: CM PRODUCTION LLC Operator No: 10352
Address: 390 UNION BLVD SUITE 620
City: LAKEWOOD State: CO Zip: 80228
Contact Person: Richard Murray

Phone Numbers
Phone: (907) 989-3092
Mobile: (970) 989-3092
Email: g.richard.murray@state.co.us

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #:
Initial Form 27 Document #: 402673506

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
- [x] Other Rule 911: Closure of Oil and Gas Facilities

SITE INFORMATION

Y Multiple Facilites (in accordance with Rule 909.c.)

Facility Type: LOCATION Facility ID: 324634 API #: County Name: JACKSON
Facility Name: MARGARET SPAULDING-69N81W 28SWSE Latitude: 40.717432 Longitude: -106.499019
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: SWSE Sec: 28 Twp: 9N Range: 81W Meridian: 6 Sensitive Area? Yes

Facility Type: TANK BATTERY Facility ID: 427281 API #: County Name: JACKSON
Facility Name: M. SPAULDING CENTRALIZED TANK BATT 1 Latitude: 40.718009 Longitude: -106.498498
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: SWSE Sec: 28 Twp: 9N Range: 81W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SW
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? Yes

Other Potential Receptors within 1/4 mile

Wolfer Ditch less than 50 feet to the east and Spring Gulch Ditch approximately 385 feet to the west. Groundwater ranges from 11 feet below ground surface (bgs) to 30 feet bgs.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- [x] **E&P Waste**
  - [x] Produced Water
  - [x] Oil
  - [ ] Condensate
  - [ ] Drilling Fluids
  - [ ] Drill Cuttings
- [x] **Other E&P Waste**
  - [ ] Workover Fluids
  - [x] Tank Bottoms
  - [ ] Pigging Waste
  - [ ] Rig Wash
  - [ ] Spent Filters
  - [ ] Pit Bottoms
  - [ ] Other (as described by EPA)
- [x] **Non-E&P Waste**
  - Potential petroleum oils and lubes (POLs)

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	GROUNDWATER	Potential impact.	Not yet investigated.
UNDETERMINED	SOILS	Throughout tank battery prod fac	visual

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 decommissioning the MS Tank Battery and Production Facility. All production equipment will be removed from the location. Fifteen 400 BBLS above ground storage tanks, Five separators, Seven empty 330 gallons totes, Ten outbuildings of various sizes from 64 sf to 660 sf above ground flowlines and 3050 feet of below grade on location flowline. All flowlines will be removed to the edge of location cut, capped, and buried per COGCC Guidelines or as approved by COGCC. All trash and debris will be removed from location (potential POLs). Soil samples will be collected in accordance with COGCC Rule 911.a(4) Guidance Document. Samples will be collected from beneath the 5 separators, flowline manifold, within the footprint of the Production Facility, from within the footprint of the tank battery, along the flowline ends and path(s) and submitted for laboratory analysis of Table 915-1 constituents.

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

- [x] 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 in the area showing the highest degree of impact during field screening activities at the various locations and equipment previously described (see Attachment); samples will be collected in accordance with COGCC Rule 911.a (4) Guidance Document. Additionally, visual inspection and field screening of soils will be conducted in the areas surrounding the flowline, including the closest point where the flowline begins at the edge of the Location and at the terminus point at the flowline manifold and separator, to determine if impacts are present. Based on these observations, soil samples may be collected and submitted for laboratory analysis of Table 915-1 constituents.

Proposed Groundwater Sampling

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

Under a separate scope of work (SOW) groundwater monitoring wells (MWs) will be installed within the proximity of the Tank Battery, Production Facility and across the Location, if warranted.

Proposed Surface Water Sampling

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

Additional Investigative Actions

- [x] Additional alternative investigative actions described in attached Site Investigation Plan (summary):

The footprint and locations of the tanks and tank battery and the foot print and locations of equipment Production Facility will be surveyed (GPS). Once all of the equipment has been removed, under a separate SOW a Phase II Subsurface Site Investigation will be proposed to delineate the horizontal and vertical extent of impact across the Location. Groundwater MWs will also be installed.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 0

Number of soil samples exceeeding 910-1 _____

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 > 910-1 _____

Vertical Extent > 910-1 (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 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) _____

_____ 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.

Any impacted soils will be removed and transported to a licensed disposal facility in accordance with Rules 905 and 906. Spill reporting will be conducted in accordance with Rule 912.

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.

N/A

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

Frequency: ☐ Quarterly ☐ Semi-Annually ☐ Annually ☒ Other Will be determined from the Phase II Subsurface Investigation results.

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? 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

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.

Reclamation will be in accordance with COGCC 1000 Series Rules.

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?

If NO, does the seed mix comply with local soil conservation district recommendations?

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). 05/03/2021

Date of commencement of Site Investigation.

Date of completion of Site Investigation.

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

COGCC OWP anticipates work to start as soon as May 3, 2021. This eForm 27 was prepared by a COGCC EPS on behalf of the COGCC OWP program.

NOTE: THE PITS, LANDFARM, AND E&P WASTE STOCKPILE WILL NOT BE Characterized AND ARE NOT PART OF THIS SCOPE OF WORK.

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

Signed:` Alex Fischer

Title: Environmental Supervisor

Submit Date:`

Email: alex.fischer@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:

Date:

Remediation Project Number:

Condition of Approval

COA Type	Description

0 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
402674537	SOIL SAMPLE LOCATION MAP

Total Attach: 1 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)