

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
404372452  
Receive Date:  
11/18/2025

Report taken by:  
ALEX FISCHER

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 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: KERR MCGEE OIL & GAS ONSHORE LP | Operator No: 47120                 | Phone Numbers<br>Phone: (720) 9294307<br>Mobile: ( ) |
| Address: P O BOX 173779                           |                                    |  |
| City: DENVER                                      | State: CO                          | Zip: 80217-3779                                      |
| Contact Person: Maxwell Moran                     | Email: DJRemediation_Forms@oxy.com |  |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 33317 Initial Form 27 Document #: 403624610

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

Yes Multiple Facilities

|  |                     |                        |  |
|--|---------------------|------------------------|--|
| Facility Type: LOCATION                            | Facility ID: 302691 | API #: _____           | County Name: WELD                          |
| Facility Name: CLIFFORD L-63N66W 3SWNW             | Latitude: 40.256946 | Longitude: -104.772234 |  |
| ** correct Lat/Long if needed: Latitude: 40.255595 |                     | Longitude: -104.772597 |  |
| QtrQtr: SWNW                                       | Sec: 3              | Twp: 3N                | Range: 66W Meridian: 6 Sensitive Area? Yes |
| Facility Type: SPILL OR RELEASE                    | Facility ID: 486821 | API #: _____           | County Name: WELD                          |
| Facility Name: Clifford 03-31 FAC Historic Release | Latitude: 40.255595 | Longitude: -104.772597 |  |
| ** correct Lat/Long if needed: Latitude: _____     |                     | Longitude: _____       |  |
| QtrQtr: SWNW                                       | Sec: 3              | Twp: 3N                | Range: 66W Meridian: 6 Sensitive Area? Yes |

## SITE CONDITIONS

General soil type - USCS Classifications SC

Most Sensitive Adjacent Land Use Crop land

Is domestic water well within 1/4 mile? Yes

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**

A building is located approximately 940 feet west of the facility.  
The nearest domestic water well is located approximately 980 feet to the west of the facility.  
Surface water is located approximately 550 feet to the southeast of the facility.  
An area with wetland characteristics is located approximately 310 feet southwest of the facility.

**DENIED**

# 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 checked="" 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          | See attached data | Inspection/soil samples/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.

Tank battery decommissioning activities were conducted at the Clifford L 03-31 Production Facility location on May 15, 2024. Visual inspection and field screening of soils was conducted following tank battery decommissioning activities, and seven (7) confirmation soil samples were collected from the former separators (SEP), above-ground storage tank (AST), and partially-buried produced water vessels (PWV), and were submitted for laboratory analysis of the full Table 915-1 analytical suite using standard ECMC-approved methods. Laboratory analytical results indicate soil impacts were present at sample location PWV1-B01@4' due to total petroleum hydrocarbons (TPH), 1,2,4- and 1,3,5- Trimethylbenzene (1,2,4- and 1,3,5-TMB), 1- and 2-Methylnaphthalene (1- and 2-M), and naphthalene (N), PWV2-B01@4' due to 1,3,5-TMB, 1-M and barium (Ba), and PWV2-S01@2' due to TPH concentrations exceeding ECMC Table 915-1 standards and site-specific background levels (x 1.25 for metals). As such, a Form 19-Initial/Supplemental Spill/Release Report (Document No. 403794953) was submitted on May 17, 2024, and the ECMC issued Spill/Release Point ID 486821. Analytical results indicate constituent concentrations in the remaining confirmation soil samples were within ECMC Table 915-1 standards and/or site specific background levels.

## 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 ):

On January 22, 2025 through March 4, 2025 excavation activities were completed to address soil impacts at the former PWV location, and soil samples were collected from depths ranging from approximately 6 to 12 feet bgs. Based on the waste characterization results for sample PWV2-B01@4', soil samples collected from the PWV excavation area were submitted for analysis of BTEX, naphthalene, TPH, TMB, PAHs and select Table 915-1 metals (As, Ba, Cd, Pb and Ni), in accordance with the COA issued for a previous Form 27-Supplemental update (Document No. 403887770). Excavation and site assessment activities to address remaining soil impacts are ongoing and will be summarized in a forthcoming Form 27-Supplemental update.

### Proposed Groundwater Sampling

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

Groundwater was encountered in the PWV excavation area at depths of approximately 10 feet bgs. On January 22, 2025, groundwater sample GW01 was collected and submitted for laboratory analysis of the full Table 915-1 analytical suite. Analytical results indicated that the benzene, 1,2,4- TMB, Chloride and Sulfate concentrations exceeded ECMC Table 915-1 groundwater standards. Pending the completion of excavation activities, temporary groundwater monitoring wells will be installed to fully define the extent and magnitude of the remaining groundwater impacts associated with sample location GW01.

### 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 ):

No additional excavation or site assessment activities have been conducted since a previous Form 27-Supplemental update was submitted (Document No. 404290570). As such, no additional screening or sampling results are provided in this document. On May 15, 2024, visual inspection and field screening of soils was conducted at 6 sidewall locations within the PWV removal excavation, 1 location at the former enclosed combustion device (ECD), 1 location at the former meter houses (MH), and 1 location at the former AST. Based on the inspection and screening results, hydrocarbon-impacted soil was not observed at the soil screening locations, and no soil samples were submitted for laboratory analysis from these areas in accordance with ECMC Operator Guidance, as described in a previous Form 27-Supplemental update (Document No. 403887770).

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 50  
Number of soil samples exceeding 915-1 17  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square feet) 8100

### NA / ND

-- Highest concentration of TPH (mg/kg) 985  
-- Highest concentration of SAR 0.921  
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 12

### Groundwater

Number of groundwater samples collected 1  
Was extent of groundwater contaminated delineated? No  
Depth to groundwater (below ground surface, in feet) 10  
Number of groundwater monitoring wells installed 0  
Number of groundwater samples exceeding 915-1 1

Highest concentration of Benzene (µg/l) \_\_\_\_\_  
ND Highest concentration of Toluene (µg/l) \_\_\_\_\_  
Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_  
Highest concentration of Xylene (µg/l) \_\_\_\_\_  
NA 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?

Four (4) background samples were collected from undisturbed native material adjacent to the Clifford L 03-31 Production Facility, at comparable depths and soil composition to the confirmation soil samples. The background soil samples were submitted for laboratory analysis of Table 915-1 metals and the Soil Suitability for Reclamation Parameters, using standard ECMC-approved methods appropriate for detecting the target analytes in Table 915-1.

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?

No additional excavation or site assessment activities have been conducted since a previous Form 27-Supplemental update was submitted (Document No. 404290570). As such, no additional screening or sampling results are provided in this document. Excavation and site assessment activities to address soil impacts at the former PWV locations are currently ongoing, and will be summarized in a forthcoming Form 27-Supplemental update. Soil samples collected from the PWV excavation area will be submitted for analysis of BTEX, naphthalene, TPH, TMB, PAHs and select Table 915-1 metals (As, Ba, Cd, Pb and Ni), in accordance with the COA issued for a previous Form 27-Supplemental update (Document No. 403887770).

Pending the completion of excavation activities, temporary groundwater monitoring wells will be installed to fully define the extent and magnitude of the remaining groundwater impacts associated with sample location GW01.

## 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.

From May 15, 2024 through March 4, 2025, approximately 4280 cubic yards of impacted material have been removed from the produced water vessel excavation area and transported to the Buffalo Ridge Landfill in Keenesburg, Colorado for disposal. Following the collection of groundwater sample GW01, approximately 2420 barrels of groundwater were removed from the wellhead and flowline excavation areas, for sidewall stability and backfill management purposes, and transported to the Kerr-McGee Aggregate Recycle Facility in Weld County, Colorado for recycling.

### REMEDICATION 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 soils remain in the PWV excavation area. Based on the waste characterization results for sample PWV2-B01@4', soil samples collected from the PWV excavation area were submitted for analysis of BTEX, naphthalene, TPH, TMB, PAHs and select Table915-1 metals (As, Ba, Cd, Pb and Ni), in accordance with the COA issued for a previous Form 27-Supplemental update (Document No. 403887770). Excavation and site assessment activities to address remaining soil impacts are ongoing and will be summarized in a forthcoming Form 27-Supplemental update.

Pending the completion of excavation activities, temporary groundwater monitoring wells will be installed to fully define the extent and magnitude of the remaining groundwater impacts associated with sample location GW01.

### Soil Remediation Summary

In Situ

Ex Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

\_\_\_\_\_ Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_

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

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

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

\_\_\_\_\_ Excavate and onsite remediation

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

\_\_\_\_\_ 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.

Groundwater monitoring wells will be installed at the site to fully define the extent and magnitude of the remaining groundwater impacts associated with sample location GW01. The temporary groundwater monitoring wells will be sampled on a quarterly basis and submitted for laboratory analysis of Table 915-1 constituents. Groundwater monitoring well installation is currently pending completion of excavation and soil assessment activities. Subsequent to the completion of excavation activities to address remaining soil impacts, a figure illustrating the proposed locations of the temporary groundwater monitoring wells will be provided in a Form 27-Supplemental update.

# 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 Project status update \_\_\_\_\_

## 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.

KMOG has sufficient insurance and bonding to fully address the anticipated costs of Remediation, including the remaining estimated costs for this project. KMOG currently has over 40 million in bonds with the Colorado Energy and Carbon Management Commission. The cost for remediation is a preliminary estimate only, costs may change upwards or downward based on site-specific information. KMOG makes no representation or guarantees as to the accuracy of the preliminary estimate.

Operator anticipates the remaining cost for this project to be: \$ 20000 \_\_\_\_\_

## 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:

Approximately 2420 barrels of groundwater were removed from the wellhead and flowline excavation areas, for sidewall stability and backfill management purposes, and transported to the Kerr-McGee Aggregate Recycle Facility in Weld County, Colorado for recycling.

Volume of E&P Waste (solid) in cubic yards \_\_\_\_\_ 4280

E&P waste (solid) description \_\_\_\_\_ Impacted soil

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-ECMC Disposal Facility: \_\_\_\_\_ Buffalo Ridge Landfill - Keenesburg, CO

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_ 2420

E&P waste (liquid) description \_\_\_\_\_ Impacted Groundwater

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_ 434766

Non-ECMC Disposal Facility: \_\_\_\_\_

## REMEDIATION COMPLETION REPORT

### REMEDIATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? No \_\_\_\_\_

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? No \_\_\_\_\_

Does the previous reply indicate consideration of background concentrations? \_\_\_\_\_

Does Groundwater meet Table 915-1 standards? No

Is additional groundwater monitoring to be conducted? Yes

Operator shall comply with the ECMC 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.

The site will be reclaimed in accordance with ECMC 1000 Series Reclamation Rules. Timeliness of reclamation initiation and completion will be subject to NFA, surface owner discretion and land use, and suitable ground conditions which allow for execution of surface reclamation activities so as to not cause unwarranted damages.

Is the described reclamation complete? Yes

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? Yes

If YES, does the seed mix comply with local soil conservation district recommendations? Yes

Did the local soil conservation district provide the seed mix? No

### 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. 11/21/2023

Actual Spill or Release date, or date of discovery. 05/17/2024

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/15/2024

Proposed site investigation commencement. 05/15/2024

Proposed completion of site investigation. 05/31/2026

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/15/2024

Proposed date of completion of Remediation. 05/31/2026

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**

No additional excavation or site assessment activities have been conducted since a previous Form 27-Supplemental update was submitted (Document No. 404290570). Therefore, no additional soil or groundwater sampling results are provided in this document.

Excavation and site assessment activities at the former PWV locations are currently pending landowner crop harvest, and will be summarized in a forthcoming Form 27-Supplemental update.

As per the COA of Form 27-Supplemental (Document no. 404109596), the off-location background samples collected from the Clifford L 03-29 Production Facility are not considered representative backgrounds. As such, additional background samples will be collected from a nearby/representative background.

Pending the completion of excavation activities, temporary groundwater monitoring wells will be installed to fully define the extent and magnitude of the remaining groundwater impacts associated with sample location GW01.

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

Signed: Maxwell Moran

Title: Environmental Advisor

Submit Date: 11/18/2025

Email: DJRemediation\_Forms@oxy.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: \_\_\_\_\_ Date: \_\_\_\_\_

Remediation Project Number: 33317

**COA Type**

**Description**

|       |  |
|-------|--|
| 0 COA |  |
|-------|--|

**ATTACHMENT 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                           |
|-------------|--------------------------------|
| 404372452   | FORM 27-SUPPLEMENTAL-SUBMITTED |
| 404439505   | IMPLEMENTATION SCHEDULE        |

Total Attach: 2 Files

**General Comments**

| User Group    | Comment   | Comment Date |
|---------------|---|--------------|
| Environmental | <p>Rule 912.a.(2) and Rule 913.d.(1) requires that Operators will investigate, clean up, and document impacts resulting from Spills and Releases as soon as the impacts are discovered. Rule 913.b.(2) is clear on the requirements for Operators to determine the horizontal and vertical extent of any contamination in excess of the cleanup concentrations in Table 915-1.</p> <p>This form is denied. Operator's argument for delay in the implementation of the proposed site investigation is not accepted. Operator shall ensure all attachments are directly relevant to the remediation plan and refrain from providing extraneous attachments.</p> | 12/03/2025   |

Total: 1 comment(s)