

State of Colorado  
Energy & Carbon Management Commission

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404276961  
Receive Date:  
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Report taken by:  
Kari Brown

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 ECOM 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>KERR MCGEE OIL &amp; GAS ONSHORE LP</u> | Operator No: <u>47120</u>                 | <b>Phone Numbers</b>         |
| Address: <u>P O BOX 173779</u>                               |   | Phone: <u>(713) 350-4906</u> |
| City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80217-3779</u>  |   | Mobile: <u>( )</u>           |
| Contact Person: <u>Ariana Ochoa</u>                          | Email: <u>DJRemediation_Forms@oxy.com</u> |                              |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 40391 Initial Form 27 Document #: 404157128

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: <u>LOCATION</u>                              | Facility ID: <u>435886</u> | API #: _____                  | County Name: <u>WELD</u>  |
| Facility Name: <u>AGGREGATE STATE TANK BATTERY 37C-16HZ</u> | Latitude: <u>40.150386</u> | Longitude: <u>-104.778643</u> |   |
| ** correct Lat/Long if needed: Latitude: _____              |                            | Longitude: _____              |   |
| QtrQtr: <u>NWSE</u>   | Sec: <u>9</u>              | Twp: <u>2N</u>                | Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

|  |                            |                               |   |
|--|----------------------------|-------------------------------|---|
| Facility Type: <u>SPILL OR RELEASE</u>                   | Facility ID: <u>489263</u> | API #: _____                  | County Name: <u>WELD</u>  |
| Facility Name: <u>Aggregate State 24 22 25-9 HZ O SA</u> | Latitude: <u>40.150810</u> | Longitude: <u>-104.778527</u> |   |
| ** correct Lat/Long if needed: Latitude: _____           |                            | Longitude: _____              |   |
| QtrQtr: <u>NWSE</u>                                      | Sec: <u>9</u>              | Twp: <u>2N</u>                | Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

## SITE CONDITIONS

General soil type - USCS Classifications SC

Most Sensitive Adjacent Land Use Crop 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**

Domestic water well: none  
Surface water: approximately 770' SE  
Wetland: an area with wetland characteristics is located approximately 770' SE and 400' W  
Spring: none  
Livestock: none  
Occupied Building: none  
High Priority Habitats: none

# 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  |
|--------------|----------------|------------------|---|
| UNDETERMINED | GROUNDWATER    | TBD              | Groundwater samples/laboratory analytical results     |
| Yes          | SOILS          | TBD              | 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.

On January 28, 2025, a release was discovered at the Aggregate State 24 22 25-9 HZ O SA location. As such, the ECMC was notified via email January 28, 2025 and a Form 19-Initial Spill/Release Report (ECMC Document No. 404072710) was submitted on January 29, 2025, and the ECMC issued Spill/Release Point ID 489263. The cause of the release was due to a dump line failure at the separator. Groundwater was not encountered. Visual inspection and field screening of soils around the pad location was conducted, and soil sample (Initial Waste Characterization @ 3") was submitted for laboratory analysis. Laboratory analytical results indicated that the TPH, BTEX, and TMB concentration Initial Waste Characterization @ 3" exceeded the applicable ECMC Table 915-1 protection of groundwater soil standards and/or background limits. Soil sample location and field screening data are presented in Table 1. The excavation soil sample locations are illustrated on Figure 1.

## 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 February 26 through July 7, 2025, excavation activities were conducted to address impacts around the release location and 9 confirmation soil samples were collected from the base and sidewalls of the current excavation extents at depths of approximately 2 - 12' below ground surface (bgs), and were submitted for laboratory analysis of the full Table 915-1 analytical suite. Laboratory analytical results soil samples for SS-05@11' and SS-W04@11' are pending and will be summarized on a forthcoming Form 27-Supplemental update. Soil analytical results are summarized in Tables 2 through 5. The laboratory analytical reports are attached. Based on waste characterization results, future confirmation samples will be submitted for boron, TPH, TMBs, BTEX, 1,2-methyl., fluorene, naph., As, Ba, Pb, and Ni.

### Proposed Groundwater Sampling

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

Groundwater has not been encountered during initial assessment or subsequent excavation activities. If groundwater is encountered during remaining assessment activities, a minimum of one grab sample will be collected as soon as practical. Groundwater samples will be submitted to an accredited laboratory for all analytes listed in ECMC Table 915-1 Organic Compounds in Groundwater and Groundwater Inorganic Parameters using standard methods appropriate for detecting the target analytes in ECMC Table 915-1.

### 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 ):

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 20

Number of soil samples exceeding 915-1 18

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

Approximate areal extent (square feet) 305

### NA / ND

-- Highest concentration of TPH (mg/kg) 34990

-- Highest concentration of SAR 1.81

BTEX > 915-1 Yes

Vertical Extent > 915-1 (in feet) 12

### 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 (BG) soil samples BG01-BG05 were collected from non-impacted like and kind material (Vona Sandy Loam) adjacent to the pad location at depths of approx. 4-6' bgs, during the Aggregate State 24, 22, 25-9HZ Separator Release, as approved on Form 19-Initial Spill/Release Report Doc. 403760776, submitted on 4/24/24. BG soil samples from the Aggregate State 13N-16HZ wellhead (located approx. 2,070' NW), and from the Ellerman 12-9 wellhead (located approx. 2980' W) have been included (collected from an area with similar soil type (sandy loam), depths, and land use (grassland)). The BG soil samples were submitted for laboratory analysis of the Soil Suitability for Reclamation Parameters and/or Table 915-1 metals using standard methods appropriate for detecting the target analytes in Table 915. Analytical results for the BG soil samples are presented on Tables 3 and 5. BG sample locations are presented on Fig. 2.

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?

Final analytical results are pending and will be summarized in a forthcoming quarterly Form 27-Supplemental update.

## 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.

Final analytical results are pending and will be summarized in a forthcoming quarterly Form 27-Supplemental update. Soils will be removed and transported to a licensed disposal facility. Disposal records will be kept on file and available upon request.

### 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.

Final analytical results are pending and will be summarized in a forthcoming quarterly Form 27-Supplemental update.

### 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 ECMC 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.



Does Groundwater meet Table 915-1 standards? \_\_\_\_\_

Is additional groundwater monitoring to be conducted? \_\_\_\_\_

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.

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. 01/28/2025

Actual Spill or Release date, or date of discovery. 01/28/2025

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/28/2025

Proposed site investigation commencement. 01/28/2025

Proposed completion of site investigation. 12/31/2025

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 01/28/2025

Proposed date of completion of Remediation. 12/31/2025

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**

Based on waste characterization results, KMOG proposes an amended sampling and analysis plan to include only detected organic constituents, detected metal constituents (including boron), and soil suitability parameters exceeding Table 915-1. Based on the data presented herein, KMOG proposes to analyze future confirmation soil samples for boron, TPH, TMBs, BTEX, 1-methylnaphthalene, 2-methylnaphthalene, fluorene, naphthalene, arsenic, barium, lead, and nickel.

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

Signed: Ariana Ochoa

Title: Sr. HSE Advisor

Submit Date: 07/30/2025

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: Kari Brown

Date: 03/17/2026

Remediation Project Number: 40391

**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**

|           |  |
|-----------|--|
| 404276961 | INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL) |
| 404277070 | SOIL SAMPLE LOCATION MAP                         |
| 404277072 | PHOTO DOCUMENTATION                              |
| 404277078 | ANALYTICAL DATA SUMMARY TABLE(S)                 |
| 404277079 | LABORATORY ANALYTICAL REPORT                     |
| 404277080 | LABORATORY ANALYTICAL REPORT                     |
| 404278337 | SOIL SAMPLE LOCATION MAP                         |
| 404281631 | LABORATORY ANALYTICAL REPORT                     |
| 404281633 | LABORATORY ANALYTICAL REPORT                     |
| 404582800 | FORM 27-SUPPLEMENTAL-SUBMITTED                   |

Total Attach: 10 Files

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

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

Total: 0 comment(s)