

State of Colorado  
Energy & Carbon Management Commission

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Report taken by:  
Alexander Ahmadian

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: <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>(970) 515-1110</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80217-3779</u>		Mobile: <u>( )</u>
Contact Person: <u>Macy Kiel</u>	Email: <u>DJRemediation_Forms@oxy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 37345 Initial Form 27 Document #: 403889733

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>TANK BATTERY</u>	Facility ID: <u>487348</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Riverbend 10 22 25-12 Facility</u>	Latitude: <u>40.064718</u>	Longitude: <u>-104.838656</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWSE</u>	Sec: <u>12</u>	Twp: <u>1N</u>	Range: <u>67W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Non-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**

The nearest domestic water well is located approximately 180 feet to the northwest of the facility.

Surface water is located approximately 1200 feet to the east of the facility.

An area with wetland characteristics is located approximately 1200 feet east of the facility.

The facility is located within a Mule Deer Migration Corridor designated high priority habitat, and within ¼ mile of Bald Eagle Active Nest Site Half Mile Buffer and Aquatic Native Species Conservation Waters designated high priority habitats.

The facility is located within ¼ mile of a 100-year floodplain.

# 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
No	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 completed at the Riverbend 10, 22, 25-12 production facility location on November 13, 2024. Groundwater was not encountered during facility decommissioning activities. Visual inspection and field screening of soils at the former production facility infrastructure location was conducted following decommissioning activities, and eight (8) soil samples were submitted for laboratory analysis of the full ECMC Table 915-1 analytical suite to determine if a release occurred. Laboratory analytical results indicated that 1-Methylnaphthalene (1-M) and naphthalene concentration in soil sample PW-E01@3' exceeded the ECMC Table 915-1 standards. Confirmation soil samples were collected from the native soil below the lined secondary containment to confirm liner integrity. Analytical results indicate that constituent concentrations in the remaining confirmation soil samples, including samples collected below the liner, were in compliance with ECMC Table 915-1 standards and/or site-specific background levels (x 1.25 for metals). Disposal of the soils are currently on hold due to wildlife stipulations, as the access road to the site is located within a Bald Eagle Active Nest Site Half-Mile Buffer. As such, soil is expected to be removed and disposed of at a licensed facility on or after August 1, 2025. A site location map is included as Figure 1. The soil sample and field screening locations are illustrated on Figure 2. Soil sample location and field screening data are presented in Table 1. Soil analytical results are summarized in Tables 2 through 5.

## 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 November 13, 2024, eight (8) soil samples were collected from the former separator (SEP), above-ground storage tanks (AST), and partially-buried produced water vessel (PWV) locations, at depths ranging from approximately 3-inches to 6 feet below ground surface (bgs). The soil samples were submitted for laboratory analysis of the full Table 915-1 analytical suite. Analytical results indicate that impacts were detected in soil sample PW-E01@3'. However, the impacted ballast material located within the lined secondary containment was removed and confirmation soil samples were collected from the native soil below the lined secondary containment to confirm liner integrity. Analytical results indicate that constituent concentrations in the remaining confirmation soil samples were in compliance with ECMC Table 915-1 standards and/or site-specific background levels (x 1.25 for metals).

### Proposed Groundwater Sampling

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

Groundwater was not encountered during facility decommissioning activities.

### 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 ):

On November 13, 2024, visual inspection and field screening of soils was conducted at one (1) location below the former AST, three (3) sidewall locations within the PWV removal excavation, one (1) location at the former meter house (MH), and one (1) location at the former enclosed combustion device (ECD). 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 the ECMC Operator Guidance document. Soil sample location and field screening data are presented in Table 1. Soil analytical results are summarized in Tables 2 through 5. The soil sample and field screening locations are illustrated on Figure 1. The laboratory analytical reports are provided as Attachment A. The field notes and a photographic log are provided as Attachment B.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 8

Number of soil samples exceeding 915-1 1

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 230

### NA / ND

ND Highest concentration of TPH (mg/kg) \_\_\_\_\_

Highest concentration of SAR \_\_\_\_\_

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 3

### Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? Yes

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?

Nine (9) background soil samples were collected from undisturbed native material adjacent to the former 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. Analytical results for the background soil samples are presented in Tables 4 and 5. Background soil sample locations are illustrated on Figure 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?

## 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.

Analytical results indicate that constituent concentrations in the eight (8) confirmation soil samples were in compliance with the ECMC Table 915-1 standards and/or site-specific background levels (x 1.25 for metals), with the exception of 1-M and naphthalene in PW-E01@3'. Confirmation soil samples were collected from the native soil below the lined secondary containment to confirm liner integrity. Analytical results indicate that constituent concentrations in the remaining confirmation soil samples were in compliance with ECMC Table 915-1 standards and/or site-specific background levels (x 1.25 for metals). Removal of the stored soils are currently on hold due to wildlife stipulations. As such, no soils have been removed during facility decommissioning operations to date.

### 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.

Analytical results indicate that constituent concentrations in the eight (8) confirmation soil samples were in compliance with the ECMC Table 915-1 standards and/or site-specific background levels (x 1.25 for metals), with the exception of 1-M and naphthalene in soil sample PW-E01@3'. Confirmation soil samples were collected from the native soil below the lined secondary containment to confirm liner integrity. Analytical results for the confirmation soil samples were in compliance with ECMC Table 915-1 allowable levels and/or site specific background levels. Groundwater was not encountered during facility decommissioning activities. Based on the analytical and soil screening data presented herein, assessment is complete at this site and no further site investigation activities are required.

**Soil Remediation Summary**

**In Situ**

**Ex Situ**

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

- \_\_\_\_\_ 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? Yes

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.

Following the completion of remediation and site assessment activities, 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? 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? 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. 07/03/2024

Actual Spill or Release date, or date of discovery. \_\_\_\_\_

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/13/2024

Proposed site investigation commencement. 11/13/2024

Proposed completion of site investigation. 11/13/2024

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 11/13/2024

Proposed date of completion of Remediation. 11/30/2025

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**

Analytical results indicate that impacts were detected in the PWV excavation area. The impacted ballast material located within the lined secondary containment was removed and confirmation soil samples were collected from the native soil below the lined secondary containment to confirm liner integrity. Analytical results for the confirmation soil samples were in compliance with ECMC Table 915-1 standards and/or site-specific background levels (x 1.25 for metals). Disposal of the stored soils are currently on hold due to wildlife stipulations, as the access road to the site is located within a Bald Eagle Active Nest Site Half-Mile Buffer. As such, soil is expected to be removed and disposed of at a licensed facility on or after August 1, 2025.

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

Signed: Macy Kiel

Title: HSE Advisor

Submit Date: 03/21/2025

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: Alexander Ahmadian

Date: 06/16/2025

Remediation Project Number: 37345

**COA Type****Description**

	ECMC approves annual reporting due to wildlife stipulations.
1 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**

404122805	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404137161	SITE MAP
404137162	SOIL SAMPLE LOCATION MAP
404137163	ANALYTICAL RESULTS
404137164	PHOTO DOCUMENTATION
404137165	ANALYTICAL RESULTS
404241851	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 7 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)