

State of Colorado  
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



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Report taken by:  
Collin Metz

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 #: 32373 Initial Form 27 Document #: 403545335

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>318753</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>STATE OF COLORADO-63N67W 16CSW</u>	Latitude: <u>40.222230</u>	Longitude: <u>-104.899810</u>	
** correct Lat/Long if needed: Latitude: <u>40.222457</u>		Longitude: <u>-104.899480</u>	
QtrQtr: <u>CSW</u>	Sec: <u>16</u>	Twp: <u>3N</u>	Range: <u>67W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>488393</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>St Co1, St16-11&amp;12&amp;14 Facility</u>	Latitude: <u>40.222457</u>	Longitude: <u>-104.899480</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>CSW</u>	Sec: <u>16</u>	Twp: <u>3N</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 Surface Water

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

St. Vrain River 400 feet (ft) west and Irrigation ditch 250 ft east. The site is located within a Mule Deer Migration Corridor, Mule Deer Severe Winter Range, Mule deer Winter Concentration Area, and within 1/4 mile of the Aquatic Native Species Conservation Waters High Priority Habitat (HPH) areas, and within a 1/4 mile of a Bald Eagle 1/2 Mile Nest Buffer HPH boundary. Groundwater at approximately 3 ft below ground surface (bgs).

## 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	Groundwater Samples/Laboratory Analytical Results
Yes	SOILS	TBD	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.

Decommissioning activities were completed at the ST CO1, ST16-11&12&14 facility on August 29 and September 3, 2024. Visual inspection and field screening of soil at two aboveground storage tanks (ASTs), one produced water vessel (PWV), three dumphole potholes, one meter house, one emission control device (ECD), and one separator were conducted following removal activities. Soil samples (AST01@0.5', AST02@1', PWV01-W01@3', PWV01-B01@5', SEP01-INLET@4', and SEP01-OUTLET@4') were submitted for analysis of full list Table 915-1 constituents to determine if a release occurred. Initial laboratory analytical results indicated that polycyclic aromatic hydrocarbon (PAH) impacts exceeding the ECMC Table 915-1 allowable level was present at the AST02@1' location. A verification sample was collected to confirm the initial results. Final results were within the Table 915-1 allowable level for all requested constituents and therefore a Form 19 Report was not submitted. Per updated ECMC guidance, verification sampling of organic exceedances is not considered valid. As such, a Form 19 Initial/Supplemental Spill/Release Report (Document No 403943281) was submitted on October 3, 2024, and the ECMC issued Spill/Release Point ID 488393. An additional soil sample (TB-B01@7') was collected following tank battery liner removal, however, all initial exceedances were subsequently cleared by verification or background data; therefore, the waste profile is no longer valid and full list Table 915-1 analyses are needed below the liner. The facility soil sample locations are depicted on Figure 1. The PID readings and soil sample results are summarized in Tables 1 and 2, respectively.

Assessment activities are ongoing and will be summarized in a subsequent Form 27 Supplemental report.

### 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 ):

Between August 29 and November 6, 2024, excavation activities were conducted to address the impacts at the former tank battery. One confirmation soil sample (TB-B01@7') was collected from beneath the liner and submitted for the site-specific waste profile. Additional volume will be collected to analyze the sample from beneath the liner for full list Table 915-1 constituents. Assessment activities are ongoing. The laboratory report is attached.

#### Proposed Groundwater Sampling

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

On November 6, 2024, one groundwater samples GW01@5' was collected from the tank battery excavation at a depth of 5 ft bgs. The groundwater sample was submitted for analysis of full list Table 915-1 constituents in groundwater. Background groundwater samples [GW-BG03(TB)@3', GW-BG04 (TB)@4', GW-BG05(TB)@5.5'] were collected for analysis of Table 915-1 inorganic constituents in groundwater. Based on the laboratory analytical results groundwater concentrations were in compliance with ECMC Table 915-1 allowable levels or background levels. No organic constituents were detected above the laboratory reporting limits. An evaluation will be made as to whether groundwater was in contact with impacted soil following collection of additional sample volume beneath the tank battery liner. The groundwater sample locations and background groundwater sample locations are depicted on Figure 1. The groundwater sample analytical results are summarized in Table 3.

**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 August 29 and September 3, 2024, visual inspections and field screening of soil were conducted at the hatch and loadout of AST01, the footprint and loadout of AST02, three sidewalls of the PWV excavation, three dumpline potholes, the ECD, and the meter house. Based on the inspection and screening results, hydrocarbon-impacted soils were not observed at the soil screening locations. As a result, no soil samples were submitted for laboratory analysis from these areas in accordance with the ECMC Operator Guidance for Oil & Gas Facility Closure document. A photographic log is attached.

**SITE INVESTIGATION REPORT**

**SAMPLE SUMMARY**

**Soil**

Number of soil samples collected 13  
 Number of soil samples exceeding 915-1 13  
 Was the areal and vertical extent of soil contamination delineated? No  
 Approximate areal extent (square feet) 2289

**NA / ND**

ND Highest concentration of TPH (mg/kg) \_\_\_\_\_  
-- Highest concentration of SAR 1.84  
       BTEX > 915-1 No  
       Vertical Extent > 915-1 (in feet) 7

**Groundwater**

Number of groundwater samples collected 1  
 Was extent of groundwater contaminated delineated? No  
 Depth to groundwater (below ground surface, in feet) 5  
 Number of groundwater monitoring wells installed 0  
 Number of groundwater samples exceeding 915-1 0

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

One background soil sample was collected from the soil used to construct the tank battery. Ten background soil samples were collected from native material outside of the facility excavations. Background samples were submitted for laboratory analysis of pH, electrical conductivity (EC), sodium adsorption ratio (SAR), boron, and Table 915-1 metals, using ECMC-approved methods. Laboratory analytical results indicate that pH and arsenic are naturally high in the soil used to construct the tank battery and EC, SAR, pH, arsenic, barium, lead, and selenium are naturally high in the native soil. The background soil sample laboratory analytical results are summarized in Table 2.

Three background groundwater samples were collected for analysis of Table 915-1 inorganic constituents in groundwater. The background groundwater sample results are summarized in Table 3.

The background soil and groundwater locations are depicted on Figure 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?

Assessment activities are ongoing and will be summarized in a subsequent Form 27 Supplemental report.

## 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.

Impacted soil from the former tank battery location will be removed and transported to a licensed disposal facility. Final disposal information will be provided upon completion of excavation activities. Disposal records will be kept on file and available upon request. The excavation areas will be backfilled and contoured to match pre-existing conditions.

### 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.

Laboratory data indicate that PAH impacts have been remediated and all soil at the final excavation extents are within the ECMC Table 915-1 allowable levels or within background levels x1.25 for Table 915-1 metals. An additional soil sample (TB-B01@7') was collected following tank battery liner removal, however, all initial exceedances were subsequently cleared by verification or background data; therefore, the waste profile is no longer valid and full list Table 915-1 analyses are needed below the liner. Additional volume will be collected to analyze the sample from beneath the liner for full list Table 915-1 constituents. Groundwater was encountered at approximately 5 ft bgs. Analytical results indicate that groundwater concentrations were in compliance with ECMC Table 915-1 allowable levels or background levels. No organic constituents were detected above the laboratory reporting limits. Assessment activities are ongoing and will be summarized in a subsequent Form 27 Supplemental report.

### 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 ECMC 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.



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. 10/02/2024

Actual Spill or Release date, or date of discovery. 10/02/2024

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/29/2024

Proposed site investigation commencement. 08/29/2024

Proposed completion of site investigation. 10/20/2025

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/29/2024

Proposed date of completion of Remediation. 10/20/2025

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**

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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: 04/22/2025

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: Collin Metz

Date: 08/29/2025

Remediation Project Number: 32373

**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**

404061891	FORM 27-SUPPLEMENTAL-SUBMITTED
404062090	LABORATORY ANALYTICAL REPORT
404167730	ANALYTICAL DATA SUMMARY TABLE(S)
404167731	PHOTO DOCUMENTATION
404168672	SOIL SAMPLE LOCATION MAP

Total Attach: 5 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)