

**State of Colorado**  
**Energy & Carbon Management Commission**

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Document Number:  
404152533

Receive Date:  
04/14/2025

Report taken by:  
Laurel Anderson

**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>(720) 929-4306</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80217-3779</u>		Mobile: <u>( )</u>
Contact Person: <u>Erik Mickelson</u>	Email: <u>Erik_Mickelson@oxy.com</u>	

**PROJECT, PURPOSE & SITE INFORMATION**

**PROJECT INFORMATION**

Remediation Project #: 21210 Initial Form 27 Document #: 402898266

**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>WELL</u>	Facility ID: _____	API #: <u>123-25348</u>	County Name: <u>WELD</u>
Facility Name: <u>ROLAND X 28-3</u>	Latitude: <u>40.114965</u>	Longitude: <u>-104.671318</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NENW</u>	Sec: <u>28</u>	Twp: <u>2N</u>	Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>FLOWLINE</u>	Facility ID: <u>480679</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Roland X 28-3 &amp; 28-4 battery</u>	Latitude: <u>40.116506</u>	Longitude: <u>-104.675791</u>	
** correct Lat/Long if needed: Latitude: <u>40.116583</u>		Longitude: <u>-104.675541</u>	
QtrQtr: <u>NWNW</u>	Sec: <u>28</u>	Twp: <u>2N</u>	Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: SPILL OR RELEASE Facility ID: 481497 API #: County Name: WELD  
Facility Name: Roland X 28-3 Wellhead Release Latitude: 40.114965 Longitude: -104.671335  
\*\* correct Lat/Long if needed: Latitude: Longitude:  
QtrQtr: NENW Sec: 28 Twp: 2N Range: 65W Meridian: 6 Sensitive Area? Yes

**SITE CONDITIONS**

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Crop land

Is domestic water well within 1/4 mile? Yes Is surface water within 1/4 mile? No

Is groundwater less than 20 feet below ground surface? Yes

**Other Potential Receptors within 1/4 mile**

Multiple buildings are located within 1/4 mile of the wellhead.  
The nearest building is located approximately 1,260 feet northeast of the wellhead.  
The nearest domestic water well is located approximately 800 feet northwest of the wellhead.

# 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
Yes	SOILS	20' (E-W) x 18' (N-S) x 8' bgs	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.

In accordance with the remediation workplan (Rem #38129, Doc #404019399) approved on December 9th, 2024, reassessment activities were conducted in response to the submittal of analytical data that was altered by a third-party contractor without the knowledge and beyond the reasonable control of Kerr-McGee Onshore Oil & Gas LP (KMOG). SAR in sample WH-B01@6' was altered by a third-party from 8.82 to 8.52. SAR in background sample WH-BG02@6' was altered by a third party from 8.52 to 8.82. The location in which WH-B01@6' was collected was over-excavated to 8 ft bgs. Following excavation, sample WH-B02@8' was collected but not analyzed for SAR. In response, one verification sample (WH-B02RS@8) and four background samples (BG01@8, BG02@8, BG03@8, BG04@8) were collected on December 15, 2024. The analytical result of the resample WH-B02RS@8 was a SAR of 3.83. The verification sample result was in compliance with the cleanup concentration in Table 915-1. Elevated PID screening levels and SAR were detected at background sample BG02@8. Additional soil investigation will be conducted at the location of background sample BG02@8 to evaluate potential impacts.

The analytical data altered by a third-party without the knowledge of and beyond the reasonable control of KMOG can be found in Form 27 Document No. 403025120. The original unaltered lab report and the reassessment analytical results are attached. The original sample results and the reassessment sample results are provided in Table 1. A topographic Site Location Map is provided as Figure 1. The reassessment sample locations are provided on Figure 2.

## 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 ):

### Proposed Groundwater Sampling

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

### 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 15  
Number of soil samples exceeding 915-1 3  
Was the areal and vertical extent of soil contamination delineated? Yes  
Approximate areal extent (square feet) 360

### NA / ND

--          Highest concentration of TPH (mg/kg) 3477  
--          Highest concentration of SAR 8.52  
         BTEX > 915-1 Yes  
         Vertical Extent > 915-1 (in feet) 8

### 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?

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.

Between January 26 and March 15, 2022, approximately 70 cubic yards of impacted material were excavated and transported to the Kerr-McGee Land Treatment Facility in Weld County, Colorado for recycling. The excavation area was subsequently backfilled and contoured to match pre-existing site conditions.

### 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.

In accordance with the remediation workplan (Rem #38129, Doc #404019399) approved on December 9th, 2024, reassessment activities were conducted in response to the submittal of analytical data that was altered by a third-party contractor without the knowledge and beyond the reasonable control of Kerr-McGee Onshore Oil & Gas LP (KMOG). SAR in sample WH-B01@6' was altered by a third-party from 8.82 to 8.52. SAR in background sample WH-BG02@6' was altered by a third party from 8.52 to 8.82. The location in which WH-B01@6' was collected was over-excavated to 8 ft bgs. Following excavation, sample WH-B02@8' was collected but not analyzed for SAR. In response, one verification sample (WH-B02RS@8) and four background samples (BG01@8, BG02@8, BG03@8, BG04@8) were collected on December 15, 2024. The analytical result of the resample WH-B02RS@8 was a SAR of 3.83. The verification sample result was in compliance with the cleanup concentration in Table 915-1. Elevated PID screening levels and SAR were detected at background sample BG02@8. Additional soil investigation will be conducted at the location of background sample BG02@8 to evaluate potential impacts.

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### Soil Remediation Summary

<input type="checkbox"/> In Situ	<input checked="" type="checkbox"/> Ex Situ
_____ Bioremediation ( or enhanced bioremediation )	Yes Excavate and offsite disposal
_____ Chemical oxidation	If Yes: Estimated Volume (Cubic Yards) _____ 70
_____ Air sparge / Soil vapor extraction	Name of Licensed Disposal Facility or ECMC Facility ID # _____ 149007
_____ Natural Attenuation	No 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.

# 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 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: \$ \_\_\_\_\_

## WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? Yes

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

Approximately 70 cubic yards of impacted material were excavated and transported to the Kerr-McGee Land Treatment Facility in Weld County, Colorado for recycling.

Volume of E&P Waste (solid) in cubic yards 70

E&P waste (solid) description Impacted soil

ECMC Disposal Facility ID #, if applicable: 149007

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

Volume of E&P Waste (liquid) in barrels 0

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

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

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? 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.

The site has been reclaimed in accordance with ECMC 1000 Series Reclamation Rules.

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. 07/31/2024

Proposed date of completion of Reclamation. 08/31/2024

## 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. 01/28/2022

Actual Spill or Release date, or date of discovery. 01/27/2022

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/26/2022

Proposed site investigation commencement. 01/26/2022

Proposed completion of site investigation. 12/15/2025

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 01/26/2022

Proposed date of completion of Remediation. 03/15/2022

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:

In December 2024, reassessment activities were conducted in response to the submittal of analytical data that was altered by a third-party contractor without the knowledge and beyond the reasonable control of KMOG.

**OPERATOR COMMENT**

In accordance with the remediation workplan (Rem #38129, Doc #404019399) approved on December 9th, 2024, reassessment activities were conducted in response to the submittal of analytical data that was altered by a third-party contractor without the knowledge and beyond the reasonable control of Kerr-McGee Onshore Oil & Gas LP (KMOG). SAR in sample WH-B01@6' was altered by a third-party from 8.82 to 8.52. SAR in background sample WH-BG02@6' was altered by a third party from 8.52 to 8.82. The location in which WH-B01@6' was collected was over-excavated to 8 ft bgs. Following excavation, sample WH-B02@8' was collected but not analyzed for SAR. In response, one verification sample (WH-B02RS@8) and four background samples (BG01@8, BG02@8, BG03@8, BG04@8) were collected on December 15, 2024. The analytical result of the resample WH-B02RS@8 was a SAR of 3.83. The verification sample result was in compliance with the cleanup concentration in Table 915-1. Elevated PID screening levels and SAR were detected at background sample BG02@8. Additional soil investigation will be conducted at the location of background sample BG02@8 to evaluate potential impacts.

A lab report, figure, and analytical table altered by a third-party without the knowledge of and beyond the reasonable control of KMOG were originally submitted to the ECMC in Form 27 Document Number 403025120 submitted on 04/26/2022; the following are replacements attached to this form. An original locked version of lab report Y201460 is attached to this form as a replacement to the lab report provided in the Site Investigation Report (Attachment Document No. 403025205). The analytical table attached to this form replaces Table 5 provided in the Site Investigation Report (Attachment Document No. 403025206). The figure attached to this form replaces Figure 2 provided in the Site Investigation Report (Attachment Document No. 403025203).

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

Signed: Erik Mickelson

Title: Environmental Lead

Submit Date: 04/14/2025

Email: Erik\_Mickelson@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: Laurel Anderson

Date: 09/02/2025

Remediation Project Number: 21210

**COA Type****Description**

	Operator shall provide all laboratory analytical report(s) as a stand-alone attachment(s) via Supplemental Form 27. The Laboratory Report PDF(s) must be secured by the issuing laboratory; If there is a difference between the creation date and secured date of the PDF, Operator shall provide an explanation in the case narrative of the associated report.  Note: A secured version of the lab report with soil samples WH-B02@8', WH-N02@6', WH-W02@6' collected on 3/15/2022 (Origins Project #Y203386-01) has not been provided to date.
	All laboratory analytical results for Table 915-1 Soil TPH, Organic Compounds in Soils, and Metals in Soils shall be reported on a dry weight basis.
	Background samples collected to date as part of REM #21210 were collected from areas on the former working pad surface and are not representative of background conditions as confirmation samples at BG02 confirm historic impacts to soil remain in situ and undefined.  Operator shall obtain additional background samples from locations sufficiently away from the impacted area to reflect conditions not impacted by oil and gas activity, from similar depths, and soil horizons or lithologic materials for comparison to confirmation soil samples.
	All ongoing/unaddressed comments/COAs from previous Forms remain applicable.
4 COAs	

**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**

404152533	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404152650	SITE MAP
404152653	LABORATORY ANALYTICAL REPORT
404152654	ANALYTICAL DATA SUMMARY TABLE(S)
404152656	OTHER

404152813	SOIL SAMPLE LOCATION MAP
404159530	ANALYTICAL DATA SUMMARY TABLE(S)
404164644	LABORATORY ANALYTICAL REPORT
404164645	SOIL SAMPLE LOCATION MAP
404339106	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 10 Files

### **General Comments**

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>
Environmental	Historic impacts confirmed at BG02@8' have been reported under Spill ID 491268 (Form 19i/s Doc #404330414).	09/02/2025
Environmental	ECMC Staff accepts the information as provided in this form. By reviewing this form, ECMC Staff does not determine fault for any alleged wrongful actions. As provided by Rule 201.b., Operators must ensure compliance with ECMC Rules by all consultants, contractors, and subcontractors.	09/02/2025
Environmental	ECMC has changed the status of this Remediation Project (REM 21210) from Resolved to Open based on the need for additional site investigation and remediation.	09/02/2025

Total: 3 comment(s)