

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
404472460  
Receive Date:  
12/16/2025  
Report taken by:  
Taylor Robinson

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>
Contact Person: <u>Erik Mickelson</u>	Email: <u>Erik_Mickelson@oxy.com</u>	Mobile: <u>( )</u>

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 31890 Initial Form 27 Document #: 403512631

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>LOCATION</u>	Facility ID: <u>329343</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>HSR-WEIS-63N67W 21SWNW</u>	Latitude: <u>40.213490</u>	Longitude: <u>-104.902700</u>	
	** correct Lat/Long if needed: Latitude: <u>40.213272</u>	Longitude: <u>-104.902475</u>	
QtrQtr: <u>SWNW</u>	Sec: <u>21</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 SC Most Sensitive Adjacent Land Use Non-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

Surface water is located approximately 270 feet west of the facility.  
A wetland is located approximately 350 feet west of the facility.  
The facility is located within a designated high-priority habitat.

# 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	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.

In accordance with the remediation workplan (Rem #38129, Doc #404019399) approved on December 9, 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). The pH result in sample AST-B01R@3" was altered by a third-party from 8.62 to 8.22. The sodium adsorption ratio (SAR) result in sample AST-B01@3" was altered by a third-party from 6.55 to 5.55. The original SAR result of 6.55 for AST-B01@3" was within background values based on BG-02@3'. In response, one verification sample (AST-B01RRS@1.5) and four background samples (BG01@1.5, BG02@1.5, BG03@1.5, and BG04@1.5) were collected on December 20, 2024. Due to the addition of backfill after the initial sampling, the resamples were collected at a depth of 1.5 ft instead of 0.25 ft to match the original depth. The analytical result of pH for resample AST-B01RRS@1.5 was 8.52. The analytical result of the resample AST-B01RRS@1.5 is within the site-specific background value based on background sample WH-BG04@4' collected from nearby site HSR-LOWES 6-21A (Remediation No. 20318). Per the general comment for denied Form 27 Document No. 404076183, a sample will be collected at the location of AST-B01RRS@1.5 and will be analyzed for full list Table 915-1 constituents. During assessment activities, soils will be logged to account for any overlying backfill material and confirm the confirmation sample is collected at the same depth/elevation as the original sample. The results will be summarized in a subsequent Form 27 Supplemental report.

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. 403650598. The original unaltered lab report and the reassessment analytical results are attached.

## 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 ):

Per the general comment for denied Form 27 Document No. 404076183, a sample will be collected at the location of AST-B01RRS@1.5 and will be analyzed for full list Table 915-1 constituents. During assessment activities, soils will be logged to account for any overlying backfill material and confirm the confirmation sample is collected at the same depth/elevation as the original sample. The results will be summarized in a subsequent Form 27 Supplemental report.

### 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 12  
Number of soil samples exceeding 915-1 1  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square feet) 0

### NA / ND

ND Highest concentration of TPH (mg/kg) \_\_\_\_\_  
-- Highest concentration of SAR 5.55  
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 0

### 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?

Twelve background soil samples were collected from the native material outside of the facility excavations. One background soil sample was collected as part of the HSR-Lowes 6-21A decommissioning activities, located approximately 1,200 ft to the east, in the same land use, similar depths (4 ft bgs), and same NRCS soil type (Ellicott-Ellicott sandy-skeletal complex). The background soil samples were submitted for analysis of pH or pH, SAR, EC, boron, and/or Table 915-1 metals, using ECMC-approved methods. Laboratory analytical results indicate that levels of pH and arsenic are naturally high in the native soil. The background sample locations are depicted on Figure 3.

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?

Per the general comment for denied Form 27 Document No. 404076183, a sample will be collected at the location of AST-B01RRS@1.5 and will be analyzed for full list Table 915-1 constituents. During assessment activities, soils will be logged to account for any overlying backfill material and confirm the confirmation sample is collected at the same depth/elevation as the original sample. The results 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.

Please refer to the past submitted Form 27 Document No. 403650598.

### REMEDATION 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 9, 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. The pH result in sample AST-B01R@3" was altered by a third-party from 8.62 to 8.22. The SAR result in sample AST-B01@3" was altered by a third-party from 6.55 to 5.55. The original SAR result of 6.55 for AST-B01@3" was within background values based on BG-02@3'. In response, one verification sample (AST-B01RRS@1.5) and four background samples (BG01@1.5, BG02@1.5, BG03@1.5, and BG04@1.5) were collected on December 20, 2024. Due to the addition of backfill after the initial sampling, the resamples were collected at a depth of 1.5 ft instead of 0.25 ft to match the original depth. The analytical result of pH for resample AST-B01RRS@1.5 was 8.52. The analytical result of the resample AST-B01RRS@1.5 is within the site-specific background value based on background sample WH-BG04@4' collected from nearby site HSR-LOWES 6-21A (Remediation No. 20318). Per the general comment for denied Form 27 Document No. 404076183, a sample will be collected at the location of AST-B01RRS@1.5 and will be analyzed for full list Table 915-1 constituents. During assessment activities, soils will be logged to account for any overlying backfill material and confirm the confirmation sample is collected at the same depth/elevation as the original sample. The results will be summarized in a subsequent Form 27 Supplemental report.

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. 403650598. 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.

**Soil Remediation Summary**

<input type="checkbox"/> <b>In Situ</b>	<input type="checkbox"/> <b>Ex Situ</b>
_____ 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.

# REMEDATION 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 \_\_\_\_\_

## 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: \$ 5000 \_\_\_\_\_

## 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:

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

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

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

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

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

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

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

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

## REMEDATION COMPLETION REPORT

### REMEDATION 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? \_\_\_\_\_

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

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. 07/12/2023

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

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/17/2023

Proposed site investigation commencement. 10/17/2023

Proposed completion of site investigation. 02/15/2026

### REMEDIAL ACTION DATES

Proposed start date of Remediation. \_\_\_\_\_

Proposed date of completion of Remediation. \_\_\_\_\_

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 9, 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. The pH result in sample AST-B01R@3" was altered by a third-party from 8.62 to 8.22. The SAR result in sample AST-B01@3" was altered by a third-party from 6.55 to 5.55. The original SAR result of 6.55 for AST-B01@3" was within background values based on BG-02@3'. In response, one verification sample (AST-B01RRS@1.5) and four background samples (BG01@1.5, BG02@1.5, BG03@1.5, and BG04@1.5) were collected on December 20, 2024. Due to the addition of backfill after the initial sampling, the resamples were collected at a depth of 1.5 ft instead of 0.25 ft to match the original depth. The analytical result of pH for resample AST-B01RRS@1.5 was 8.52. The analytical result of the resample AST-B01RRS@1.5 is within the site-specific background value based on background sample WH-BG04@4' collected from nearby site HSR-LOWES 6-21A (Remediation No. 20318). Per the general comment for denied Form 27 Document No. 404076183, a sample will be collected at the location of AST-B01RRS@1.5 and will be analyzed for full list Table 915-1 constituents. During assessment activities, soils will be logged to account for any overlaying backfill material and confirm the confirmation sample is collected at the same depth/elevation as the original sample. The results will be summarized in a subsequent Form 27 Supplemental report.

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 No. 403650598 submitted on 01/12/2024; the following are replacements attached to this form. An original locked version of lab report Y311431 and Y310453 is attached to this form as a replacement to the lab report attached to Form 27 Doc No. 403650598 (Attachment Doc No. 403652545). The analytical table attached to this form replaces Table 5 attached to Form 27 Doc No. 403650598 (Attachment Doc No. 403652549). The figure attached to this form replaces Figure 2 attached to Form 27 Doc No. 403650598 (Attachment Doc No. 403652548).

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: 12/16/2025

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: Candice (Nikki) Graber

Date: 01/07/2026

Remediation Project Number: 31890

**COA Type**

**Description**

	<p>Environmental ECMC denies the use of off-location background sampling to clear falsified data. In addition the off-location sample was not collected from the same NRCS soil type or hydrologic conditions.</p> <p>Shallow groundwater (1.5-2' bgs) was encountered during soil sampling activities associated with Remediation Project #20318/ HSR-LOWES 6-21A (Doc #403247756). ECMC does not approve the use of background samples associated with REM 20318.</p>
	<p>Operator shall ensure background soil samples are obtained from:</p> <ol style="list-style-type: none"><li>1) Locations sufficiently away from impacted area(s) and oil and gas activities to reflect native conditions,</li><li>2) Similar depths and soil horizons or lithologic materials as the confirmation soil samples,</li><li>3) Locations with similar land use (current and historic) as the confirmation soil samples,</li><li>4) Locations with similar hydrologic conditions,</li></ol> <p>Additionally, Operator shall provide a figure depicting the location of all background soil samples used in the site specific background calculations. If for any reason the background samples do not meet the above criteria, then these samples shall be omitted from the site specific background determination calculations.</p>

	<p>All ongoing/unaddressed comments/COAs from previous Forms remain applicable. Relevant comments from Denied Doc #404076183 have been reiterated below:</p> <ul style="list-style-type: none"> <li>-Per Rule 915.e.(2)A. If soil contamination is suspected or known to exist as a result of Spills or Releases or E&amp;P Waste management, Operators will collect and analyze representative samples of soil pursuant to this Rule 915.e.(2).</li> <li>-Operator shall collect a confirmation sample for complete Table</li> <li>-Operator shall collect a confirmation sample for complete Table 915-1 contaminants of concern and provide ECMC Area EPS and ECMC Environmental Data Group Supervisor,</li> <li>Arthur Koepsell, 72-hour notice via email prior to sampling.</li> <li>-Operator shall provide grading plans/invoices/or other supporting documentation to illustrate how the resample depth was determined.</li> <li>-Operator shall provide a description of the source of material used for "backfill" and describe the depth, area and approximate total volume of "backfill" used for final reclamation.</li> <li>-If topsoil has been imported, then it shall meet the agronomic soil analysis outlined in the Rule 915.b. - Soil Suitability for Reclamation Guidance Document."</li> <li>-Operator shall submit a replacement Form 27 Supplemental for this Remediation Project proposing additional site investigation to properly characterize the vertical and lateral extent of exceedances. -Background samples near the historic release cannot be approved until impacts have been properly characterized and delineated. Operator shall obtain 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 types/horizons or lithologic materials for comparison to confirmation soil samples.</li> </ul>
3 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.

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
404472460	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404472546	LABORATORY ANALYTICAL REPORT
404472547	LABORATORY ANALYTICAL REPORT
404472548	LABORATORY ANALYTICAL REPORT
404472549	OTHER
404472550	SITE MAP
404472552	SOIL SAMPLE LOCATION MAP
404472554	ANALYTICAL DATA SUMMARY TABLE(S)
404472555	ANALYTICAL DATA SUMMARY TABLE(S)
404472556	ANALYTICAL DATA SUMMARY TABLE(S)
404472557	SOIL SAMPLE LOCATION MAP
404472558	SOIL SAMPLE LOCATION MAP
404497847	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 13 Files

**General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
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.	01/07/2026

Total: 1 comment(s)