

State of Colorado  
Energy & Carbon Management Commission

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Report taken by:  
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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) 929-4307</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80217-3779</u>		Mobile: <u>( )</u>
Contact Person: <u>Max Moran</u>	Email: <u>DJRemediation_Forms@oxy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 41639 Initial Form 27 Document #: 404264824

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>490802</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Griswold 28N 3C 3N 29-11HZ TB 490802</u>	Latitude: <u>40.058806</u>	Longitude: <u>-104.746206</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SESW</u>	Sec: <u>11</u>	Twps: <u>1N</u>	Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

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

Surface water: None.

Wetlands: None.

Water Wells: The nearest water well is located 1,223 feet west of the location.

Springs: None.

Occupied Building: A building is located approximately 1,170 feet west of the location.

Livestock: Livestock is located approximately 765 feet west-southwest of the location.

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
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.

Partial facility decommissioning activities were initiated at the Griswold 28N 3C 3N 29-11HZ production facility on August 12, 2025. Visual inspections and field screening of soils was conducted following produced water vessel (PWV) removal activities, and four (4) confirmation soil samples were collected from the ballast material within the lined containment of the PWV locations at depths ranging from approximately two (2) to four (4) feet below ground surface (bgs). Laboratory analytical results indicated that constituent concentrations were in compliance with Table 915-1 standards and/or background levels (x 1.25 for metals). A topographic Site Location Map showing the geographic setting of the site is provided as Figure 1. Sampling 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 August 12, 2025, four (4) confirmation soil samples were collected from the ballast material within the lined containment of the PWV excavation areas, as describe above. Laboratory analytical results indicated that constituent concentrations were in compliance with the ECMC Table 915-1 soil standards and/or background levels (x 1.25 metals).

### Proposed Groundwater Sampling

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

On August 12, 2025, water samples GW01 and GW02 were collected from rainwater captured within the lined containment beneath the PWVs, which was mistaken for groundwater. These samples were collected in error and are not indicative of groundwater conditions. Groundwater was not observed at this location during produced water vessel replacement activities. The water sample locations are illustrated on Figure 1, and analytical results are summarized in Table 6.

### 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 12, 2025, visual inspection and field screening of ballast material within lined containment was conducted at six (6) sidewall locations within the PWV removal excavations. 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. The laboratory analytical reports, field notes, and a photographic log are provided as attachments.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 4

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

Number of soil samples exceeding 915-1 0

-- Highest concentration of SAR 1.34

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

BTEX > 915-1 No

Approximate areal extent (square feet) 0

Vertical Extent > 915-1 (in feet) 0

**Groundwater**

Number of groundwater samples collected 0

Highest concentration of Benzene (µg/l) \_\_\_\_\_

Was extent of groundwater contaminated delineated? Yes

Highest concentration of Toluene (µg/l) \_\_\_\_\_

Depth to groundwater (below ground surface, in feet) 0

Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_

Number of groundwater monitoring wells installed 0

Highest concentration of Xylene (µg/l) \_\_\_\_\_

Number of groundwater samples exceeding 915-1 0

Highest concentration of Methane (mg/l) \_\_\_\_\_

**Surface Water**

2 Number of surface water samples collected

0 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?

Six (6) background soil samples were utilized from ballast material collected adjacent to the associated Griswold 3N-11HZ Wellhead located approximately 490 feet north of the facility, from similar depths, and similar NRCS soil types (sand). 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. Proximity of the Griswold 3N-11HZ wellhead and background soil sample locations are presented in 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?

\_\_\_\_\_

**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 four (4) confirmation soil samples were in compliance with the ECMC Table 915-1 standards and/or background levels (x 1.25 for metals). As a result, no soils were removed during PWV removal activities. The excavation areas were subsequently backfilled and re-graded to match pre-existing conditions.

**REMIEDIATION 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 analytical results indicate that constituent concentrations in the four (4) confirmation soil samples collected from ballast material within the lined containment were in compliance with ECMC Table 915-1 standards and/or background levels (x 1.25 for metals). Two (2) water samples GW01 and GW02 were collected from rainwater captured within the lined containment beneath the PWVs, which was mistaken for groundwater. These samples were collected in error and are not indicative of groundwater conditions. Groundwater was not observed at this location during produced water vessel replacement activities. Hydrocarbon-impacted soil was not observed during field inspection and soil screening activities at the facility. Based on the analytical results and soil screening data presented herein, assessment is complete at the Griswold 28N 3C 3N 29-11HZ production facility, and no further activities are required. As such, Kerr-McGee is requesting a No Further Action (NFA) determination for this location.

**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.

# 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 NFA request \_\_\_\_\_

## 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 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: \$ 0 \_\_\_\_\_

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

# REMEDIATION COMPLETION REPORT

## REMEDIATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? Yes

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? Yes

Does the previous reply indicate consideration of background concentrations? Yes

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 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. 11/30/2025

Proposed date of completion of Reclamation. 11/30/2026

## 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. 05/01/2025

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

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/12/2025

Proposed site investigation commencement. 08/12/2025

Proposed completion of site investigation. 08/12/2025

### 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:

**OPERATOR COMMENT**

In response to the COA on Form 27 Document # 404264824, this remediation is a partial facility decommissioning, and no flowline work will be conducted related to this remediation project (41639) and therefore no Form 42 is included.

Two (2) water samples GW01 and GW02 were collected from rainwater captured within the lined containment beneath the PWVs, which was mistaken for groundwater. These samples were collected in error and are not indicative of groundwater conditions. Groundwater was not observed at this location during produced water vessel replacement activities.

Based on the analytical results and soil screening data presented herein, Kerr-McGee is requesting an NFA determination for this location.

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

Signed: Max Moran

Title: Environmental Advisor

Submit Date: 10/03/2025

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: 11/24/2025

Remediation Project Number: 41639

**COA Type****Description**

	<p>Based on the information presented, it appears that no further action is necessary at this time and the ECMC approves the closure request. However, if future conditions at the site indicate contaminant concentrations in soils exceeding ECMC standards or if groundwater is found to be impacted, then further investigation and/or remediation activities may be required.</p> <p>The surface area disturbed by the remediation activity shall be reclaimed in accordance with the 1000 Series Reclamation Rules. For locations with active ongoing oil and gas operations, comply with Rule 1003 interim reclamation requirements and for locations that will no longer have active oil and gas operations, comply with Rule 1004 Final Reclamation requirements.</p>
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**

404360940	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404379630	SITE MAP
404379632	SOIL SAMPLE LOCATION MAP
404379634	SITE MAP
404379636	ANALYTICAL DATA SUMMARY TABLE(S)
404379638	PHOTO DOCUMENTATION
404379642	LABORATORY ANALYTICAL REPORT
404379643	LABORATORY ANALYTICAL REPORT
404448459	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 9 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)