

State of Colorado  
Energy & Carbon Management Commission

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



Document Number:  
404258217  
Receive Date:  
08/08/2025  
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 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: KERR MCGEE OIL & GAS ONSHORE LP	Operator No: 47120	Phone Numbers Phone: (970) 515-1110 Mobile: ( )
Address: P O BOX 173779		
City: DENVER	State: CO Zip: 80217-3779	
Contact Person: Macy Kiel	Email: DJRemediation_Forms@oxy.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 36274 Initial Form 27 Document #: 403838245

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: TANK BATTERY	Facility ID: 487115	API #: _____	County Name: WELD
Facility Name: MCGUCKIN H 32-2J,4D FACILITY TB	Latitude: 40.185817	Longitude: -104.695754	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWNW	Sec: 32	Twp: 3N	Range: 65W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE	Facility ID: 490726	API #: _____	County Name: WELD
Facility Name: McGuckin H 32-2J, 4D Facility	Latitude: 40.185893	Longitude: -104.696232	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWNW	Sec: 32	Twp: 3N	Range: 65W Meridian: 6 Sensitive Area? Yes

## 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? No

### Other Potential Receptors within 1/4 mile

Water well 700 feet (ft) north. A building is located approximately 550 ft north. Solar farm 380 ft east. County Road 160 ft west and 1,190 ft north. Groundwater at approximately 5 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
No	SOILS	N/A	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 McGuckin H 32-2J, 4D Facility on May 23, 2025. Groundwater was encountered in a facility excavation at 5 ft bgs. Visual inspection and field screening of soil at three aboveground storage tanks (ASTs), four produced water vessels (PWVs), one emission control device (ECD), one meter house, and one separator were conducted following removal activities. Soil samples (AST01@0.5', AST02@0.5', AST03@0.5', PWV01-B01@5', PWV01-N01@2', PWV02-B01@5', PWV02-S01@2', PWV03-B01@5', PWV04-B01@4', PWV04-W01@2', SEP01-Inlet@3', and SEP01-Outlet@3') were submitted for analysis of full list Table 915-1 constituents to determine if a release occurred. Initial laboratory analytical results indicated that electrical conductivity (EC) and cadmium exceeding the Table 915-1 allowable levels and background levels were present at the PWV01-B01@5' and SEP01-Inlet@3' locations. Verification samples were collected concurrently with the initial samples but in separate laboratory provided bottles to confirm the initial results. Final analytical results were within the ECMC Table 915-1 allowable levels or within background levels. Initial laboratory analytical results indicated that pH exceeding the Table 915-1 allowable level and background level were present at the PWV02-S01@2', PWV04-B01@5', PWV04-W01@2' locations and were confirmed with verification samples. As such, a Form 19 Initial/Supplemental Spill/Release Report (Document No. 404238571) was submitted on June 13, 2025 and the ECMC issued Spill/Release Point ID 490726. Additional backgrounds were collected and cleared the pH exceedances after the F19 was already submitted. The facility is depicted on Figure 1. The PID readings and soil sample results are summarized in Tables 1 and 2, respectively.

### 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 May 23, 2025, confirmation soil samples (AST01@0.5', AST02@0.5', AST03@0.5', PWV01-B01@5', PWV01-N01@2', PWV02-B01@5', PWV02-S01@2', PWV03-B01@5', PWV03-S01@2', PWV04-B01@4', PWV04-W01@2', SEP01-Inlet@3', and SEP01-Outlet@3'), were collected from the former ASTs, PWVs, and separator at depths ranging from 0.5 to 5 ft bgs. The samples were submitted for analysis of full list Table 915-1 constituents, using ECMC-approved methods. Initial laboratory analytical results indicated that electrical conductivity (EC) and cadmium exceeded the Table 915-1 allowable levels and background levels are present at the PWV01-B01@5' and SEP01-Inlet@3' locations. Verification samples were collected concurrently with the initial samples but in separate laboratory provided bottle ware to confirm the initial results. Final analytical results were within the ECMC Table 915-1 allowable levels or within background levels. 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 May 23, 2025, one groundwater sample (GW-PWV01-B01@5') was collected from the PWV excavation at a depth of 5 ft bgs. Groundwater was not in contact with impacted soil. The groundwater sample was submitted for analysis of full list Table 915-1 constituents in groundwater. Based on the laboratory analytical results groundwater concentrations were in compliance with the ECMC Table 915-1 allowable levels for all organic constituents. No organic constituents were detected above the laboratory reporting limits. Background groundwater samples are required to determine inorganic compliance. The 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 May 23, 2025, visual inspection and field screening of soil were conducted at the footprint, hatch, and/or loadout for each AST, six sidewalls of the PWV excavation, the ECD, and the meter house. Based on the inspection and screening results, hydrocarbon-impacted soil was not observed at the screening locations, and no soil samples were submitted for laboratory analysis from these areas, in accordance with the ECMC Operator Guidance. A photographic log is attached.

## SITE INVESTIGATION REPORT

### SAMPLE SUMMARY

Soil		NA / ND	
Number of soil samples collected	26	--	Highest concentration of TPH (mg/kg) 0.212
Number of soil samples exceeding 915-1	19	--	Highest concentration of SAR 7
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
<b>Groundwater</b>			
Number of groundwater samples collected	1	ND	Highest concentration of Benzene (µg/l)
Was extent of groundwater contaminated delineated?	No	ND	Highest concentration of Toluene (µg/l)
Depth to groundwater (below ground surface, in feet)	5	ND	Highest concentration of Ethylbenzene (µg/l)
Number of groundwater monitoring wells installed	0	ND	Highest concentration of Xylene (µg/l)
Number of groundwater samples exceeding 915-1	0	NA	Highest concentration of Methane (mg/l)
<b>Surface Water</b>			
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 tank battery background soil sample (TB-BG01@0.5') was collected from the soil used to construct the tank battery. Twenty-four background samples were also collected as part of the McGuckin X05-69HN, McGuckin H32-31, and Fore Thought 9-31 wellhead cut and cap activities (Remediation Nos. 35656, 36004, and 18770), located approximately 3,838 and 190 ft south and 2167 ft southwest, from similar depths (0.25', 3' and 6' bgs), and NCRS soil type (Sand). Background soil samples were submitted for laboratory analysis of pH, EC, sodium adsorption ratio (SAR), boron and Table 915-1 metals using ECMC-approved methods. Analytical results indicate that pH and arsenic are naturally high in the soil used to construct the tank battery and SAR, pH, boron, arsenic, and barium are naturally high in the native soil. The background soil sample analytical results are summarized in Table 2. The background soil sample locations are illustrated on Figures 1 and 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.

Laboratory data indicate that soil samples collected during facility decommissioning activities were within the ECMC Table 915-1 allowable levels or within background levels; therefore, no soil was removed from the site during decommissioning activities. The excavation areas were backfilled and contoured to match pre-existing 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.

Laboratory data indicate that soil samples collected during facility decommissioning activities were within the ECMC Table 915-1 allowable levels or within background levels. Groundwater was encountered at approximately 5 ft bgs. Groundwater was not in contact with impacted soil. Analytical results indicate that groundwater concentrations were in compliance with the ECMC Table 915-1 allowable levels for all organic constituents. No organic constituents were detected above the laboratory reporting limits. Background groundwater samples are required to determine inorganic compliance. 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.

# 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 \_\_\_\_\_

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

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

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 reseeded 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. 01/24/2024

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

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/23/2025

Proposed site investigation commencement. 05/23/2025

Proposed completion of site investigation. 01/02/2026

### 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:

\_\_\_\_\_

**OPERATOR COMMENT**

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: 08/08/2025

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: \_\_\_\_\_

Date: \_\_\_\_\_

Remediation Project Number: 36274

**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.

<b>Att Doc Num</b>	<b>Name</b>
404258217	FORM 27 DENIED
404258323	SOIL SAMPLE LOCATION MAP
404258371	ANALYTICAL DATA SUMMARY TABLE(S)
404258373	PHOTO DOCUMENTATION
404258395	LABORATORY ANALYTICAL REPORT
404263671	LABORATORY ANALYTICAL REPORT
404263676	LABORATORY ANALYTICAL REPORT
404263679	LABORATORY ANALYTICAL REPORT
404268197	SOIL SAMPLE LOCATION MAP
404529205	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 10 Files

**General Comments**

User Group	Comment	Comment Date
Environmental	<p>ECMC has denied this form without technical review for the following reasons:</p> <ul style="list-style-type: none"> <li>-Multiple background samples presented were collected on former working pad surfaces and/or adjacent to historic releases/oil and gas infrastructure.</li> <li>-Off-location background samples which have not been approved under their original remediation project(s) are invalid.</li> </ul> <p>Operator shall submit a replacement Form 27 Supplemental for this Remediation Project proposing additional site investigation and ensure the following items are reviewed and addressed as applicable:</p> <ul style="list-style-type: none"> <li>-Any outstanding COAs/CAs.</li> <li>-Operator shall collect confirmation soil samples as described in the Rule 915.e.(2) Guidance Document.</li> <li>-When groundwater is encountered during the investigation, characterization of the soil impacts will still be completed by submitting soil samples from the unsaturated zone, capillary fringe, and/or the "smear zone" for laboratory analysis.</li> <li>-Operator will collect samples on a bias; from areas and depths where the highest concentrations would be expected based on visible contamination, odor characteristics, field screening results, release characteristics, soil type and, if available, information from prior investigations.</li> <li>-Operator shall refrain from presenting invalid background samples on future Supplemental Form 27s for this and other Remediation Projects.</li> <li>-Operator shall submit future confirmation soil samples for complete Table 915-1 contaminants of concern until Operator has submitted sufficient characterization data to request and receive Director Approval of reduced list of contaminants of concern.</li> <li>-Operator shall include the following a figure/figure(s) depicting the location of excavation extents, stockpiles, soil &amp; groundwater sample locations and all oil and gas facilities (and indicate the status: removed/abandoned in place/active) in relation to one another and in relation to background soil sample locations.</li> <li>-Operator shall ensure background soil samples have been/are obtained from: <ul 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> </ul> </li> </ul> <p>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. Operator shall reevaluate data collected to date using the newly calculated site and depth-specific background concentrations to determine the need for additional site investigation and/or remediation.</p>	02/02/2026

Total: 1 comment(s)