

State of Colorado
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203
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Document Number:

404051293

Receive Date:

02/06/2025

Report taken by:

Kari Brown

Site Investigation and Remediation Workplan (Initial 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
Address: P O BOX 173779		Phone: (970) 515-0055
City: DENVER	State: CO	Zip: 80217-3779
Contact Person: Jaron Bartoszek	Email: DJRemediation_Forms@oxy.com	Mobile: ()

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 38881 Initial Form 27 Document #: 404051293

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: LOCATION	Facility ID: 436957	API #: _____	County Name: WELD
Facility Name: SMALL EYED 14N-35HZ	Latitude: 40.119185	Longitude: -104.860585	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESW	Sec: 23	Twp: 2N	Range: 67W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE	Facility ID: 488164	API #: _____	County Name: WELD
Facility Name: MULGA 29C SMALL EYED 14C HZ O SA	Latitude: 40.119299	Longitude: -104.863132	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESW	Sec: 23	Twp: 2N	Range: 67W 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

Surface water: None.
Wetlands: An area with wetland characteristics is 1,140 feet north of the location.
Water Wells: The nearest water well is located 1,320 feet northwest of the location.
Springs: None.
Occupied Building: A building is located 835 feet northwest of the location.
Livestock: Livestock is located 895 feet northwest of the location.
High Priority Habitats: None.

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	24' (N-S) x 18' (E-W) x 9.5' 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.

On October 7, 2024, a release of unknown volume was discovered at the Mulga 29C Small Eyed 14C HZ O SA Production Facility location, due to fluid observed daylighting from the subsurface near the separator. As such, a Form 19-Initial Spill/Release Report (Document No. 403948338) was submitted on October 9, 2024, and the ECMC issued Spill/Release Point ID 488164. Cleanup and site assessment activities are currently ongoing. On October 8, 2024, a preliminary waste characterization soil sample (WP01@3") was collected from the area most likely to be impacted within the release area, based on field observations, and submitted for laboratory analysis of the full Table 915-1 analytical suite, using standard ECMC approved methods appropriate for detecting the target analytes in Table 915-1. Analytical results indicate that the benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, total petroleum hydrocarbons (TPH), 1,2,4- and 1,3,5-trimethylbenzene (TMB), arsenic, barium, boron, sodium adsorption ratio (SAR), electrical conductivity (EC), and various polycyclic aromatic hydrocarbon (PAH) concentrations in waste characterization soil sample WP01@3" exceeded the applicable ECMC Table 915-1 soil standards. The remaining PAH, soil suitability, and metals concentrations in soil sample WP01@3" were in compliance with ECMC Table 915-1 standards. A topographic Site Location Map showing the geographic setting of the release is provided as Figure 1. The soil sample locations are illustrated on Figure 2. Soil sample location and field screening data are provided in Table 1. Soil analytical results are summarized in Tables 2 through 5. The laboratory analytical report is provided as Attachment A. Field notes and a photographic log are provided as Attachment B.

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 October 7 through December 31, 2024, excavation and site investigation activities were conducted to address the soil impacts at the release location. Thirteen (13) soil samples were collected from the excavation area and were submitted for laboratory analysis of BTEX, naphthalene, TPH, 1,2,4- & 1,3,5-TMB, 1-methylnaphthalene (M), 2-M, Benzo (a) anthracene, Chrysene, Fluorene, Pyrene, boron, SAR, EC, As, Ba, Cd, Cu, Pb, and Ni based on the waste characterization profile created using the analytical results of sample WP01@3". Excavation and soil sampling activities are on-going and shall be reported on a subsequent Form 27-Supplemental. Soil sample location and field screening data are presented in Table 1 Soil analytical results are summarized in Tables 2 through 5. The soil sample locations are illustrated on Figure 2.

Proposed Groundwater Sampling

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

Groundwater was not encountered during over-excavation activities completed to date.

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 14
Number of soil samples exceeding 915-1 12
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 432

NA / ND

-- Highest concentration of TPH (mg/kg) 30330
-- Highest concentration of SAR 41.1
BTEX > 915-1 Yes
Vertical Extent > 915-1 (in feet) 10

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?

Four (4) background soil samples were collected from undisturbed native material adjacent to the facility, at comparable depths and soil composition to the waste characterization soil sample. The background soil samples were submitted for laboratory analysis of the Soil Suitability for Reclamation Parameters and Table 915-1 metals 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. Additional background soil sampling activities are pending and shall be reported on a subsequent Form 27-Supplemental.

☐ 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?

Excavation and soil sampling activities are on-going and shall be reported on a subsequent Form 27 supplemental.

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

On October 28 through December 23, 2024, approximately 99 cubic yards of impacted material were removed from the excavation via vacuum truck and transported to the Kerr-McGee Aggregate Recycle Facility in Weld County, Colorado for recycling; approximately 10 cubic yards of impacted material were removed from the excavation and transported to the Front Range Landfill in Erie, Colorado for disposal.

REMEDIATION SUMMARY

Describe how remediation of existing impacts to soil and groundwater is to be accomplished (i.e. summarize remedial action plan). Provide a brief narrative description including: technical justification, schedule for implementation, estimated time to attain NFA status, plus plans and specifications for the selected remedial action technology.

Excavation and soil sampling activities are on-going and shall be reported on a subsequent Form 27 supplemental. Soil sample location and field screening data are presented in Table 1. Soil analytical results are summarized in Tables 2 through 5. The soil sample locations are illustrated on Figure 2. The laboratory analytical reports are provided as Attachment A. Field notes and a photographic log are provided as Attachment B.

Soil Remediation Summary

☐ In Situ ☒ Ex Situ

☐ Bioremediation (or enhanced bioremediation)
☐ Chemical oxidation
☐ Air sparge / Soil vapor extraction
☐ Natural Attenuation
☐ Other _____

☐ Yes Excavate and offsite disposal
☐ If Yes: Estimated Volume (Cubic Yards) _____ 109
☐ 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 Remediation progress 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 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: \$ 10000

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 99 cubic yards of impacted material were removed from the excavation via vacuum truck and transported to the Kerr-McGee Aggregate Recycle Facility in Weld County, Colorado for recycling.

Volume of E&P Waste (solid) in cubic yards 109

E&P waste (solid) description Impacted soil

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility: Front Range Landfill & Kerr-McGee Aggregate Recycle 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:

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? _____

If YES, does the seed mix comply with local soil conservation district recommendations? _____

Did the local soil conservation district provide the seed mix? _____

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. _____

Proposed date of completion of Reclamation. _____

IMPLEMENTATION SCHEDULE

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

PRIOR DATES

Date of Surface Owner notification/consultation, if required. 10/07/2024

Actual Spill or Release date, or date of discovery. 10/07/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/07/2024

Proposed site investigation commencement. 10/07/2024

Proposed completion of site investigation. 03/31/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 10/07/2024

Proposed date of completion of Remediation. 03/31/2025

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

☐ Change from approved implementation schedule per Rule 913.d.(2).

Basis for change in implementation schedule:

OPERATOR COMMENT

Excavation and soil sampling activities are on-going and shall be reported on a subsequent Form 27 supplemental.

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

Signed: Jaron Bartoszek

Title: Environmental Advisor

Submit Date: 02/06/2025

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: Kari Brown

Date: 02/11/2025

Remediation Project Number: 38881

COA Type**Description**

0 COA	

ATTACHMENT LIST

Upon approval, the approved Form 27 and all listed attachments will be indexed to the Remediation Project file. Only the approved Form 27 will also be indexed to the related Facilities.

Att Doc Num**Name**

404051293	INVESTIGATION/REMEDATION WORKPLAN (INITIAL)
404083956	SITE MAP
404083958	SOIL SAMPLE LOCATION MAP
404083959	SOIL SAMPLE LOCATION MAP
404083961	ANALYTICAL RESULTS
404083962	PHOTO DOCUMENTATION
404083963	ANALYTICAL RESULTS
404083964	ANALYTICAL RESULTS
404083965	ANALYTICAL RESULTS
404083966	ANALYTICAL RESULTS
404083968	ANALYTICAL RESULTS
404088805	FORM 27-INITIAL-SUBMITTED

Total Attach: 12 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)