

State of Colorado
Energy & Carbon Management Commission

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404269130
Receive Date:
08/28/2025

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 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: <u>KERR MCGEE OIL & GAS ONSHORE LP</u>	Operator No: <u>47120</u>	Phone Numbers
Address: <u>P O BOX 173779</u>		
City: <u>DENVER</u>	State: <u>CO</u>	Phone: <u>(720) 929-4306</u>
	Zip: <u>80217-3779</u>	Mobile: <u>()</u>
Contact Person: <u>Erik Mickelson</u>	Email: <u>DJRemediation_Forms@oxy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 39623 Initial Form 27 Document #: 404028304

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>LOCATION</u>	Facility ID: <u>417609</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>KERN L 04-20D, 04-32D</u>	Latitude: <u>40.254093</u>	Longitude: <u>-104.791487</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWNW</u>	Sec: <u>4</u>	Twp: <u>3N</u>	Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>490235</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Kern L04-20D, 32D Facility</u>	Latitude: <u>40.254283</u>	Longitude: <u>-104.791495</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWNW</u>	Sec: <u>4</u>	Twp: <u>3N</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 Residential

Is domestic water well within 1/4 mile? Yes

Is surface water within 1/4 mile? Yes

Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

Surface water: An unnamed riverine is approximately 971 feet west of the location.
Wetlands: An area with wetland characteristics is located 268 feet west-southwest of the location.
Water Wells: The nearest water well is located 239 feet south of the location.
Springs: None.
Occupied Building: A building is located approximately 281 feet northwest of the location.
Livestock: Livestock is located approximately 60 feet west 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	GROUNDWATER	See attached data	Inspection/groundwater samples/laboratory analytical results
Yes	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.

Tank battery decommissioning activities were conducted at the Kern L04-20D, 32D production facility location on April 17 and 21, 2025. Visual inspections and field screening of soils was conducted following tank battery decommissioning activities, and seven (7) confirmation soil samples were collected from the former separator (SEP), above-ground storage tank (AST), and produced water vessel (PWV) locations, at depths ranging from approximately 3 inches to 4 feet below ground surface (bgs). The soil samples were submitted for laboratory analysis of the full Table 915-1 analytical suite to determine if a release occurred. Laboratory analytical results indicated that the benzene, 1,2,4- and 1,3,5-trimethylbenzene (TMB), 1-methylnaphthalene (1-M), 2-methylnaphthalene (2-M), and naphthalene concentrations in soil samples PW1-B01@4' and PW2-B01@4', pH and SAR levels in sample PW1-B01@4', and pH in samples AST1-B01@3", AST2-B01@3", and DL-B01@4' exceeded the applicable ECMC Table 915-1 standards and/or site-specific background levels. Verification soil samples AST1-B01@3"V and AST2-B01@3"V were collected on March 17, 2025, and were analyzed for pH only. Laboratory analytical reports indicated that the pH level in verification soil samples AST1-B01@3"V and AST2-B01@3"V were in compliance with ECMC Table 915-1 standards and/or site-specific background levels. A Form 19-Initial/Supplemental Spill/Release Report (Document No. 404203254) was submitted on May 16, 2025, and the ECMC issued Spill/Release Point ID 490235. The analytical results for the remaining confirmation soil samples collected during facility decommissioning activities were in compliance with ECMC Table 915-1 standards and/or site-specific background levels (x 1.25 for metals). 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 and field screening locations are illustrated on Figure 1.

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 April 17 and 21, 2025, a total of nine (9) confirmation and verification soil samples were collected from the former SEP, AST, and partially buried PWV locations, as described above. The soil samples were submitted for laboratory analysis of the full Table 915-1 analytical suite, or for pH only to verify the initial results. Analytical results indicate that constituent concentrations in the confirmation and/or verification soil samples were in compliance with ECMC Table 915-1 standards and/or site-specific background levels (x 1.25 for metals), with the exception of soil samples PW1-B01@4', PW2-B01@4', and DL-B01@4' as described above. Excavation activities, verification sampling, and site assessment activities to address remaining impacts to soil are pending and will be summarized in a forthcoming Form 27-Supplemental update.

Proposed Groundwater Sampling

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

Groundwater was encountered in the dump line (DL) and PWV excavation areas at approximately 4 feet below ground surface (bgs). On April 17 and 21, 2025, groundwater samples DL-GW01 and PW-GW01 were collected from the DL and PWV excavation areas, respectively, and submitted for laboratory analysis of BTEX, naphthalene, 1,2,4- and 1,3,5-TMB by USEPA Method 8260D and total dissolved solids (TDS), chloride, and sulfate. Analytical results indicated that benzene and 1,2,4-TMB concentrations in both groundwater samples, and 1,3,5-TMB in DL-GW01 exceeded ECMC Table 915-1 groundwater standards. The groundwater sample locations are illustrated on Figure 1. The groundwater 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 April 17 and 21, 2025, visual inspection and field screening of soils was conducted at two (2) locations below the former ASTs, one (1) location at the former meter house (MH), and one (1) location at the former enclosed combustion device (ECD). 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 <u>9</u>	-- Highest concentration of TPH (mg/kg) <u>160</u>
Number of soil samples exceeding 915-1 <u>3</u>	-- Highest concentration of SAR <u>8.5</u>
Was the areal and vertical extent of soil contamination delineated? <u>No</u>	BTEX > 915-1 <u>Yes</u>
Approximate areal extent (square feet) <u>0</u>	Vertical Extent > 915-1 (in feet) <u>0</u>
Groundwater	
Number of groundwater samples collected <u>2</u>	-- Highest concentration of Benzene (µg/l) <u>6.33</u>
Was extent of groundwater contaminated delineated? <u>No</u>	-- Highest concentration of Toluene (µg/l) <u>8.96</u>
Depth to groundwater (below ground surface, in feet) <u>4</u>	-- Highest concentration of Ethylbenzene (µg/l) <u>60.6</u>
Number of groundwater monitoring wells installed <u>0</u>	-- Highest concentration of Xylene (µg/l) <u>958</u>
Number of groundwater samples exceeding 915-1 <u>2</u>	NA Highest concentration of Methane (mg/l) <u></u>
Surface Water	
<u>0</u> Number of surface water samples collected	
<u></u> 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 collected from undisturbed native material adjacent to the former facility, at comparable depths and soil composition to the confirmation soil samples. Additionally, soil samples were utilized from undisturbed native material collected adjacent to the Kern L 04-20D, 32D wellheads, located approximately 630 feet northeast from similar depths, and NRCS soil type (loamy 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. Background soil sample locations are illustrated on Figures 1 and 3. Proximity of the Kern L 04-20D, 32D wellheads are illustrated on Figure 2. Background groundwater samples were utilized from the Kern L 04-20D, 32D wellheads location and are illustrated 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?

Impacted soils remains in the PWV and the DL excavation areas at the Kern L04-20D, 32D production facility location. Excavation, verification sampling, and site assessment activities are pending and will be summarized in a forthcoming Form 27-Supplemental update.

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.

Impacted soil will be removed and transported to a licensed disposal facility. Final disposal information will be provided upon completion of excavation activities. Disposal records will be kept on file and available upon request. The excavation areas will be 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.

Impacted soils remains in the PWV and the DL excavation areas at the Kern L04-20D, 32D production facility location. Excavation, verification sampling, and site assessment activities are pending and will be summarized in a forthcoming Form 27-Supplemental update. Impacts to groundwater are present at the facility. Groundwater assessment activities are pending and will be summarized in a forthcoming Form 27-Supplemental update.

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.

Impacts to groundwater are present at the Kern L04-20D, 32D production facility location. Additional site assessment activities are pending and will be summarized in a forthcoming Form 27-Supplemental update.

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 Project 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 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: \$ 20000

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? No

Does the previous reply indicate consideration of background concentrations? _____

Does Groundwater meet Table 915-1 standards? No

Is additional groundwater monitoring to be conducted? Yes

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. _____

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. 11/20/2024

Actual Spill or Release date, or date of discovery. 05/14/2025

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/17/2025

Proposed site investigation commencement. 03/17/2025

Proposed completion of site investigation. 10/31/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/01/2025

Proposed date of completion of Remediation. 10/31/2026

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

Analytical results indicate that impacted soil and groundwater remains at the Kern L04-20D, 32D production facility. Excavation, verification sampling, and additional site assessment activities are pending and will be summarized in a forthcoming Form 27-Supplemental update.

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: 08/28/2025

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: Taylor Robinson

Date: 03/09/2026

Remediation Project Number: 39623

COA Type**Description**

0 COA	
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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**

404269130	FORM 27-SUPPLEMENTAL-SUBMITTED
404333954	SOIL SAMPLE LOCATION MAP
404333955	SOIL SAMPLE LOCATION MAP
404333956	SOIL SAMPLE LOCATION MAP
404333957	ANALYTICAL DATA SUMMARY TABLE(S)
404333958	PHOTO DOCUMENTATION
404333959	LABORATORY ANALYTICAL REPORT
404333960	LABORATORY ANALYTICAL REPORT
404333961	LABORATORY ANALYTICAL REPORT

Total Attach: 9 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)