

State of Colorado
Energy & Carbon Management Commission

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



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Report taken by:
Kari Brown

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 Phone: <u>(970) 515-1058</u> Mobile: <u>()</u>
Address: <u>P O BOX 173779</u>		
City: <u>DENVER</u>	State: <u>CO</u>	Zip: <u>80217-3779</u>
Contact Person: <u>Austin Lee</u>	Email: <u>DJRemediation_Forms@oxy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 36422 Initial Form 27 Document #: 403845162

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>TANK BATTERY</u>	Facility ID: <u>487116</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>FEHRN 7 8 24 25 26 41-32 FacilityTB</u>	Latitude: <u>40.096937</u>	Longitude: <u>-104.794880</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SENE</u>	Sec: <u>32</u>	Twp: <u>2N</u>	Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>
Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>488018</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Fehrn 7 8 24 25 26 41-32 Facility</u>	Latitude: <u>40.096937</u>	Longitude: <u>-104.794880</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SENE</u>	Sec: <u>32</u>	Twp: <u>2N</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 Crop Land

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

Domestic water well: multiple domestic wells within 1/4 mile.
Surface water: none
Wetlands: an area with wetland characteristics is located approximately 1005' NW
Springs: none
Livestock: none
Occupied building: multiple occupied buildings within 1/4 mile
High Priority Habitat (HPH): 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
UNDETERMINED	GROUNDWATER	TBD	Groundwater samples/laboratory analytical results
Yes	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.

Decommissioning activities were completed at the Fehr 7 8 24 25 26 41-32 production facility on September 1, through September 25, 2024. Groundwater was not encountered during decommissioning activities. Visual inspection and field screening of soils at two separators, two meter houses, two emission control devices (ECD), one dumpline removal pothole, and six aboveground storage tanks (AST) was conducted following removal activities, and soil samples (AST-B01@3", AST-B03@3", AST-B05@3", AST-B07@3", AST-B09@3", AST-B11@3", SEP-B01@5', SEP-B02@6", SEP-B03@5' and SEP-B04@6") were submitted for laboratory analysis to determine if a release occurred. Following removal of the secondary containment liner, soil samples (AST-B01@4', AST-B03@4', AST-B05@4', AST-B07@4', AST-B09@4', AST-B11@4') were collected. Laboratory analytical results indicated that the arsenic concentration in soil sample AST-B03@3", the cadmium concentration in soil sample SEP-B04@6", and the selenium concentration in soil sample AST-B01@4' exceeded the applicable ECMC Table 915-1 standards and/or background limits. As such, a Form 19-Initial/Supplemental Spill/Release Report (ECMC Document No. 403922979) was submitted on September 19, 2024, and the ECMC issued Spill/Release Point ID 488018. Verification samples (SEP-B04-01@6", AST-B01-01@4') were collected and submitted for analysis of Cd or Se only, as applicable. Analytical results for the verification samples indicated that the Cd and Se concentrations in the soil samples were within the applicable Table 915-1 standards and/or within background limits. A topographic Site Location Map showing the geographic setting of the site location is provided as Figure 1. Soil sample location and field screening data are presented in Table 1. The facility soil sample and field screening locations are illustrated on Figure 2. The laboratory analytical reports are attached. The field notes and a photographic log are provided as Attachment A.

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 September 11 through September 19, 2024, six (6) soil samples were collected from beneath the secondary liner and submitted for laboratory analysis of the full ECMC Table 915-1 analytical suite. Partial laboratory analytical results indicated As concentrations in soil sample AST-B03@4' were within site-specific background limits. Final analytical results are pending and will be summarized in a forthcoming quarterly Form 27-Supplemental Site Investigation and Remediation Workplan. Soil analytical results are summarized in Tables 2 through 5.

Proposed Groundwater Sampling

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

Groundwater has not been encountered during the initial decommissioning activities. If groundwater is encountered during ongoing excavation or site assessment activities, a minimum of one grab sample will be collected as soon as practical. Groundwater samples will be submitted for laboratory analysis of BTEX, naphthalene, 1,2,4- and 1,3,5-TMB, and Groundwater Inorganic Parameters (TDS, chloride, and sulfate) using standard methods appropriate for detecting the target analytes in Table 915-1.

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 September 11, 2024 visual inspections and field screening of soils was conducted at two meter houses, two separators, two ECDs, one dumpline removal pothole, and beneath six former ASTs. Based on the inspection and screening results, hydrocarbon-impacted soils were not observed at the soil screening locations. As a result, no soil samples were submitted for laboratory analysis from these areas in accordance with the ECMC Operator Guidance for Oil & Gas Facility Closure document.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 18

Number of soil samples exceeding 915-1 16

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet) 20

NA / ND

-- Highest concentration of TPH (mg/kg) 161.9

NA Highest concentration of SAR

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 1

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?

Background soil samples PW-BG01 - PW-BG04 were collected from non-impacted native material nearby the tank battery at depths ranging from approximately 0.25' - 6' bgs. The background soil samples were submitted for laboratory analysis of the Soil Suitability for Reclamation Parameters and ECMC Table 915-1 Metals using standard methods appropriate for detecting target analytes in ECMC Table 915-1. Analytical results for the background soil samples are presented in Tables 3 and 5. The background locations are illustrated on Figure 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?

Assessment and excavation activities are ongoing. The laboratory analytical results of the confirmation samples collected are pending and will be summarized in a forthcoming quarterly Form 27-Supplemental Site Investigation and Remediation Workplan.

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.

Assessment and excavation activities are ongoing. The laboratory analytical results of the confirmation samples collected are pending and will be summarized in a forthcoming quarterly Form 27-Supplemental Site Investigation and Remediation Workplan.

REMEDIAL ACTION 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.

Assessment and excavation activities are ongoing. The laboratory analytical results of the confirmation samples collected are pending and will be summarized in a forthcoming quarterly Form 27-Supplemental Site Investigation and Remediation Workplan.

Soil Remediation Summary

In Situ

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

Ex Situ

- _____ 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.

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. 05/29/2024

Actual Spill or Release date, or date of discovery. 09/16/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 09/11/2024

Proposed site investigation commencement. 09/11/2024

Proposed completion of site investigation. 12/31/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 09/16/2024

Proposed date of completion of Remediation. 12/31/2024

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

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

Signed: Austin Lee

Title: HSE Advisor

Submit Date: 10/08/2024

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: 12/19/2024

Remediation Project Number: 36422

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**

403936679	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403937516	ANALYTICAL RESULTS
403937528	ANALYTICAL RESULTS
403937531	SITE MAP
403937533	SOIL SAMPLE LOCATION MAP
403937539	PHOTO DOCUMENTATION
403940837	ANALYTICAL RESULTS
403950236	ANALYTICAL RESULTS
404036149	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)