

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
403945020

Receive Date:

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Report taken by:

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
Address: P O BOX 173779		
City: DENVER	State: CO	Zip: 80217-3779
Contact Person: Macy Kiel	Email: DJRemediation_Forms@oxy.com	Phone: (970) 515-1110
		Mobile: ( )

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 33737 Initial Form 27 Document #: 403647165

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: WELL	Facility ID: _____	API #: 123-16133	County Name: WELD
Facility Name: HSR-PERCONTE 16-23	Latitude: 40.206220	Longitude: -104.852250	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESE	Sec: 23	Twp: 3N	Range: 67W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SC Most Sensitive Adjacent Land Use Livestock

Is domestic water well within 1/4 mile? No Is surface water within 1/4 mile? Yes

Is groundwater less than 20 feet below ground surface? Yes

**Other Potential Receptors within 1/4 mile**

Domestic water well: none  
Surface water: approximately 70' E  
Wetlands: multiple areas with wetland characteristics are located within 1/4 mile  
Spring: none  
Livestock: none  
Occupied Building: none  
High Priority Habitats: located within Mule Deer Severe Winter Range; within 1/4 mile of the boundary of Mule Deer Migration Corridor

**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
No	GROUNDWATER	No impacted groundwater	Groundwater samples/laboratory analytical results
No	SOILS	No impacted soils	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.

Flowline removal activities were completed at the HSR-Perconte 16-23 flowline on May 14 through August 27, 2024. The HSR-Perconte 16-23 wellhead was previously plugged and abandoned on October 24, 2017. Groundwater was encountered at approximately 3' below ground surface (bgs) within the FL-B18-01@4' pothole location, and at three flowline background pothole locations. Visual inspection and field screening of soils around the flowline potholes following flowline removal activities was conducted and soil samples (FL-B01@4', FLB17@4', FL-B18@4', FL-B19@4') were submitted for laboratory analysis to determine if a release occurred. Initial laboratory analytical results indicated that the SAR concentration in soil sample FL-B18@4' exceeded the applicable ECMC Table 915-1 standard and/or background limit. As such, verification soil sample FL-B18-01@4' was collected and submitted for analysis of SAR only. Final analytical results for the verification soil sample (FL-B18-01@4') indicated that the SAR concentration was in compliance with the applicable ECMC Table 915-1 standard and/or within background limit. 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 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 May 14 through August 27, 2024, soil samples were collected from the locations where the flowline risers were disconnected at the wellhead (FL-B19@4') and separator (FL-B01@4'), and from both sides of an irrigation ditch that the former flowline crossed (FL-B17@4', FL-B18@4'). The soil samples were submitted for laboratory analysis of the full ECMC Table 915-1 analytical suite using ECMC-approved methods. Laboratory analytical results indicated that the SAR concentration in soil sample FL-B18@4' exceeded the applicable ECMC Table 915-1 standard and/or background limit. As such, verification soil sample FL-B18-01@4' was collected and submitted for analysis of SAR only. Final analytical results for the verification soil sample (FL-B18-01@4') indicated that the SAR concentration was in compliance with the applicable ECMC Table 915-1 standard and/or within background limit. Soil analytical results are presented 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 was encountered at approximately 3' bgs within the FL-B18-01@4' pothole location, and at three flowline background pothole locations. On August 27, 2024, groundwater samples (GW-01 - GW-04) were collected from the excavation areas and submitted for laboratory analysis of BTEX, naphthalene, TMBs, total dissolved solids (TDS), chloride, and sulfate using ECMC-approved methods. Groundwater analytical results indicated that constituent concentrations in samples GW-01 - GW-04 were in compliance with the ECMC Table 915-1 standards and/or background limits. Groundwater sample GW-04 was collected from an upgradient location and was used to calculate site-specific TDS, chloride ion, and sulfate ion background limits. Groundwater analytical results are presented in Tables 6 and 7. The groundwater sample locations are illustrated on Figure 2.

**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 14 and May 15, 2024, visual inspection and field screening of soils was conducted at 15 flowline removal potholes. 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 5  
Number of soil samples exceeding 915-1 5  
Was the areal and vertical extent of soil contamination delineated? Yes  
Approximate areal extent (square feet) 0

**NA / ND**

ND Highest concentration of TPH (mg/kg) \_\_\_\_\_  
-- Highest concentration of SAR 11.9  
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 0

**Groundwater**

Number of groundwater samples collected 4  
Was extent of groundwater contaminated delineated? No  
Depth to groundwater (below ground surface, in feet) 3  
Number of groundwater monitoring wells installed 0  
Number of groundwater samples exceeding 915-1 0

ND Highest concentration of Benzene (µg/l) \_\_\_\_\_  
ND Highest concentration of Toluene (µg/l) \_\_\_\_\_  
ND Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_  
ND Highest concentration of Xylene (µg/l) \_\_\_\_\_  
NA Highest concentration of Methane (mg/l) \_\_\_\_\_

**Surface Water**

0 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?

Background soil samples FL-BG01 - FL-BG03 were collected from non-impacted native material (Altvan loam) nearby the flowline at approximate depth of 3' bgs. Background soil samples from the Davis V.6-26A wellhead (located approximately 0.6 mi SW) and the PIZ 15-23A wellhead (located approximately 0.15 mi SW) have been included (collected from similar soil type (Altvan loam), depths (3' and 6' bgs), and/or land use). The background soil samples were submitted for laboratory analysis of the Soil Suitability for Reclamation Parameters in Soils and Table 915-1 metals using standard methods appropriate for detecting the target analytes in Table 915-1. Analytical results for the background soil samples are presented in Table 3 and 5. The background sample locations are illustrated on Figures 3 through 5.

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 analytical results indicated that the SAR concentration in soil sample FL-B18@4' exceeded the applicable ECMC Table 915-1 standard and/or background limit. As such, verification soil sample FL-B18-01@4' was collected and submitted for analysis of SAR only. Final laboratory analytical results indicated that the constituent concentrations in the soil samples were in compliance with the applicable ECMC Table 915-1 standards and/or within site-specific background limits. The excavation areas will be backfilled and contoured to match preexisting site conditions.

## **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.

Laboratory analytical results indicated that the SAR concentration in soil sample FL-B18@4' exceeded the applicable ECMC Table 915-1 standard and/or background limit. As such, verification soil sample FL-B18-01@4' was collected and submitted for analysis of SAR only. Final laboratory analytical results indicated that the constituent concentrations in the soil samples were in compliance with the applicable ECMC Table 915-1 standards and/or within site-specific background limits. Groundwater analytical results indicated that constituent concentrations in samples GW-01 - GW-04 were in compliance with ECMC Table 915-1 standards and/or background limits. Based on the analytical and soil screening data presented herein, assessment is complete at this site 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 )

\_\_\_\_\_ 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 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 & 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. 11/15/2024

Proposed date of completion of Reclamation. 11/15/2025

## 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. 12/21/2023

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

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/14/2024

Proposed site investigation commencement. 05/14/2024

Proposed completion of site investigation. 08/27/2024

### 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**

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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: Macy Kiel

Title: Environmental Engineer

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

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: 33737

**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**

403945460	PHOTO DOCUMENTATION
403945465	SITE MAP
403945467	SOIL SAMPLE LOCATION MAP
403945470	SOIL SAMPLE LOCATION MAP
403945471	SOIL SAMPLE LOCATION MAP
403945474	SOIL SAMPLE LOCATION MAP
403945541	ANALYTICAL RESULTS
403945542	ANALYTICAL RESULTS
403945545	ANALYTICAL RESULTS
403945547	ANALYTICAL RESULTS
403945548	ANALYTICAL RESULTS
403945550	ANALYTICAL RESULTS
403945553	ANALYTICAL RESULTS
403945555	ANALYTICAL RESULTS
403990043	ANALYTICAL RESULTS

Total Attach: 15 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)