

# State of Colorado Energy & Carbon Management Commission

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Document Number:

404097522

Receive Date:

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 Phone: (970) 515-1727 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 #: 38231 Initial Form 27 Document #: 403987310

#### 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: WELL	Facility ID: _____	API #: 123-16020	County Name: WELD
Facility Name: BARCLAY 2-16K	Latitude: 40.249430	Longitude: -104.738370	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESE	Sec: 2	Twp: 3N	Range: 66W Meridian: 6 Sensitive Area? Yes
Facility Type: SPILL OR RELEASE	Facility ID: 490341	API #: _____	County Name: WELD
Facility Name: Barclay Farms L11-27D Wellhead	Latitude: 40.249390	Longitude: -104.738541	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SWSE	Sec: 2	Twp: 3N	Range: 66W Meridian: 6 Sensitive Area? Yes

## SITE CONDITIONS

General soil type - USCS Classifications SM

Most Sensitive Adjacent Land Use Occupied Buildings

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

County Roads 970 feet (ft) east and 980 ft south. Water well 1140 ft southeast. Occupied buildings 1160 ft southwest. Agriculture.

## 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	Soil Samples/Laboratory Analytical Results

### INITIAL ACTION SUMMARY

Description of initial action or emergency response measures taken to abate, investigate, and/or remediate impacts associated with E&P Waste.

Wellhead cut and cap operations were completed at the Barclay 2-16K and Barclay Farms L11-27D wellheads on 1/24 and 5/5/2025. Groundwater was not encountered during wellhead cut and cap operations. Visual inspection and field screening of soil around the wellheads and associated pumping equipment were conducted following cut and cap operations. Soil samples [B01(2-16K)@6' and B01(L11-27D)@6'] were submitted for analysis of full list ECMC Table 915-1 constituents, to determine if a release occurred. The flowlines associated with the wellheads were removed on 5/5 and 5/16/25 and soil samples were collected from where the flowline was disconnected from the Barclay Farms L11-27D wellhead [WH-Riser(L11-27D)@5], and from where the flowlines changed directions [FL01(2-16K, L11-27D)@4']. The samples were submitted for analysis of full list Table 915-1 constituents to determine if a release occurred. Laboratory analytical results indicated that polycyclic aromatic hydrocarbon (PAH) impacts exceeding the Table 915-1 allowable levels were present at the Barclay Farms L11-27D wellhead riser, and the FL01 locations. As such, Form 19 Initials (Document Nos. 404218820 and 404231299) were submitted on 5/29 and 6/6/25 and the ECMC issued Spill/Release Point ID 490341. The other Spill/Release Point ID is pending. The wellheads and flowlines are depicted on Figures 1 and 2. The PID readings and soil sample results are summarized in Tables 1 and 2, respectively.

Separator riser and the Barclay 2-16K wellhead riser sampling are pending. Assessment activities are ongoing and details will be provided in a subsequent Form 27 supplemental report.

### 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 ):

Between 1/24 and 5/16/2025, soil samples were collected from the wellhead excavations [B01(2-16K)@6' and B01(L11-27D)@6'], from where the flowline was disconnected from the Barclay Farms L11-27D wellhead and from where the flowlines changed directions [FL01(2-16K, L11-27D)@4'] at depths ranging from 4 to 6 ft below ground surface (bgs). The samples were submitted for analysis of full Table 915-1 constituents, using ECMC-approved methods. Laboratory analytical results indicated that polycyclic aromatic hydrocarbon (PAH) impacts exceeding the Table 915-1 allowable levels were present at the Barclay Farms L11-27D wellhead riser and the FL01 locations. Assessment activities are ongoing. The laboratory reports are attached.

#### Proposed Groundwater Sampling

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

Groundwater was not encountered during wellhead cut and cap or flowline removal activities.

## 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 ):

Between 1/24 and 5/16/2025, visual inspection and field screening of soil were conducted at eight sidewall locations within the cut and cap excavation areas and eight locations at the ground surface adjacent to the cut and cap excavation areas, and two flowline potholes. 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.

On 2/6 and 5/13/2025, soil gas surveys were conducted at ten soil vapor points installed adjacent to the former wellhead locations following cut and cap operations. GEM 5000 field readings were all non-detect for methane at all soil vapor points. The soil vapor point locations are illustrated on Figure 1. The soil vapor field forms are included as an attachment.

## SITE INVESTIGATION REPORT

### SAMPLE SUMMARY

#### Soil

Number of soil samples collected 8

Number of soil samples exceeding 915-1 6

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

Approximate areal extent (square feet) 415

#### NA / ND

ND Highest concentration of TPH (mg/kg)         

-- Highest concentration of SAR 1.15

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 6

#### 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?

Sixteen background soil samples (NATIVE-BG01@3' through NATIVE-BG08@3' and NATIVE-BG01@6' through NATIVE-BG08@6') were collected from the native material outside of the wellhead excavation areas. The background soil samples were submitted for laboratory analysis of pH, EC, SAR, boron, and ECMC Table 915-1 metals, using ECMC-approved methods. Analytical results indicate that pH, arsenic, barium, lead, and selenium 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 Figure 1.

☐ 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?

Separator riser and the Barclay 2-16K wellhead riser sampling are pending. Assessment activities are ongoing and details will be provided in a subsequent Form 27 supplemental report.

## 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 from the wellhead cut and cap and flowline pothole excavations will be removed and transported to a licensed disposal facility. Final disposal information will be provided upon completion of assessment 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.

### **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 data indicate that PAH impacts exceeding the Table 915-1 allowable levels are present at the Barclay Farms L11-27D wellhead riser and the FL01 locations. Groundwater was not encountered during wellhead cut and cap activities. Flowline removal activities are pending. Assessment activities are ongoing and details will be provided in a subsequent Form 27 supplemental report.

### **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.

## 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: \$ 11000

### WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? ☐

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 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. 06/06/2025

Actual Spill or Release date, or date of discovery. 06/05/2025

### **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). 01/24/2025

Proposed site investigation commencement. 01/24/2025

Proposed completion of site investigation. 12/17/2025

### **REMEDIAL ACTION DATES**

Proposed start date of Remediation. 05/05/2025

Proposed date of completion of Remediation. 12/17/2025

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**

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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: HSE Advisor

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: 38231

**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**

404244586	ANALYTICAL DATA SUMMARY TABLE(S)
404244587	PHOTO DOCUMENTATION
404244588	OTHER
404244589	LABORATORY ANALYTICAL REPORT
404244590	LABORATORY ANALYTICAL REPORT
404244591	LABORATORY ANALYTICAL REPORT
404244592	SOIL SAMPLE LOCATION MAP
404244593	SOIL SAMPLE LOCATION MAP

Total Attach: 8 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)