

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404006001

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
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 #: 35192 Initial Form 27 Document #: 403722803

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 #: 123-20969	County Name: WELD
Facility Name: OPEN 10-25	Latitude: 40.107550	Longitude: -104.609960	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWSE	Sec: 25	Twp: 2N	Range: 65W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Surface Water

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? Yes

Other Potential Receptors within 1/4 mile

Box Elder Creek 490 feet (ft) south. An area with wetland characteristics is located approximately 480 ft south. Water well 25 ft southeast. Occupied buildings 850 ft east and 1140 ft northeast. Agriculture. The site is located within an Aquatic Native Species Conservation Waters and Mule Deer Migration Corridor High Priority Habitat (HPH) areas. The site is located in a 100 year floodplain.

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
UNDETERMINED	SOILS	TBD	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.

Wellhead cut and cap operations were completed at the Open 10-25 wellhead on May 23, 2024. Groundwater was not encountered during wellhead cut and cap activities. Visual inspection and field screening of soil around the wellhead and associated pumping equipment were conducted following cut and cap operations, and a soil sample (WH-B01@6') was submitted for analysis of full Table 915-1 constituents, to determine if a release occurred. The flowline associated with the wellhead was removed on May 23 and May 28, 2024, and soil samples were collected from the locations where the flowline risers were disconnected from the wellhead (FL-B01@4') and from the separator (FL-B03@4'). The samples were submitted for laboratory analysis of full list Table 915-1 constituents to determine if a release occurred. Laboratory analytical results indicated that lead impacts exceeding the ECMC Table 915-1 allowable levels and background level were present at the WH-B01@6' location; however, additional assessment is being performed to verify reportability. As such, a verification soil sample will be collected to confirm the initial lead result and will be submitted for analysis of lead only. Verification soil sampling activities are pending and will be summarized in a subsequent Form 27-Supplemental report. All other soil sample results were in compliance with Table 915-1 standards or within site-specific background levels. The wellhead excavation and flowline are depicted on Figures 1 and 2. The PID readings and soil sample results are summarized in Tables 1 and 2, respectively. The Form 44 is attached.

Additional assessment activities are pending due to crops and will be summarized 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):

On May 23 and May 28, 2024, soil samples were collected from the base of the cut and cap excavation (WH-B01@6') and from the locations where the flowline risers were disconnected from the wellhead (FL-B01@4') and from the separator (FL-B03@4'). The samples were submitted for laboratory analysis of full list Table 915-1 constituents using ECMC-approved methods. Laboratory analytical results indicated that lead impacts exceeding the ECMC Table 915-1 allowable levels and background level were present at the WH-B01@6' location; however, additional assessment is being performed to verify reportability. As such, a verification soil sample will be collected to confirm the initial lead result. All other soil sample results were in compliance with Table 915-1 standards or within site-specific background levels. The wellhead excavation and flowline are depicted on Figures 1 and 2. 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 and 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):

On May 23 and May 28, 2024, visual inspection and field screening of soil were conducted at four sidewall locations within the cut and cap excavation area, four locations at the ground surface adjacent to the cut and cap excavation, and one flowline pothole. 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 June 4, 2024, a soil gas survey was conducted at five soil vapor points installed adjacent to the former wellhead location following cut and cap operations. GEM 5000 field reading was non-detect for methane at all soil vapor points. The soil vapor point locations are illustrated on Figure 1. The soil vapor screening results are included as an attachment.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 3

Number of soil samples exceeding 915-1 3

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

Approximate areal extent (square feet) 0

NA / ND

-- Highest concentration of TPH (mg/kg) 0.468

-- Highest concentration of SAR 4.05

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 0

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?

Six background soil samples (BG01@3' through BG03@3' and BG01@6' through BG03@6') were collected from native material adjacent to the wellhead cut and cap excavation. Ten background samples were also collected as part of the Shaklee/Open 10&13-25 facility decommissioning activities (Remediation No. 35194), located approximately 370 ft southwest, from similar depths (3' and 6' bgs), and similar NRCS soil type (loamy sand). The background soil samples were submitted for laboratory analysis of pH, electrical conductivity (EC), sodium adsorption ratio (SAR), boron, and Table 915-1 metals, using ECMC-approved methods. Laboratory analytical results indicate that EC, SAR, pH, arsenic, barium, and hexavalent chromium 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 Figures 1 and 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?

Additional assessment activities are pending due to crops and will be summarized 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.

If a suspected release is identified and confirmed through soil screening and/or laboratory analysis, soil will be removed and transported to a licensed disposal facility. Disposal records will be kept on file and available upon request.

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 impacts exceeding the ECMC Table 915-1 allowable level and background level for lead are present in the WH-B01@6' location; however, additional assessment is being performed to verify reportability. As such, a verification soil sample will be collected to confirm the initial lead result and will be submitted for analysis of lead only. Verification soil sampling activities are pending and will be summarized in a subsequent Form 27-Supplemental report. All other soil sample results were in compliance with Table 915-1 standards or within site-specific background levels. Groundwater was not encountered during wellhead cut and cap and flowline removal activities. Additional assessment activities are pending due to crops and will be summarized in a subsequent Form 27 Supplemental report.

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 _____

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: \$ 10500 _____

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. 11/15/2023

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/23/2024

Proposed site investigation commencement. 05/23/2024

Proposed completion of site investigation. 05/26/2025

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

The prior Form 27 Supplemental (Document No. 403894591) dated August 26, 2024, was denied with a general comment stating the laboratory analytical PDFs were altered after delivery.

The nature of the modification to the laboratory analytical PDFs on the previous submittal was not identified, but original locked PDFs were obtained directly from the lab and are attached.

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: 35192 _____

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

404006129	SOIL SAMPLE LOCATION MAP
404006130	SOIL SAMPLE LOCATION MAP
404006131	SOIL SAMPLE LOCATION MAP
404006134	ANALYTICAL RESULTS
404006136	ANALYTICAL RESULTS
404006138	ANALYTICAL RESULTS
404006141	PHOTO DOCUMENTATION
404006142	OTHER
404006143	CORRESPONDENCE

Total Attach: 9 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
--	--	---------------------

Total: 0 comment(s)