

State of Colorado
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203
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Document Number:

403884688

Receive Date:

10/25/2024

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: KERR MCGEE OIL & GAS ONSHORE LP	Operator No: 47120	Phone Numbers
Address: P O BOX 173779		Phone: (713) 350-4906
City: DENVER	State: CO	Zip: 80217-3779
Contact Person: Ariana Ochoa	Email: DJRemediation_Forms@oxy.com	Mobile: ()

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 18888 Initial Form 27 Document #: 402732790

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 #: 123-25961	County Name: WELD
Facility Name: USA 36-36	Latitude: 40.176360	Longitude: -104.727850	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESW	Sec: 36	Twp: 3N	Range: 66W Meridian: 6 Sensitive Area? Yes

Facility Type: TANK BATTERY	Facility ID: 442949	API #: _____	County Name: WELD
Facility Name: USA FED TANK BATTERY 29N-36HZ	Latitude: 40.178538	Longitude: -104.729673	
** correct Lat/Long if needed: Latitude: 40.178875		Longitude: -104.730502	
QtrQtr: NESW	Sec: 36	Twp: 3N	Range: 66W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE	Facility ID: 483365	API #:	County Name: WELD
Facility Name: USA 36-36 Wellhead	Latitude: 40.178854	Longitude: -104.730468	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: NWSW	Sec: 36	Twp: 3N	Range: 66W
		Meridian: 6	Sensitive Area? Yes

SITE CONDITIONS

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

Is domestic water well within 1/4 mile? No 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

No other potential receptors were identified in a 1/4 mile radius.

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	SOILS	See attached data.	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 & cap operations were completed at the USA 36-36 wellhead on 11/3/2022. Visual inspection & field screening of soils around the wellhead & associated pumping equipment was conducted following cut & cap operations, & a soil sample (B01@6'-WP) was submitted for analysis of reduced list Table 915-1 constituents, as approved in the Form 27 Initial dated 6/29/2021 (Doc# 402732790) to determine if a release occurred. Portions of the flowline associated with the wellhead were removed between 11/11/2022 & 2/2/2023, & soil samples were collected from the location where the flowline riser was disconnected from the separator (Sep01-Riser@4.5'-WP) & from where the line was cut & capped (FL01@4'). The separator riser sample was submitted for analysis of full list Table 915-1 constituents due to potential impact & the FL01 sample was submitted for analysis of reduced list Table 915-1 constituents to determine if a release occurred. Results indicated that naphthalene impacts exceeding the ECMC Table 915-1 allowable level were present at the separator riser. As such, a Form 19 Spill Report (Doc# 403243287) was submitted on 12/1/2022 & the ECMC issued Spill ID 483365. The status of the remainder of the flowline has been changed from active to out-of-service & cannot be removed due to the proximity to active lines.

Per the condition of approval (COA) issued by the ECMC for document number 403315714, on 6/5/2024, two soil samples were collected from locations along the abandoned-in-place flowline where the flowline turned at sharp angles (FL02@5' & FL03@5') & were submitted for analysis of reduced list Table 915-1 constituents to determine if a release occurred. Final analytical results indicated that all soil samples were in full compliance with Table 915-1 standards or within site-specific background levels. The wellhead excavation & flowline are depicted on Figures 1 & 2. The PID readings & soil sample results are summarized in Tables 1 & 2. The Form 44 is attached.

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):

From November 23 to December 20, 2022, excavation activities were conducted to address soil impacts at the former separator riser location and five confirmation soil samples were collected from the base and sidewalls of the excavation extent at approximately 5.5 ft below ground surface (bgs) and 4 ft bgs, respectively. The confirmation soil samples were submitted for laboratory analysis of naphthalene based on waste characterization sample Sep01-Riser@4.5'-WP using ECMC-approved methods. Results indicated that samples collected at the final excavation extents were within the ECMC Table 915-1 allowable levels. The excavation is depicted on Figure 3. 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 partial 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 November 3, 2022, and June 5, 2024, visual inspection and field screening of soils were conducted at four sidewall locations within the cut and cap excavation area, four locations at the ground surface adjacent to the excavation, and at three flowline hand auger locations. 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 November 7, 2022, 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 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 form is included as an attachment.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 10

Number of soil samples exceeding 915-1 7

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 110

NA / ND

ND Highest concentration of TPH (mg/kg)

-- Highest concentration of SAR 1.57

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 6

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? Yes

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?

Four background soil samples (Native-BG01@3', Native-BG01@6', Native-BG02@3', and Native-BG02@6') were collected from the native material outside of the USA 19-36 wellhead cut and cap excavation (Remediation No. 23478) located in the same quarter section and NRCS soil type. Per the COA issued for Document No. 403315714, the backgrounds collected near the USA 36-36 wellhead have been omitted from this report. The samples were submitted for laboratory analysis of EC, SAR, pH, boron, and Table 915-1 metals using ECMC-approved methods. Laboratory analytical results indicate that SAR, pH, arsenic, barium, and selenium are naturally high in the native soil. The background soil sample laboratory analytical results are summarized in Table 2. The background soil sample locations are depicted 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?

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.

Approximately 20 cubic yards of impacted soil were transported to the Aggregate Recycle Facility in Weld County, Colorado for recycling. Disposal records are kept on file and are available upon request. The excavation area was 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 impacts at the separator riser have been remediated to be within the ECMC Table 915-1 allowable level. Per the COA issued by the ECMC for document number 403315714, on 6/5/2024, two soil samples were collected from locations along the abandoned-in-place flowline where the flowline turned at sharp angles (FL02@5' & FL03@5') & were submitted for analysis of reduced list Table 915-1 constituents to determine if a release occurred. Final analytical results indicated that all soil samples were in full compliance with Table 915-1 standards or within site-specific background levels. Groundwater was not encountered during wellhead cut and cap or partial flowline removal activities. Based on the analytical and soil screening data presented herein, assessment is complete at this site and no further activities are required. As such, KMOG is requesting a No Further Action (NFA) determination for this location.

Soil Remediation Summary

☐ In Situ

☒ Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes _____ Excavate and offsite disposal

_____ Chemical oxidation

_____ If Yes: Estimated Volume (Cubic Yards) _____ 20

_____ Air sparge / Soil vapor extraction

_____ Name of Licensed Disposal Facility or ECMC Facility ID # _____ 434766

_____ Natural Attenuation

No _____ 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 Status 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 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: \$ 0

WASTE DISPOSAL INFORMATION

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

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

Approximately 20 cubic yards of impacted soil were transported to the Aggregate Recycle Facility in Weld County, Colorado for recycling.

Volume of E&P Waste (solid) in cubic yards 20

E&P waste (solid) description Impacted Soil

ECMC Disposal Facility ID #, if applicable: 434766

Non-ECMC Disposal Facility:

Volume of E&P Waste (liquid) in barrels 0

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? No

Does the previous reply indicate consideration of background concentrations?

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. 07/09/2025

Proposed date of completion of Reclamation. 08/09/2025

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. 11/29/2022

Actual Spill or Release date, or date of discovery. 11/29/2022

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/03/2022

Proposed site investigation commencement. 11/03/2022

Proposed completion of site investigation. 06/05/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 11/23/2022

Proposed date of completion of Remediation. 06/05/2024

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

Per the email correspondence from the ECMC dated October 1, 2024, this report has been revised to eliminate the discrepancy between the separator riser sample names. The original sample ID in the previously-submitted Origins laboratory report was incorrectly noted on the chain of custody. This error was previously identified and the laboratory analytical report and associated chain of custody were revised accordingly. The incorrect laboratory analytical report was previously included as an attachment to this form and has now been replaced with the correct, updated laboratory analytical report. In addition, the report drafter used the incorrect name in the Initial Action Section and in Figure 2, while referencing the incorrect laboratory analytical report. These discrepancies have also been remedied.

Based on analytical and soil screening data provided herein, assessment is complete and Kerr-McGee is requesting an NFA determination for this location.

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

Signed: Ariana Ochoa

Title: Sr. HSE Advisor

Submit Date: 10/25/2024

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: Taylor Robinson

Date: 12/26/2024

Remediation Project Number: 18888

COA Type**Description**

	Closure request removed. TMBs were not analyzed for in the B01@6'-WP and FL01@4' sample locations as is required by Rule 915.f. Additionally, analysis of the full Table 915-1 is required as of 8/8/23 and PAHs and metals were not analyzed for in soil samples FL02@5' and FL03@5'. The missing organics in soil shall be analyzed for and found to be below Table 915-1 standards for closure to be approved.
1 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**

403884688	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403884740	SOIL SAMPLE LOCATION MAP
403884744	SOIL SAMPLE LOCATION MAP
403884747	PHOTO DOCUMENTATION
403884750	OTHER
403884751	CORRESPONDENCE
403947184	ANALYTICAL RESULTS
403947192	SOIL SAMPLE LOCATION MAP
404040733	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)