

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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403778592

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Report taken by:
Alexander Ahmadian

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 ECOM 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

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste | <input type="checkbox"/> Other E&P Waste | <input type="checkbox"/> Non-E&P Waste |
| <input checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids | |
| <input checked="" type="checkbox"/> Oil | <input type="checkbox"/> Tank Bottoms | |
| <input checked="" type="checkbox"/> Condensate | <input type="checkbox"/> Pigging Waste | |
| <input type="checkbox"/> Drilling Fluids | <input type="checkbox"/> Rig Wash | |
| <input type="checkbox"/> Drill Cuttings | <input type="checkbox"/> Spent Filters | |
| | <input type="checkbox"/> Pit Bottoms | |
| | <input type="checkbox"/> 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 and cap operations were completed at the USA 36-36 wellhead on November 3, 2022. 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 (B01@6'-WP) was submitted for analysis of reduced list Table 915-1 constituents including benzene, toluene, ethylbenzene, xylenes (BTEX), 1,2,4- and 1,3,5-trimethylbenzenes (TMBs), naphthalene, total petroleum hydrocarbons (TPH)-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO), pH, electrical conductivity (EC), sodium adsorption ratio (SAR), and boron, as approved in the Form 27 Initial dated June 29, 2021 (Document No. 402732790) to determine if a release occurred. Portions of the flowline associated with the wellhead were removed on November 11, 2022 and February 2, 2023. Soil samples were collected from the location where the flowline riser was disconnected from the separator (Sep01-Riser@4.5'-WP) and from where the line was cut and capped (FL01@4'). The separator riser sample was submitted for analysis of full list Table 915-1 constituents due to evidence of impact and the FL01 sample was submitted for analysis of reduced list Table 915-1 constituents to determine if a release occurred. Laboratory analytical results indicated that naphthalene impacts exceeding the ECMC Table 915-1 allowable level were present at the separator riser. As such, a Form 19 Initial/Supplemental Spill/Release Report (Document No. 403243287) was submitted on December 1, 2022 and the ECMC issued Spill/Release Point ID 483365. The status of the remainder of the flowline has been changed from active to out-of-service. The wellhead excavation and flowline are depicted on Figures 1 and 2. The Form 44 is attached.

Per the condition of approval (COA) issued by the ECMC for document number 403315714, an assessment will be conducted along the abandoned-in-place flowline.

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 feet below ground surface (ft bgs) and 4 ft bgs, respectively. The confirmation soil samples were submitted for laboratory analysis of naphthalene using ECMC-approved methods. Results indicated that samples collected at the final excavation extents were within the ECMC Table 915-1 allowable levels. The PID readings and soil sample results are summarized in Tables 1 and 2. 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 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, visual inspection and/or field screening of soils were conducted at four sidewall locations within the cut and cap excavation area and four locations at the ground surface adjacent to the excavation. 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 8

Number of soil samples exceeding 915-1 5

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

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? 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?

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 4.

☐ 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?

Per the COA issued by the ECMC for document number 403315714, an assessment will be conducted along the abandoned-in-place flowline. Assessment activities 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.

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.

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. Groundwater was not encountered in the wellhead excavation. Per the COA issued by the ECMC for document number 403315714, an assessment will be conducted along the abandoned-in-place flowline. Assessment activities will be summarized 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

Yes Excavate and offsite disposal

If Yes: Estimated Volume (Cubic Yards) 20

Name of Licensed Disposal Facility or ECMC Facility ID # 434766

No 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: \$ 5000

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?

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. 11/29/2022

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. 11/03/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 11/23/2022

Proposed date of completion of Remediation. 11/03/2024

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

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: 05/09/2024

Email: DJRemediation_Forms@oxy.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with ECOMC Rules and applicable orders and is hereby approved.

ECMC Approved: Alexander Ahmadian

Date: 07/02/2024

Remediation Project Number: 18888

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**

403778592	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403778665	SOIL SAMPLE LOCATION MAP
403778669	SOIL SAMPLE LOCATION MAP
403778671	SOIL SAMPLE LOCATION MAP
403778672	CORRESPONDENCE
403778674	ANALYTICAL RESULTS
403778675	PHOTO DOCUMENTATION
403778676	OTHER
403779996	SOIL SAMPLE LOCATION MAP
403842805	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 10 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)