

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

403888310

Receive Date:

08/17/2024

Report taken by:

Kari Brown

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 #: 34201 Initial Form 27 Document #: 403678572

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: LOCATION | Facility ID: 336241 | API #: _____ | County Name: WELD |
| Facility Name: DEBEQUE V-62N67W 27NWSE | Latitude: 40.109165 | Longitude: -104.872859 | |
| ** correct Lat/Long if needed: Latitude: 40.109007 | | Longitude: -104.872362 | |
| QtrQtr: NWSE | Sec: 27 | Twp: 2N | Range: 67W Meridian: 6 Sensitive Area? Yes |

| | | | |
|--|---------------------|------------------------|--|
| Facility Type: SPILL OR RELEASE | Facility ID: 487564 | API #: _____ | County Name: WELD |
| Facility Name: Dehaan V27-10, 15 Facility | Latitude: 40.109007 | Longitude: -104.872362 | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: NWSE | Sec: 27 | Twp: 2N | Range: 67W Meridian: 6 Sensitive Area? Yes |

SITE CONDITIONS

General soil type - USCS Classifications GM

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 390' W
Wetlands: none
Springs: none
Livestock: approximately 280' SW
Occupied building: multiple occupied buildings within 1/4 mile
High Priority Habitat: none

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 | 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.

Decommissioning activities were completed at the Dehaan V27-150,15 production facility on July 30 and July 31, 2024. Groundwater was not encountered during decommissioning activities. Visual inspection and field screening of soils at two separators, one meter house, one produced water vessel (PWV), one emission control device (ECD), two dumphine removal potholes, and two aboveground storage tanks (AST) was conducted following removal activities and soil samples (AST-B01@3", AST-B03@3", PW-B01@5', PW-W01@4', SEP-B01@4', SEP-B02@4', SEP-B03@4', and SEP-B04@4') were submitted for laboratory analysis to determine if a release occurred. Initial laboratory analytical results indicated that the benzene, toluene, TMBs, TPH, naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, and/or barium concentrations in soil samples SEP-B01@4', SEP-B02@4', SEP-B03@4', and SEP-B04@4' exceeded the applicable ECMC Table 915-1 standards and/or background limit. As such, a Form 19-Initial Spill/Release Report (Document No. 403875390) was submitted on August 5, 2024, and the ECMC issued Spill/Release Point ID 487564 for this release. 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 is presented in Table 1. Soil analytical results are summarized in Tables 2 through 5. The facility soil sample and field screening locations are illustrated on Figure 2. The laboratory analytical report is provided as Attachment A. The field notes and photographic log are provided as Attachment B.

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 July 30-31, 2024, soil samples were collected from the former separators (SEP-B01@4', SEP-B02@4', SEP-B03@4', SEP-B04@4'), from the base and sidewall of the PWV (PW-B01@5', PW-W01@4'), and beneath the former ASTs (AST-B01@3', AST-B03@3") and were submitted for laboratory analysis to determine if a release occurred. The soil samples were submitted for laboratory analysis of the full ECMC Table 915-1 using ECMC approved methods. Initial laboratory analytical results indicated that the benzene, toluene, TMBs, TPH, naphthalene, 1 and 2-methylnaphthalene, and/or barium concentrations in soil samples (SEP-B01@4', SEP-B02@4', SEP-B03@4', SEP-B04@4') exceeded the applicable ECMC Table 915-1 standards and/or background limit. A waste characterization for future confirmation soil samples will be developed upon receipt of the final laboratory analytical report. Excavation and assessment activities are ongoing and will be summarized in a forthcoming Form 27-Supplemental update.

Proposed Groundwater Sampling

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

Groundwater was not encountered during initial decommissioning activities. If groundwater is encountered during remaining assessment activities, a minimum of one grab sample will be collected as soon as practical. Groundwater samples will be submitted to an accredited laboratory for all analytes listed in ECMC Table 915-1 Organic Compounds in Groundwater (benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, 1,2,4-trimethylbenzene (1,2,4 – TMB), and 1,3,5-trimethylbenzene (1,3,5 – TMB)) and Groundwater Inorganic Parameters (total dissolved solids (TDS), chloride, and sulfate) using standard methods appropriate for detecting the target analytes in ECMC Table 915-1.

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 July 30, 2024, visual inspections and field screening of soils was conducted at three sidewalls of the PWV excavation, one ECD, one former meter house, two dumphine removal potholes, and beneath two former AST locations. 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 8

Number of soil samples exceeding 915-1 8

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

Approximate areal extent (square feet) 120

NA / ND

-- Highest concentration of TPH (mg/kg) 971.6

NA Highest concentration of SAR

BTEX > 915-1 Yes

Vertical Extent > 915-1 (in feet) 4

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?

Background soil samples PW-BG01 - PW-BG04 and AST-BG01 - AST-BG03 were collected from non-impacted native material nearby at the tank battery at depths ranging from approximately 0.25' - 6' bgs. The background soil samples were submitted for laboratory analysis of the Soil Suitability for Reclamation Parameters and Table 915-1 metals using standard methods appropriate for detecting target analytes in Table 915-1. Analytical results for the background soil samples are presented in Tables 3 and 5. The background locations are illustrated 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?

Excavation and assessment activities are ongoing and will be summarized in a forthcoming Form 27-Supplemental update.

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.

Excavation and assessment activities are ongoing and will be summarized in a forthcoming Form 27-Supplemental update.

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.

Excavation and assessment activities are ongoing and will be summarized in a forthcoming Form 27-Supplemental update.

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 & 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: \$ 15500

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. 12/20/2023

Actual Spill or Release date, or date of discovery. 08/02/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 07/30/2024

Proposed site investigation commencement. 07/30/2024

Proposed completion of site investigation. 07/31/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/02/2024

Proposed date of completion of Remediation. 12/31/2024

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: 08/17/2024

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: Kari Brown

Date: 10/29/2024

Remediation Project Number: 34201

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**

| | |
|-----------|--|
| 403888310 | INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL) |
| 403888482 | PHOTO DOCUMENTATION |
| 403888485 | SITE MAP |
| 403888486 | SOIL SAMPLE LOCATION MAP |
| 403888487 | ANALYTICAL RESULTS |
| 403888488 | ANALYTICAL RESULTS |
| 403973226 | FORM 27-SUPPLEMENTAL-SUBMITTED |

Total Attach: 7 Files

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

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

Total: 0 comment(s)