

State of Colorado
Energy & Carbon Management Commission

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Report taken by:
Collin Metz

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: <u>KERR MCGEE OIL & GAS ONSHORE LP</u> | Operator No: <u>47120</u> | Phone Numbers Phone: <u>(720) 929-4306</u> Mobile: <u>()</u> |
| Address: <u>P O BOX 173779</u> | | |
| City: <u>DENVER</u> | State: <u>CO</u> | Zip: <u>80217-3779</u> |
| Contact Person: <u>Erik Mickelson</u> | Email: <u>DJRemediation_Forms@oxy.com</u> | |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 34404 Initial Form 27 Document #: 403706160

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: <u>LOCATION</u> | Facility ID: <u>317553</u> | API #: _____ | County Name: <u>WELD</u> |
| Facility Name: <u>UPRR 42 PAN AM-63N66W 29NWSW</u> | Latitude: <u>40.193850</u> | Longitude: <u>-104.808230</u> | |
| ** correct Lat/Long if needed: Latitude: <u>40.193122</u> | | Longitude: <u>-104.808243</u> | |
| QtrQtr: <u>NWSW</u> | Sec: <u>29</u> | Twp: <u>3N</u> | Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

| | | | |
|---|----------------------------|-------------------------------|---|
| Facility Type: <u>SPILL OR RELEASE</u> | Facility ID: <u>486981</u> | API #: _____ | County Name: <u>WELD</u> |
| Facility Name: <u>UPRC29-11K&14K, UP42 Facility</u> | Latitude: <u>40.193122</u> | Longitude: <u>-104.808243</u> | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: <u>NWSW</u> | Sec: <u>29</u> | Twp: <u>3N</u> | Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

SITE CONDITIONS

General soil type - USCS Classifications SM

Most Sensitive Adjacent Land Use Agriculture

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

Agriculture. No other potential receptors were identified in a 1/4 mile radius. Groundwater at approximately 20 ft below ground surface (bgs).

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 | 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 take to abate, investigate, and/or remediate impacts associated with E&P Waste.

Decommissioning activities were completed at the UPRC 29-11K&14K, UP42 Facility on June 4, 2024. Groundwater was encountered during facility decommissioning activities. Visual inspection and field screening of soil at two aboveground storage tanks (ASTs), two produced water vessels (PWVs), one emission control device (ECD), two meter houses, two dumphine locations, and three separators were conducted following removal activities. Soil samples AST01@3', AST02@1', PWV01-B01@1', PWV01-N01@3', PWV02-B02@4', PWV02-W01@2', FL01@3', FL02@4', SEP01-INLET@4', SEP01-OUTLET@4', SEP02-INLET@3', SEP02-OUTLET@3', SEP03-INLET@3', and SEP03-OUTLET@3' were submitted for analysis of full list Table 915-1 constituents, to determine if a release occurred. Laboratory analytical results indicated that total petroleum hydrocarbons (TPH), 1,2,4- and 1,3,5-trimethylbenzenes (TMBs), naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, and/or pH impacts exceeding the ECMC Table 915-1 allowable levels and site-specific background levels were present at the PWV01-N01@3', PWV02-B02@4', SEP01-INLET@4', SEP01-OUTLET@4', SEP02-OUTLET@3', and FL02@4' locations. As such, a Form 19 Initial/Supplemental Spill/Release Report (Document No. 403816680) was submitted on June 7, 2024, and the ECMC issued Spill/Release Point ID 486981. The analytical results for the remaining soil samples were within compliance of the ECMC Table 915-1 standards or below site-specific background levels. The facility soil sample locations are depicted on Figure 1. The PID readings and soil sample results are summarized in Tables 1 and 2, respectively.

Excavation activities are ongoing 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):

Between 6/4 & 11/27/2024, excavation activities were conducted to address remaining soil impacts at the separators & 22 confirmation soil samples were collected from the base of the final excavation extent at depths of 20 ft bgs. The confirmation soil samples were submitted for analysis of the site-specific waste profile, including TPH, benzene, toluene, ethylbenzene, total xylenes (BTEX), TMBs, polycyclic aromatic hydrocarbons (PAHs), sodium adsorption ratio (SAR), pH, & select Table 915-1 metals using ECMC-approved methods. Results from the 10/23/2024 confirmation samples indicate that pH, arsenic, barium, & cadmium impacts exceeding the Table 915-1 allowable levels & background levels remain in the excavation. Results for samples collected between 10/23 and 11/27/2024 are pending. Once the final lab reports have been received, they will be submitted in a subsequent Form 27 Supplemental report. Excavation activities are going. The lab report is attached.

Proposed Groundwater Sampling

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

On November 7, 2024, one groundwater sample (GW01) was collected from the excavation at a depth of 10 ft bgs. The groundwater sample was submitted for analysis of full list Table 915-1 constituents in groundwater. Partial laboratory analytical results exceeded the ECMC Table 915-1 allowable levels for TMBs. The final results are pending. Once the final lab reports have been received, they will be submitted in a subsequent Form 27 Supplemental report. The groundwater sample location is depicted on Figure 1. The groundwater sample analytical results are summarized in Table 3.

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 June 4, 2024, visual inspections and field screening of soil was conducted at the base and three sidewalls for each AST, three sidewalls of each PWV excavation, the ECD, and two meter house 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. A photographic log is attached.

Six test pits were advanced outside of the excavation extents in an attempt to delineate the remaining soil impacts at the site. The test pit samples were submitted for analysis of the site-specific waste profile. Laboratory analytical results indicate that lateral and vertical delineation have not yet been achieved. Assessment activities are ongoing.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

| Soil | NA / ND |
|---|---|
| Number of soil samples collected <u>26</u> | -- Highest concentration of TPH (mg/kg) <u>737</u> |
| Number of soil samples exceeding 915-1 <u>22</u> | -- Highest concentration of SAR <u>6.51</u> |
| Was the areal and vertical extent of soil contamination delineated? <u>No</u> | BTEX > 915-1 <u>No</u> |
| Approximate areal extent (square feet) <u>1620</u> | Vertical Extent > 915-1 (in feet) <u>4</u> |
| Groundwater | |
| Number of groundwater samples collected <u>1</u> | ND Highest concentration of Benzene (µg/l) <u> </u> |
| Was extent of groundwater contaminated delineated? <u>No</u> | ND Highest concentration of Toluene (µg/l) <u> </u> |
| Depth to groundwater (below ground surface, in feet) <u>20</u> | -- Highest concentration of Ethylbenzene (µg/l) <u>84.3</u> |
| Number of groundwater monitoring wells installed <u>0</u> | -- Highest concentration of Xylene (µg/l) <u>508</u> |
| Number of groundwater samples exceeding 915-1 <u>1</u> | NA Highest concentration of Methane (mg/l) <u> </u> |
| Surface Water | |
| <u>0</u> Number of surface water samples collected | |
| <u> </u> 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?

One tank battery background soil sample was collected. Sixteen background soil samples were collected from the native material outside of the facility excavations. Thirty-six native soil samples were collected as part of the nearby UPRC 29-11K, UPRC 29-14K, & Miller 19-29 wellheads cut & cap activities (Rem#s 34394, 34396, & 34400) located approximately 1,570 ft southeast & northeast, from similar depths (3' & 6'), & NRCS soil type (loamy sand). Background soil samples were submitted for analysis of pH, electrical conductivity (EC), SAR, boron, & Table 915-1 metals using ECMC-approved methods. Results indicate that pH & arsenic are naturally high in the soil used to construct the tank battery & SAR, pH, arsenic, barium, cadmium, hexavalent chromium, lead, nickel, & selenium are naturally high in the native soil. Additional background samples were collected at depths ranging from 10 ft bgs to 20 ft bgs. Final results are pending.

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 activities are ongoing and will be summarized in a subsequent Form 27 Supplemental report.

Groundwater monitoring wells will be installed to delineate the dissolved-phase plume. The monitoring well installation scope of work will be submitted in a subsequent Form 27 Supplemental report following completion of excavation activities.

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 will be removed and transported to a licensed disposal facility. Final disposal information will be provided upon completion of excavation 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 pH, arsenic, barium, and cadmium impacts exceeding the ECMC Table 915-1 allowable levels and background levels remain in the separator excavation area and TMB impacts remain in the PWV excavation area. Final results for the samples collected between October 23 and November 7, 2024, are pending. Once the final lab reports have been received, they will be submitted in a subsequent Form 27 Supplemental report. Groundwater was encountered at approximately 20 ft bgs. Partial laboratory analytical results exceeded the ECMC Table 915-1 allowable levels for TMBs. The final results are pending. Once the final lab reports have been received, they will be submitted in a subsequent Form 27 Supplemental report. Excavation activities are ongoing 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.

Groundwater monitoring wells will be installed to delineate the dissolved-phase plume. The monitoring well installation scope of work will be submitted in a subsequent Form 27 Supplemental following completion of excavation activities.

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. 06/07/2024

Actual Spill or Release date, or date of discovery. 06/07/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/04/2024

Proposed site investigation commencement. 06/04/2024

Proposed completion of site investigation. 05/04/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 06/04/2024

Proposed date of completion of Remediation. 05/04/2027

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: Erik Mickelson

Title: Environmental Lead

Submit Date: 12/23/2024

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: Collin Metz

Date: 03/04/2025

Remediation Project Number: 34404

COA Type**Description**

| | |
|--------|--|
| | Operator shall provide boring logs in accordance with standard environmental practices. This includes at a minimum; lithology description, USCS classifications, PID readings, sample collection depths, depth to water, and well construction. |
| | In accordance with Rule 914, if impacts are observed during monitoring well installation a step out monitoring well(s) shall be installed to define the horizontal extent of impacts to soil and groundwater and the monitoring wells shall be installed within 45 days of observations. |
| 2 COAs | |

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**

| | |
|-----------|--|
| 404015390 | INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL) |
| 404015783 | SOIL SAMPLE LOCATION MAP |
| 404015786 | SOIL SAMPLE LOCATION MAP |
| 404015787 | ANALYTICAL RESULTS |
| 404015789 | ANALYTICAL RESULTS |
| 404015791 | PHOTO DOCUMENTATION |
| 404115439 | FORM 27-SUPPLEMENTAL-SUBMITTED |

Total Attach: 7 Files

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

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

Total: 0 comment(s)