

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

403926590

Receive Date:

09/27/2024

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: (720) 929-4306 |
| City: DENVER | State: CO | Zip: 80217-3779 |
| Contact Person: Erik Mickelson | Email: DJRemediation_Forms@oxy.com | Mobile: () |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 35960 Initial Form 27 Document #: 403789218

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 #: 123-11242 | County Name: WELD |
| Facility Name: MARTIN T. HART GAS UNIT E TRUE 1 | Latitude: 40.113720 | Longitude: -104.882610 | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: NWNW | Sec: 27 | Twp: 2N | Range: 67W Meridian: 6 Sensitive Area? Yes |

| | | | |
|---|---------------------|------------------------|--|
| Facility Type: LOCATION | Facility ID: 319426 | API #: _____ | County Name: WELD |
| Facility Name: MARTIN T. HART GAS UNIT E TR-62N67W 27NWNW | Latitude: 40.113720 | Longitude: -104.882610 | |
| ** correct Lat/Long if needed: Latitude: 40.113820 | | Longitude: -104.883500 | |
| QtrQtr: NWNW | Sec: 27 | Twp: 2N | Range: 67W Meridian: 6 Sensitive Area? Yes |

| | | | |
|---|---------------------|--|--|
| Facility Type: SPILL OR RELEASE | Facility ID: 487499 | API #: | County Name: WELD |
| Facility Name: Smith 6-27A, Hart Mar Facility | | Latitude: 40.113820 | Longitude: -104.883500 |
| | | ** correct Lat/Long if needed: Latitude: | Longitude: |
| QtrQtr: NWNW | Sec: 27 | Twp: 2N | Range: 67W Meridian: 6 Sensitive Area? Yes |

| | | | |
|--|---------------------|--|--|
| Facility Type: SPILL OR RELEASE | Facility ID: 487561 | API #: | County Name: WELD |
| Facility Name: Hart Martin E True 1 Wellhead | | Latitude: 40.113744 | Longitude: -104.882749 |
| | | ** correct Lat/Long if needed: Latitude: | Longitude: |
| QtrQtr: NWNW | Sec: 27 | Twp: 2N | Range: 67W Meridian: 6 Sensitive Area? Yes |

| | | | |
|--|---------------------|--|--|
| Facility Type: SPILL OR RELEASE | Facility ID: 487897 | API #: | County Name: WELD |
| Facility Name: Hart Martin E True 1 Wellhead | | Latitude: 40.113720 | Longitude: -104.882610 |
| | | ** correct Lat/Long if needed: Latitude: | Longitude: |
| QtrQtr: NWNW | Sec: 27 | Twp: 2N | Range: 67W Meridian: 6 Sensitive Area? Yes |

SITE CONDITIONS

General soil type - USCS Classifications SM

Most Sensitive Adjacent Land Use Occupied Buildings

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

Occupied buildings 330 feet (ft) north, 760 ft southwest. Livestock 220 ft south, 1,090 ft southwest, and 1,140 ft northwest. County Roads 990 ft west and 980 ft north. Agriculture.

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 |
|--------------|----------------|------------------|---|
| UNDETERMINED | 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.

Wellhead cut and cap operations were completed at the Hart Martin E True 1 wellhead on 7/29/24. Groundwater was not encountered in the wellhead cut and cap excavation. 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') was submitted for analysis of full list Table 915-1 constituents to determine if a release occurred. The flowline was removed on July 29 and July 30, 2024. Samples were collected from the location where the flowline risers were disconnected from the wellhead (WH01-RISER@3') and from the separator (SEP-RISER@4') and from the location where there was potential impact (FL02@5'). Initial results indicated that polycyclic aromatic hydrocarbon (PAH), pH, and/or metals impacts were present at the wellhead riser and FL02. A verification sample was collected at the wellhead riser and confirmed the initial results. As such, two Form 19 Reports (Doc Nos. 403872676 and 403908809) were submitted on 8/2 and 9/6/24 and the ECMC issued Spill/Release Point IDs 487561 and 487897.

Decommissioning activities were completed at the Smith 6-27A, Hart Mar Facility on 7/30/24. Groundwater was not encountered during excavation activities. Visual inspection and field screening of soil at one aboveground storage tank (AST), one produced water vessel (PWV), one meter house, the dumphines, and one separator were conducted following removal activities, and soil were submitted for analysis of full list Table 915-1 constituents to determine if a release occurred. Initial results indicated that PAH or pH impacts were present at the AST, one dumphine pothole (FL01@6'), PWV base, and separator inlet. A verification sample was collected at the AST and confirmed the initial result. As such, a Form 19 Report (Document No. 403872669) was submitted on 8/2/24 and the ECMC issued Spill/Release Point ID 487499. Verification sampling at the PWV and separator are pending.

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 29 and July 30, 2024, samples were collected at the former Hart Martin E True 1 wellhead, along the flowline associated with the wellhead, and at the former AST, PWV, and separator of the Smith 6-27A, Hart Mar Facility. Samples were submitted for analysis of full list Table 915-1 constituents using ECMC-approved methods. Laboratory analytical results indicate that PAH, pH, and/or metals impacts are present at the wellhead riser, two flowline potholes, and former AST location. Verification sampling at the former PWV and separator are pending. Excavation activities are ongoing. The facility, wellhead, and flowline soil sample locations are depicted on Figures 1 through 3. The PID readings and soil sample results are summarized in Table 1 and Table 2, respectively, and 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 activities, flowline removal activities, or facility decommissioning 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 July 29 and July 30, 2024, visual inspections 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 wellhead excavation, four flowline potholes, the hatch and footprint of the AST, three sidewalls of the PWV excavation, and three dumphine potholes. Based on the inspection and screening results, impacted soil was not observed at the soil screening locations and no soil samples were submitted for analysis from these areas. A photographic log is attached.

On August 9, 2024, a soil gas survey was conducted at four soil vapor points installed adjacent to the former wellhead location following cut and cap operations. A fifth point was blocked and could not be screened. GEM 5000 field readings were all non-detect for methane at all remaining 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 14

Number of soil samples exceeding 915-1 13

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

Approximate areal extent (square feet) 555

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

NA / ND

-- Highest concentration of TPH (mg/kg) 475

-- Highest concentration of SAR 17.3

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 6

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?

Twenty-two background soil samples (Native-BG01 @3' through Native-BG11 @3' and Native-BG01 @6' through Native-BG11 @6') were collected from the native material outside of the wellhead cut and cap and facility excavations. The 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, boron, 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 samples 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?

Verification sampling at the PWV base and separator inlet are pending. Excavation activities are ongoing 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.

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.

Initial data indicate that PAH, pH, and/or metals impacts exceeding the ECMC Table 915-1 allowable levels and background levels are present at the wellhead riser, AST, FL01, FL02, PWV base, and separator inlet. Verification sampling at the PWV base and separator inlet are pending. Excavation activities are ongoing at the wellhead riser, AST, FL01, and FL02. Groundwater was not encountered in the wellhead cut and cap or facility excavations. Confirmation soil sample results 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: \$ 24000

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

REMEDATION 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. 07/31/2024

Actual Spill or Release date, or date of discovery. 07/31/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 07/29/2024

Proposed site investigation commencement. 07/29/2024

Proposed completion of site investigation. 03/18/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 07/29/2024

Proposed date of completion of Remediation. 03/18/2025

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: 09/27/2024

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: Kari Brown

Date: 12/12/2024

Remediation Project Number: 35960

COA Type

Description

| | |
|-------|---|
| | Re-samples/verification samples of organic exceedances are not considered valid. Operator shall remediate soils in the vicinity of impacts. |
| 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 |
|-------------|--------------------------------|
| 403926590 | FORM 27-SUPPLEMENTAL-SUBMITTED |
| 403926621 | PHOTO DOCUMENTATION |
| 403926622 | OTHER |
| 403926623 | CORRESPONDENCE |
| 403926625 | ANALYTICAL RESULTS |
| 403926627 | ANALYTICAL RESULTS |
| 403926629 | ANALYTICAL RESULTS |
| 403926630 | SOIL SAMPLE LOCATION MAP |
| 403926631 | SOIL SAMPLE LOCATION MAP |
| 403926632 | SOIL SAMPLE LOCATION MAP |
| 403926633 | SOIL SAMPLE LOCATION MAP |
| 403927938 | ANALYTICAL RESULTS |

Total Attach: 12 Files

General Comments

| User Group | Comment | Comment Date |
|------------|---------|---------------------|
| | | Stamp Upon Approval |

Total: 0 comment(s)