

State of Colorado
Oil and Gas Conservation Commission

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Document Number:
403215351
Receive Date:
11/04/2022

Report taken by:
Alexander Ahmadian

Site Investigation and Remediation Workplan (Initial 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 COGCC 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 |
| Address: <u>P O BOX 173779</u> | | Phone: <u>(970) 336-3500</u> |
| City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80217-3779</u> | | Mobile: <u>(970) 515-1698</u> |
| Contact Person: <u>Gregory Hamilton</u> | Email: <u>Gregory_Hamilton@oxy.com</u> | |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 25756 Initial Form 27 Document #: 403215351

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

No Multiple Facilities

| | | | |
|--|----------------------------|-------------------------------|---|
| Facility Type: <u>WELL</u> | Facility ID: _____ | API #: <u>123-21312</u> | County Name: <u>WELD</u> |
| Facility Name: <u>WARDELL 13-6</u> | Latitude: <u>40.250590</u> | Longitude: <u>-104.710840</u> | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: <u>CSW</u> | Sec: <u>6</u> | Twp: <u>3N</u> | Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

SITE CONDITIONS

General soil type - USCS Classifications SC Most Sensitive Adjacent Land Use Crop land
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

Surface water is located approximately 810 feet to the southeast of the wellhead.
A wetland is located approximately 810 feet southeast of the wellhead.

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 | 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.

This form has been prepared to provide prior notice of the plugging and abandonment of the Wardell 13-6 wellhead and the removal of the associated flowline. The flowline will be permanently removed. The off-location flowline system pre-removal notice was submitted under Form 44 Document No. 403202374. In accordance with COGCC Rule 911.a., soil and groundwater (if present) samples will be collected and submitted for laboratory analysis to determine if concentrations and values are in compliance with COGCC Table 915-1. Visual inspection and field screening of soils around the wellhead and associated flowline will be conducted during sampling activities. Soil vapor screening will also be performed around the wellhead. The topographic Site Location Map showing the geographic setting of the site is provided as Figure 1.

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):

Following wellhead cut and cap operations, soil will be field screened at the wellhead, separator riser and associated flowline. Samples will be collected if indications of impacts to soil or groundwater are present. If impacted soils are encountered, a waste characterization soil sample will be collected from the areas exhibiting the highest degree of impact based on visual, olfactory, and/or field screening observations. In the absence of apparent impacts, a soil sample will be collected from the base of the excavation adjacent to the wellhead, adjacent to the separator riser, and the areas most likely to have been impacted during the operational life of the flowline. Soil samples will be submitted to an accredited laboratory for analysis using standard methods appropriate for detecting the target analytes in COGCC Table 915-1. Proposed soil sample and screening locations are provided on Figures 2 and 3.

Proposed Groundwater Sampling

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

If groundwater is encountered during facility decommissioning activities, a minimum of one grab sample will be collected as soon as practical. Groundwater samples will be submitted to an accredited laboratory for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, 1,2,4-trimethylbenzene (1,2,4 – TMB), and 1,3,5-trimethylbenzene (1,3,5 – TMB), using standard methods appropriate for detecting the target analytes in COGCC 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):

If no impacts are observed, a minimum of one soil sample from the wellhead, separator riser, and associated flowline excavations will be submitted for laboratory analysis of BTEX, TMBs, naphthalene, and total petroleum hydrocarbons (TPH) - gasoline range organics (GRO: C6-C10) by United States Environmental Protection Agency (USEPA) Method 8260D, TPH - diesel range organics (DRO: C10-C28) and oil range organics (ORO: C28-C40) by USEPA Method 8015D, pH, specific conductance (EC) and sodium adsorption ratio (SAR) by saturated paste method, and boron by hot water soluble soil extract method. If impacts are encountered, a minimum of one soil sample will be submitted for laboratory analysis of the full COGCC Table 915-1 analytical suite. Following cut and cap operations, a soil gas survey will be conducted utilizing a maximum of five (5) soil vapor points located adjacent to the former wellhead location. The proposed soil vapor point locations are illustrated on Figure 2.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected _____ 0
Number of soil samples exceeding 915-1 _____
Was the areal and vertical extent of soil contamination delineated? _____
Approximate areal extent (square feet) _____

NA / ND

_____ Highest concentration of TPH (mg/kg) _____
_____ Highest concentration of SAR _____
_____ BTEX > 915-1 _____
_____ Vertical Extent > 915-1 (in feet) _____

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?

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

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

If a suspected release is identified and confirmed through soil screening and/or laboratory analysis, soils will be removed and transported to a licensed disposal facility. Disposal records will be kept on file and 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.

Potential impacts that meet the criteria in Rule 912.b. will be reported to the Director in accordance with that Rule and a site-specific soil and/or groundwater remediation plan will be developed and submitted to the COGCC via a supplemental Form 27 in accordance with Rule 913. If reportable impacts are not encountered, a supplemental Form 27 requesting closure will be submitted within 90 days following completion of sampling activities. Field screening and applicable laboratory analytical results will be reported in all submittals. E&P waste records of material transported off-site are kept on file and available upon request.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Excavate and offsite disposal

_____ Chemical oxidation
_____ Air sparge / Soil vapor extraction
_____ Natural Attenuation
_____ Other _____

If Yes: Estimated Volume (Cubic Yards) _____
Name of Licensed Disposal Facility or COGCC 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 Colorado Oil and Gas Conservation 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: \$ 11500 _____

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 _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

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

E&P waste (liquid) description _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

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 COGCC 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. 07/28/2022

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). _____

Proposed site investigation commencement. 11/07/2022

Proposed completion of site investigation. _____

REMEDIAL ACTION DATES

Proposed start date of Remediation. _____

Proposed date of completion of Remediation. _____

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: Gregory Hamilton

Title: Environmental Consultant

Submit Date: 11/04/2022

Email: Gregory_Hamilton@oxy.com

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

COGCC Approved: Alexander Ahmadian

Date: 11/08/2022

Remediation Project Number: 25756

COA Type**Description**

| | |
|-------|--|
| | |
| 0 COA | |

Attachment Check 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**

| | |
|-----------|---------------------------|
| 403215351 | FORM 27-INITIAL-SUBMITTED |
| 403219691 | SOIL SAMPLE LOCATION MAP |
| 403219692 | SOIL SAMPLE LOCATION MAP |
| 403219693 | SITE MAP |

Total Attach: 4 Files

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

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

Total: 0 comment(s)