

# State of Colorado Oil and Gas Conservation Commission

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402886354

Receive Date:

12/13/2021

Report taken by:

CHRIS CANFIELD

## 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 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 &amp; GAS ONSHORE LP</u> | Operator No: <u>47120</u>              | <b>Phone Numbers</b>          |
| 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>        |
| Contact Person: <u>Gregory Hamilton</u>                      | Email: <u>Gregory_Hamilton@oxy.com</u> | Mobile: <u>(970) 515-1698</u> |

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 19920 Initial Form 27 Document #: 402804741

#### 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>TANK BATTERY</u>                        | Facility ID: <u>418635</u> | API #: _____                  | County Name: <u>WELD</u> |
| Facility Name: <u>BRYANT TANK BATTERY 20-30</u>           | Latitude: <u>40.105838</u> | Longitude: <u>-105.039752</u> |                          |
| ** correct Lat/Long if needed: Latitude: <u>40.106044</u> |                            | Longitude: <u>-105.039492</u> |                          |
| QtrQtr: <u>NESE</u>                                       | Sec: <u>30</u>             | Twp: <u>2N</u>                | Range: <u>68W</u>        |
| Meridian: <u>6</u>  | Sensitive Area? <u>Yes</u> |                               |                          |
| Facility Type: <u>SPILL OR RELEASE</u>                    | Facility ID: <u>480826</u> | API #: _____                  | County Name: <u>WELD</u> |
| Facility Name: <u>Bryant Tank Battery AST Release</u>     | Latitude: <u>40.106075</u> | Longitude: <u>-105.039487</u> |                          |
| ** correct Lat/Long if needed: Latitude: _____            |                            | Longitude: _____              |                          |
| QtrQtr: <u>NESE</u>                                       | Sec: <u>30</u>             | Twp: <u>2N</u>                | Range: <u>68W</u>        |
| Meridian: <u>6</u>  | Sensitive Area? <u>Yes</u> |                               |                          |

## **SITE CONDITIONS**

General soil type - USCS Classifications SP

Most Sensitive Adjacent Land Use Non-crop land

Is domestic water well within 1/4 mile? Yes

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**

The nearest domestic water well is located approximately 190 feet to the southwest of the facility.  
Surface water is located approximately 100 feet to the east of the facility.  
The facility is located within a designated high priority habitat.

# 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       | SOILS          | 6' (N-S) x 6' (E-W) x 4' bgs | 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.

Above-ground storage tank (AST) removal activities were completed at the Bryant 9 & 34-30 O SA production facility location on September 14, 2021. Groundwater was not encountered during AST removal activities. Visual inspection and field screening of soils was conducted at seven (7) former AST locations following removal activities, and 7 soil samples were collected at a depth of approximately 3 inches below ground surface (bgs). The soil samples were submitted for laboratory analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, and total petroleum hydrocarbons (TPH) - gasoline range organics (GRO: C6-C10) by USEPA Method 8260D, TPH - diesel range organics (DRO: C10-C28) and oil range organics (ORO: C28-C40) by USEPA Method 8015D. Additionally, sample soil AST-B11@3" was submitted for laboratory analysis of the full Table 915-1 analytical suite, using standard methods appropriate for detecting the target analytes. Laboratory analytical results indicated that impacted soil was present at a sample location AST-B11@3", due to the TPH concentration above the applicable COGCC Table 915-1 standard. As such, a Form 19-Initial/Supplemental Spill/Release Report (COGCC Document No. 402812206) was submitted on September 16, 2021, and the COGCC issued Spill/Release Point ID 480826. The southeastern-most AST will be replaced, and the remaining production facility infrastructure will remain in-place. 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 are presented in Table 1. The soil sample and field screening locations are illustrated on Figure 2.

## 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 October 5, 2021, excavation activities were conducted to address remaining soil impacts below the former AST location. Four (4) confirmation soil samples were collected from the final lateral extents of the over-excavated area and submitted for laboratory analysis of TPH using standard methods appropriate for detecting the target analytes. Analytical results indicated that the TPH concentrations in the 4 confirmation soil samples were in compliance with the COGCC Table 915-1 standard. Impacted material was removed up to the tank battery secondary containment liner at the base of the excavation area, and the liner was verified to be intact. As a result, a confirmation soil sample was not collected from the base of the final over-excavated area. Soil analytical results are presented in Tables 2 through 5. The laboratory analytical reports are provided as Attachment A.

### Proposed Groundwater Sampling

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

Groundwater was not encountered during AST 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 September 14, 2021, visual inspection and field screening of soils was conducted at 7 former AST locations. Based on the inspection and screening results, hydrocarbon-impacted soil was not observed at the soil screening locations. Soil sample location and field screening data are presented in Table 1. Soil analytical results are presented in Tables 2 through 5. The soil sample and field screening locations are illustrated on Figure 2. The laboratory analytical reports are provided as Attachment A. The field notes and a photographic log are provided as Attachment B.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 11

Number of soil samples exceeding 915-1 1

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 36

### NA / ND

-- Highest concentration of TPH (mg/kg) 944

-- Highest concentration of SAR 0.929

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 4

### Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? Yes

Depth to groundwater (below ground surface, in feet) 1

Number of groundwater monitoring wells installed 1

Number of groundwater samples exceeding 915-1 1

Highest concentration of Benzene (µg/l) 1

Highest concentration of Toluene (µg/l) 1

Highest concentration of Ethylbenzene (µg/l) 1

Highest concentration of Xylene (µg/l) 1

Highest concentration of Methane (mg/l) 1

### 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 AST-BG01@3" - AST-BG04@3" were collected from native material adjacent to the former AST locations. The background soil samples were submitted for laboratory analysis of the Soil Suitability for Reclamation Parameters and total metals using standard methods appropriate for detecting the target analytes in Table 915-1. Analytical results for the background soil samples are presented in Tables 4 and 5.

☐ Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) 1

Volume of liquid waste (barrels) 1

☐ Is further site investigation required?

## 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.

On October 5, 2021, approximately 8 cubic yards of impacted soil were excavated and transported to the Front Range Landfill in Erie, Colorado for disposal. The southeastern-most AST will be replaced, and the former AST area will be contoured and re-graded to match preexisting site conditions; the remaining production facility infrastructure will remain in-place.

## 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 impacted soils in the excavation area have been remediated to be in compliance with COGCCC Table 915-1 standards and/or within the range of site-specific background metals concentrations. Remaining TPH-impacted soils were excavated up to the tank battery secondary containment liner, which was verified to be in tact; therefore no impacted soil remains at the former AST location. Groundwater was not encountered during AST removal and excavation activities. Based on the analytical and soil screening data presented herein, assessment is complete at this site and no further activities are required. As such, Kerr-McGee is requesting a No Further Action (NFA) determination for this location.

## 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) \_\_\_\_\_ 8  
Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_  
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 NFA Request

### 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:

Volume of E&P Waste (solid) in cubic yards 8

E&P waste (solid) description Impacted soil

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: Front Range Landfill - Erie, Colorado

Volume of E&P Waste (liquid) in barrels 0

E&P waste (liquid) description

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility:

## REMEDIATION COMPLETION REPORT

### REMEDIATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? Yes

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? Yes

Does the previous reply indicate consideration of background concentrations? Yes

Does Groundwater meet Table 915-1 standards? Yes

Is additional groundwater monitoring to be conducted?

Operator shall comply with the COGCC 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 COGCC 1000 Series Reclamation Rules following future facility decommissioning activities.

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. 09/15/2021

Actual Spill or Release date, or date of discovery. 09/15/2021

## SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 09/14/2021

Proposed site investigation commencement. 09/14/2021

Proposed completion of site investigation. 10/05/2021

## REMEDIAL ACTION DATES

Proposed start date of Remediation. 09/14/2021

Proposed date of completion of Remediation. 10/05/2021

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**

Based on the analytical and field screening data provided herein, Kerr-McGee is requesting an NFA determination for this location.

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: 12/13/2021

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: CHRIS CANFIELD

Date: 12/21/2021

Remediation Project Number: 19920

**Condition of Approval****COA Type****Description**

|        |  |
|--------|--|
|        | Based on the information presented, it appears that no further remedial action is necessary at this time and the COGCC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards or if groundwater is found to be impacted, then further investigation and/or remediation activities may be required. |
|        | This no further action determination is limited to environmental remediation. Operator is required to comply with COGCC 1100 Series Rules for Flowline Regulations for all Flowline Abandonment activities and COGCC 400 Series Rules for Wellhead Plugging and Abandonment.   |
| 2 COAs |  |

**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**

|           |                                |
|-----------|--------------------------------|
| 402886354 | FORM 27-SUPPLEMENTAL-SUBMITTED |
| 402886628 | PHOTO DOCUMENTATION            |
| 402886629 | SITE MAP                       |
| 402886630 | SOIL SAMPLE LOCATION MAP       |
| 402886632 | ANALYTICAL RESULTS             |
| 402886644 | ANALYTICAL RESULTS             |

Total Attach: 6 Files

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

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

Total: 0 comment(s)