

State of Colorado  
Oil and Gas Conservation Commission

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Document Number:  
402845640  
Receive Date:  
10/19/2021  
Report taken by:  
BOB CHESSON

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>		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 #: 17960 Initial Form 27 Document #: 402676505

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>336383</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>MOSER H-63N65W 21NENW</u>	Latitude: <u>40.217676</u>	Longitude: <u>-104.673033</u>	
	** correct Lat/Long if needed: Latitude: <u>40.217899</u>	Longitude: <u>-104.676789</u>	
QtrQtr: <u>NENW</u> Sec: <u>21</u> Twp: <u>3N</u> Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>			
Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>480310</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Moser Tank Battery Release</u>	Latitude: <u>40.217911</u>	Longitude: <u>-104.676859</u>	
	** correct Lat/Long if needed: Latitude: _____	Longitude: _____	
QtrQtr: <u>NENW</u> Sec: <u>21</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 GW

Most Sensitive Adjacent Land Use Non-crop land

Is domestic water well within 1/4 mile? Yes

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**

The nearest domestic water well is located approximately 380 feet southwest of the facility.

# 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	9' (N-S) x 9' (E-W) x 6' 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.

Partial tank battery decommissioning activities were completed at the Moser H 21-29, 21-30 production facility location on July 22, 2021. One above-ground storage tank (AST) and one separator were removed, and the remaining facility infrastructure will remain in place. Groundwater was not encountered during decommissioning activities. Visual inspection and field screening of soils at the former production facility infrastructure locations was conducted following partial tank battery decommissioning activities, and three confirmation soil samples were collected from the former separator and AST locations, 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 AST-B02@3" was submitted for laboratory analysis of total metals by USEPA Method 6020B, pH, specific conductance (EC) and sodium adsorption ratio (SAR) by saturated paste method, and boron by hot water soluble soil extract method. Laboratory analytical results indicated that impacted soil was present at the former AST location due to TPH, naphthalene, 1,2,4- and 1,3,5-trimethylbenzene (TMB), PAHs, SAR, and boron concentrations above the applicable COGCC Table 915-1 standards. As such, a Form 19-Initial/Supplemental Spill/Release Report (COGCC Document No. 402757735) was submitted on July 23, 2021, and the COGCC issued Spill/Release Point ID 480310. A topographic Site Location Map showing the geographic setting of the site location is provided as Figure 1. Soil and groundwater sample location and field screening data are presented in Table 1. The soil and groundwater 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 August 31, 2021, excavation activities were conducted to address remaining soil impacts below the former AST location. Five (5) confirmation soil samples were collected from the base and sidewalls of the final excavation extents, at depths of approximately 3 feet and 2 feet bgs, respectively. Based on the analytical results for sample AST-B02@3", the 5 confirmation soil samples were submitted for laboratory analysis of BTEX, TPH, naphthalene, TMB, PAHs, SAR, and boron, using standard methods appropriate for detecting the target analytes. Analytical results indicate that constituent concentrations in the 5 confirmation soil samples were in compliance with the COGCC Table 915-1 standards. Soil analytical data is 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 partial 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 22, 2021, visual inspection and field screening of soils was conducted at one location below the former AST. Based on the inspection and screening results, hydrocarbon-impacted soil was not observed at the soil screening location. As a result, a soil sample was not submitted for laboratory analysis from this location in accordance with the COGCC Operator Guidance for Oil & Gas Facility Closure document. 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 8  
Number of soil samples exceeding 915-1 1  
Was the areal and vertical extent of soil contamination delineated? Yes  
Approximate areal extent (square feet) 81

### NA / ND

-- Highest concentration of TPH (mg/kg) 2299  
-- Highest concentration of SAR 10.2  
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 3

### Groundwater

Number of groundwater samples collected 0  
Was extent of groundwater contaminated delineated? Yes  
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 BG-N01@3", BG-S01@3", BG-E01@3", and BG-W01@3" were collected from native material adjacent to the production facility. The background samples were submitted for laboratory analysis of total metals and the Soil Suitability for Reclamation Parameters 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)          Volume of liquid waste (barrels)         

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.

Between July 22 and August 31, 2021, approximately 9 cubic yards of impacted soil were hydro-excavated and transported to the Kerr-McGee Aggregate Recycle Facility in Weld County, Colorado for recycling. The excavation area was subsequently backfilled and contoured to match pre-existing site conditions.

### REMEDICATION 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 AST excavation area have been remediated to be in compliance with the COGCCC Table 915-1 standards. Laboratory analytical indicate that constituent concentrations in the two confirmation soil samples collected from the former separator location were in compliance with COGCC Table 915-1 standards. Hydrocarbon-impacted soil was not observed during field inspection and soil screening activities at the former AST location. Groundwater was not encountered during partial facility decommissioning 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

Ex Situ

- \_\_\_\_\_ Bioremediation ( or enhanced bioremediation )
- \_\_\_\_\_ Chemical oxidation
- \_\_\_\_\_ Air sparge / Soil vapor extraction
- \_\_\_\_\_ Natural Attenuation
- \_\_\_\_\_ Other \_\_\_\_\_

- Yes \_\_\_\_\_ Excavate and offsite disposal
- \_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 9
- \_\_\_\_\_ Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_ 434766
- 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    Final Report

### 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:

Approximately 9 cubic yards of impacted soil were transported to the Kerr-McGee Aggregate Recycle Facility in Weld County, Colorado, for recycling.

Volume of E&P Waste (solid) in cubic yards    9

E&P waste (solid) description    Impacted soil

COGCC Disposal Facility ID #, if applicable:    434766

Non-COGCC Disposal Facility:

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.

One AST and one separator were removed, and the remaining facility infrastructure remains in place. The site will be reclaimed in accordance with COGCC 1000 Series Reclamation Rules pending future facility decommissioning activities.

Is the described reclamation complete? No \_\_\_\_\_

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. 07/23/2021

Actual Spill or Release date, or date of discovery. 07/22/2021

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 07/22/2021

Proposed site investigation commencement. 07/22/2021

Proposed completion of site investigation. 08/31/2021

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 07/22/2021

Proposed date of completion of Remediation. 08/31/2021

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: 10/19/2021 \_\_\_\_\_

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: BOB CHESSON \_\_\_\_\_

Date: 10/19/2021 \_\_\_\_\_

Remediation Project Number: 17960 \_\_\_\_\_

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

0 COA	
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**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**

402845640	FORM 27-SUPPLEMENTAL-SUBMITTED
402845657	PHOTO DOCUMENTATION
402845658	SITE MAP
402845659	SOIL SAMPLE LOCATION MAP
402845660	ANALYTICAL RESULTS
402845661	ANALYTICAL RESULTS

Total Attach: 6 Files

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

Environmental	<p>Based on the information presented no further 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.</p> <p>The surface area disturbed by the remediation activity shall be reclaimed in accordance with the 1000 Series Reclamation Rules. For locations with active ongoing oil and gas operations, comply with Rule 1003 interim reclamation requirements and for locations that will no longer have active oil and gas operations, comply with Rule 1004 Final Reclamation requirements.</p>	10/19/2021
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Total: 1 comment(s)