

# State of Colorado Energy & Carbon Management Commission

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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 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 #: 25682 Initial Form 27 Document #: 403206542

#### 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>LOCATION</u>	Facility ID: <u>318360</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>DITLEV-SIMONSEN GAS UNIT-62N67W 31NWSW</u>		Latitude: <u>40.091980</u>	Longitude: <u>-104.938600</u>
** correct Lat/Long if needed: Latitude: <u>40.090055</u>		Longitude: <u>-104.937507</u>	
QtrQtr: <u>NWSW</u>	Sec: <u>31</u>	Twp: <u>2N</u>	Range: <u>67W</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

Water Well: none  
Surface Water: approximately 1300' N  
Wetlands: approximately 100' W  
Springs: none  
Livestock: none  
Occupied Building: approximately 850' S  
High Priority Habitat (HPH): none

# 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 sample/laboratory analytical results
Yes	SOILS	60' (N-S) x 70' (E-W) x 14' 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.

Decommissioning activities were completed at the Ditlev-Simonsen GU 20 SA production facility from January 3-6, 2023. Groundwater was encountered during excavation activities at a depth of approximately 10' bgs. Visual inspection and field screening of soils at one separator, one meter house, one produced water vessel (PWV), one aboveground storage tank (AST), and two dump line removal potholes was conducted following removal activities, and soil samples (SEP-B01@3', SEP-B02@3', PW-B01@5', PW-W01@2.5', AST-B01@3") were submitted for laboratory analysis to determine if a release occurred. Laboratory analytical results for AST-B01@3" and PW-B01@5' indicated that TPH, pH, SAR, 1-methylnaphthalene, 2-methylnaphthalene, arsenic, and barium impacts exceeding COGCC Table 915-1 Cleanup Concentrations were present at the former PWV and AST location. As such, a Form 19 Initial/Supplemental Spill/Release Report (COGCC Document No.403282258) was submitted on January 9, 2023 and the COGCC issued Spill/Release Point ID 483688. The remaining analytical results for the soil samples collected were in compliance with COGCC standards. 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 is presented in Table 1. The facility 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 January 6, 2023, historically impacted soil was discovered following decommissioning activities at the Ditlev-Simonsen GU 20 SA production facility. Excavation and assessment activities are ongoing. Soil analytical results are summarized 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 encountered in the PWV excavation area at approximately 10 feet bgs. On March 8, 2023, groundwater sample GW-01 was collected from the PWV excavation area and submitted for laboratory analysis of BTEX, naphthalene, 1,2,4- and 1,3,5-TMB, by USEPA Method 8260D. Analytical results indicate that benzene, naphthalene, 1,2,4-TMB, and 1,3,5-TMB concentrations in groundwater sample GW-01 exceeded the COGCC Table 915-1 standards. The groundwater sample location is illustrated on Figure 2, and groundwater analytical results are summarized in Table 6. Future groundwater samples will be submitted for the COGCC Table 915-1 groundwater analytical suite.

### 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 January 3-6, 2023, visual inspections and field screening of soils was conducted at 3 sidewall locations within the PWV excavation, the former meter house, beneath the former AST, and two dump line removal potholes. 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 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 summarized in Tables 2 through 5. The soil sample and field screening locations are illustrated on Figure 2. The laboratory analytical report is provided as Attachment A. The field notes and photographic log are provided as Attachment B.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 33

Number of soil samples exceeding 915-1 28

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

Approximate areal extent (square feet) 4200

### NA / ND

-- Highest concentration of TPH (mg/kg) 2556.5

-- Highest concentration of SAR 26.9

BTEX > 915-1 Yes

Vertical Extent > 915-1 (in feet) 14

### Groundwater

Number of groundwater samples collected 1

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 10

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 915-1 1

-- Highest concentration of Benzene (µg/l) 182

ND Highest concentration of Toluene (µg/l)

-- Highest concentration of Ethylbenzene (µg/l) 21.9

-- Highest concentration of Xylene (µg/l) 315

NA 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 PW-BG01 @3' and PW-BG01 @6' were collected from native material adjacent to the former production facility location. Additional background soil samples (WH-BG01 @3', WH-BG01 @6') were applied from the Ditlev-Simonsen GU 2 wellhead location (approximately 0.2 miles NW). The background soil samples were submitted for laboratory analysis of the Soil Suitability for Reclamation Parameters and Table 915-1 metals using standard methods appropriate for detecting the target analytes in Table 915-1. Analytical results for the background soil samples are summarized in Tables 3 and 5. Background sample locations are presented on Figure 3.

☐ 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 and assessment activities are ongoing.

## 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.

Excavation and assessment activities are ongoing. 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.

Excavation and assessment activities are ongoing.

## Soil Remediation Summary

☐

In Situ

☐

Ex Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

\_\_\_\_\_ Chemical oxidation

\_\_\_\_\_ Air sparge / Soil vapor extraction

\_\_\_\_\_ Natural Attenuation

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ Excavate and offsite disposal

\_\_\_\_\_ 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.

Groundwater monitoring wells will be installed at the site to fully define the extent and magnitude of the remaining groundwater impacts following completion of soil assessment and remediation activities. The temporary groundwater monitoring wells will be sampled on a quarterly basis and submitted for laboratory analysis of the COGCC Table 915-1 groundwater analytical suite.

## 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: \$ 13500

### 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:

## REMEDIATION COMPLETION REPORT

### REMEDIATION 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? No ☐

Does the previous reply indicate consideration of background concentrations?

Does Groundwater meet Table 915-1 standards? No

Is additional groundwater monitoring to be conducted? Yes

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.

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. 09/01/2022

Actual Spill or Release date, or date of discovery. 01/06/2023

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/03/2023

Proposed site investigation commencement. 01/03/2023

Proposed completion of site investigation. \_\_\_\_\_

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 01/03/2023

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 Lead

Submit Date: 06/09/2023

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: Kari Brown

Date: 08/23/2023

Remediation Project Number: 25682

**COA Type****Description**

	On the next quarterly Form 27 Supplemental Operator will provide a revised Proposed date of Remediation Completion based on soil and groundwater analytical data
1 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**

403427425	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403427791	OTHER
403427868	SITE MAP
403427874	SOIL SAMPLE LOCATION MAP
403427875	SOIL SAMPLE LOCATION MAP
403427878	ANALYTICAL RESULTS
403427911	ANALYTICAL RESULTS
403506533	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 8 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)