

# State of Colorado Oil and Gas Conservation Commission

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Document Number:

403423304

Receive Date:

Report taken by:

## 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: KERR MCGEE OIL & GAS ONSHORE LP	Operator No: 47120	Phone Numbers Phone: (970) 336-3500 Mobile: (970) 515-1698
Address: P O BOX 173779		
City: DENVER	State: CO Zip: 80217-3779	
Contact Person: Gregory Hamilton	Email: Gregory_Hamilton@oxy.com	

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 29284 Initial Form 27 Document #: 403369287

#### 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 #: 123-34463	County Name: WELD
Facility Name: NORTHGLENN STATE 24-36		Latitude: 40.004067	Longitude: -104.951439
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: NWSE	Sec: 36	Twp: 1N	Range: 68W Meridian: 6 Sensitive Area? Yes

  

Facility Type: WELL	Facility ID: _____	API #: 123-34464	County Name: WELD
Facility Name: NORTHGLENN STATE 33-36		Latitude: 40.003767	Longitude: -104.951442
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: SWSE	Sec: 36	Twp: 1N	Range: 68W Meridian: 6 Sensitive Area? Yes

Facility Type: WELL		Facility ID: _____		API #: 123-34465		County Name: WELD	
Facility Name: NORTHGLENN STATE 16-36		Latitude: 40.003845		Longitude: -104.951440			
		** correct Lat/Long if needed: Latitude: _____		Longitude: _____			
QtrQtr: SWSE	Sec: 36	Twp: 1N	Range: 68W	Meridian: 6	Sensitive Area?	Yes	

Facility Type: WELL		Facility ID: _____		API #: 123-34466		County Name: WELD	
Facility Name: NORTHGLENN STATE 12-36		Latitude: 40.003927		Longitude: -104.951442			
		** correct Lat/Long if needed: Latitude: _____		Longitude: _____			
QtrQtr: SWSE	Sec: 36	Twp: 1N	Range: 68W	Meridian: 6	Sensitive Area?	Yes	

Facility Type: WELL		Facility ID: _____		API #: 123-34467		County Name: WELD	
Facility Name: NORTHGLENN STATE 39-36		Latitude: 40.003903		Longitude: -104.951441			
		** correct Lat/Long if needed: Latitude: _____		Longitude: _____			
QtrQtr: SWSE	Sec: 36	Twp: 1N	Range: 68W	Meridian: 6	Sensitive Area?	Yes	

Facility Type: WELL		Facility ID: _____		API #: 123-34469		County Name: WELD	
Facility Name: NORTHGLENN STATE 19-36X		Latitude: 40.003874		Longitude: -104.951443			
		** correct Lat/Long if needed: Latitude: _____		Longitude: _____			
QtrQtr: SWSE	Sec: 36	Twp: 1N	Range: 68W	Meridian: 6	Sensitive Area?	Yes	

Facility Type: WELL		Facility ID: _____		API #: 123-34471		County Name: WELD	
Facility Name: NORTHGLENN STATE 10-36		Latitude: 40.004120		Longitude: -104.951440			
		** correct Lat/Long if needed: Latitude: _____		Longitude: _____			
QtrQtr: NWSE	Sec: 36	Twp: 1N	Range: 68W	Meridian: 6	Sensitive Area?	Yes	

Facility Type: WELL		Facility ID: _____		API #: 123-34472		County Name: WELD	
Facility Name: NORTHGLENN STATE 23-36		Latitude: 40.003824		Longitude: -104.951440			
		** correct Lat/Long if needed: Latitude: _____		Longitude: _____			
QtrQtr: SWSE	Sec: 36	Twp: 1N	Range: 68W	Meridian: 6	Sensitive Area?	Yes	

Facility Type: WELL		Facility ID: _____		API #: 123-34473		County Name: WELD	
Facility Name: NORTHGLENN STATE 36-36		Latitude: 40.003655		Longitude: -104.951441			
		** correct Lat/Long if needed: Latitude: _____		Longitude: _____			
QtrQtr: SWSE	Sec: 36	Twp: 1N	Range: 68W	Meridian: 6	Sensitive Area?	Yes	

Facility Type: WELL		Facility ID: _____		API #: 123-34488		County Name: WELD	
Facility Name: NORTHGLENN STATE 14-36		Latitude: 40.003682		Longitude: -104.951439			
		** correct Lat/Long if needed: Latitude: _____		Longitude: _____			
QtrQtr: SWSE	Sec: 36	Twp: 1N	Range: 68W	Meridian: 6	Sensitive Area?	Yes	

Facility Type: WELL		Facility ID: _____		API #: 123-34489		County Name: WELD	
Facility Name: NORTHGLENN STATE 40-36		Latitude: 40.004013		Longitude: -104.951441			
		** correct Lat/Long if needed: Latitude: _____		Longitude: _____			
QtrQtr: NWSE	Sec: 36	Twp: 1N	Range: 68W	Meridian: 6	Sensitive Area?	Yes	

## SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use 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 720 feet to the southwest of the wellhead.  
Surface water is located approximately 210 feet to the north of the wellhead.  
A wetland is located approximately 180 feet north of the wellhead.

## 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
UNDETERMINED	GROUNDWATER	TBD	Groundwater samples/laboratory analytical results
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 as a supplement to the approved Form 27-Initial (Doc# 403369287) which provided prior notice of the plugging and abandonment of the Northglenn ST 10, 12, 16, 23, 24, 39, 40-36, and 19-36X wellheads and status change of the associated flowlines. This supplemental update is to provide prior notice of the plugging and abandonment of the Northglenn ST 14, 33, 36-36 wellheads and status change of the flowline associated with the Northglenn ST 36-36 wellhead. The flowlines associated with the Northglenn ST 14, 33-36 wellheads are comingled with active wellheads and will be removed and sampled when the shared wellheads are decommissioned. The status change of the Northglenn ST 10, 12, 16, 23, 24, 36, 39, 40-36 and 19-36X associated off-location flowlines will be changed from active to out-of-service, due to the proximity to active flowlines. The flowlines will be removed and sampled when the adjacent flowlines are decommissioned. The flowline system pre-abandonment notice was submitted under Form 44 Document Nos. 403344269, 403359273, 403374184, 403383055, 403391190 and 403407075. 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 wellheads and associated pumping equipment will be conducted during sampling activities. Soil vapor screening will also be performed around each of the wellheads. 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 cut and cap operations, soil will be field screened at the associated wellheads and separator riser locations. The separator risers associated with the 14, 33-36 wellheads and the out of service flowlines will be field screened and sampled when the adjacent and comingled flowlines are decommissioned. 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. 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 each of the wellhead, separator, and wellhead riser excavations will be submitted for laboratory analysis of BTEX, naphthalene, TMBs, and 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, pH, EC and 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. Flowlines and separator risers associated with the 14, 33-36 wellheads will be removed & sampled after decommissioning of the comingled wellheads. Following cut & cap operations, a soil gas survey will be conducted utilizing a maximum of five soil vapor points located adjacent to each of the former wellhead locations. 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**

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.

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

\_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_

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

\_\_\_\_\_ Name of Licensed Disposal Facility or COGCC 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 90 days following completion of sampling activities.

#### ☐ 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: \$ 55000

### 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? \_\_\_\_\_

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 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. 05/02/2023

Actual Spill or Release date, or date of discovery. \_\_\_\_\_

### **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). 06/06/2023

Proposed site investigation commencement. \_\_\_\_\_

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 Lead

Submit Date: \_\_\_\_\_

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: \_\_\_\_\_

Date: \_\_\_\_\_

Remediation Project Number: 29284

**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**

403423410	OTHER
403423411	OTHER
403423412	OTHER
403423413	OTHER
403423414	OTHER
403423415	OTHER
403423417	SITE MAP
403424583	SOIL SAMPLE LOCATION MAP
403424584	SOIL SAMPLE LOCATION MAP

Total Attach: 9 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)