

State of Colorado  
Oil and Gas Conservation Commission

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Document Number:  
403134909

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	
Address: P O BOX 173779	Phone: (970) 336-3500		
City: DENVER	State: CO	Zip: 80217-3779	Mobile: (970) 515-1698
Contact Person: Gregory Hamilton	Email: Gregory_Hamilton@oxy.com		

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 23102 Initial Form 27 Document #: 403034188

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: WELL	Facility ID: _____	API #: 123-07225	County Name: WELD
Facility Name: UPRR PAN AM B 1 41	Latitude: 40.278699	Longitude: -104.920690	
** correct Lat/Long if needed: Latitude: 40.278700		Longitude: -104.920693	
QtrQtr: SWSW	Sec: 29	Twp: 4N	Range: 67W 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? 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 610 feet to the northwest of the wellhead.  
A wetland is located approximately 610 feet to the northwest 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
Yes	SOILS	20' (N-S) x 18' (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.

Wellhead cut and cap operations were completed at the UPRR Pan Am B1 41 wellhead on May 18, 2022. Kerr-McGee conducted this operation at the request of the COGCC, given that the operator of the UPRR Pan Am B1 41 well is no longer in existence. Groundwater was not encountered in the wellhead cut and cap excavation area. Visual inspection and field screening of soils around the well and the associated pumping equipment was conducted following cut and cap operations, and a soil sample (WH-B01@6') was submitted for laboratory analysis to determine if a release occurred. Based on field observations and preliminary analytical results, sample WH-B01@6' was selected for waste characterization purposes and was analyzed for the full COGCC Table 915-1 analytical suite using standard methods appropriate for detecting the target analytes. Laboratory analytical results for sample WH-B01@6' indicated that impacted soil was present due to 1,2,4-trimethylbenzene (TMB), naphthalene, 1-methylnaphthalene, pH, arsenic (As), barium (Ba), and selenium (Se) concentrations above COGCC Table 915-1 standards. Due to the fact that the previous operator of the UPRR Pan Am B1 41 well is no longer in existence, the COGCC will be taking over this remediation project per the State's Orphan Well Program. A topographic Site Location Map 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 May 18, 2022, a soil sample (WH-B01@6') was collected from the base of the cut and cap excavation area, at a depth of approximately 6 feet below ground surface (bgs). The soil sample was submitted for laboratory analysis of the full COGCC Table 915-1 analytical suite using standard methods appropriate for detecting the target analytes. Laboratory analytical results for sample WH-B01@6' indicated that impacted soil was present due to the 1,2,4-TMB, naphthalene, 1-methylnaphthalene, pH, As, Ba, and Se concentrations above COGCC standards. The remaining analytical results for sample WH-B01@6' were in compliance with the applicable COGCC Table 915-1 soil standards. Due to the fact that the previous operator of the UPRR Pan Am B1 41 well is no longer in existence, the COGCC will be taking over this remediation project per the State's Orphan Well Program. Soil analytical results are summarized in Tables 2 through 5. The laboratory analytical report is 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 wellhead cut and cap operations.

### **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 May 18, 2022, visual inspection and field screening of soils was conducted at 4 sidewall locations within the wellhead cut and cap excavation area and 4 locations at the ground surface adjacent to the cut and cap excavation. Based on the inspection and screening results, hydrocarbon-impacted soil was 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 a photographic log are provided as Attachment B.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 1

Number of soil samples exceeding 915-1 1

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet) 360

### NA / ND

-- Highest concentration of TPH (mg/kg) 257.1  
93

-- Highest concentration of SAR 0.959

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 6

### 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?

Impacted soil remains at the former UPRR Pan Am B1 41 wellhead location, as described herein. Due to the fact that the previous operator of the UPRR Pan Am B1 41 well is no longer in existence, the COGCC will be taking over this remediation project per the State's Orphan Well Program.

## 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.

To-date, no impacted material has been transported off-site for disposal. Impacted soil remains at the former UPRR Pan Am B1 41 wellhead location, as described herein. Due to the fact that the previous operator of the UPRR Pan Am B1 41 well is no longer in existence, the COGCC will be taking over this remediation project per the State's Orphan Well Program.

### 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.

Impacted soil remains at the former UPRR Pan Am B1 41 wellhead location, as described herein. Due to the fact that the previous operator of the UPRR Pan Am B1 41 well is no longer in existence, the COGCC will be taking over this remediation project per the State's Orphan Well Program. Based on the project transferring to the COGCC for ongoing remediation and assessment activities, 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**

\_\_\_\_\_ 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.

# 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

## 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.

Due to the fact that the previous operator of the UPRR Pan Am B1 41 well is no longer in existence, the COGCC will be taking over this remediation project per the State's Orphan Well Program. As such, KMOG does not anticipate incurring any additional Remediation costs for this project.

Operator anticipates the remaining cost for this project to be: \$ 0

## WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? No

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? 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? No

Does the previous reply indicate consideration of background concentrations? \_\_\_\_\_

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.

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. 01/18/2022

Actual Spill or Release date, or date of discovery. 05/18/2022

### **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). 05/18/2022

Proposed site investigation commencement. 05/18/2022

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

### **REMEDIAL ACTION DATES**

Proposed start date of Remediation. 05/18/2022

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**

Impacted soil remains at the former UPRR Pan Am B1 41 wellhead location, as described herein. Due to the fact that the previous operator of the UPRR Pan Am B1 41 well is no longer in existence, the COGCC will be taking over this remediation project per the State's Orphan Well Program. Based on the project transferring to the COGCC for ongoing remediation and assessment activities, Kerr-McGee is requesting a No Further Action (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: \_\_\_\_\_

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: 23102

**COA Type****Description**

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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**

403134970	PHOTO DOCUMENTATION
403134971	SITE MAP
403134972	SOIL SAMPLE LOCATION MAP
403134973	ANALYTICAL RESULTS
403134974	ANALYTICAL RESULTS

Total Attach: 5 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)