

# State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

402869394

Receive Date:

Report taken by:

## Site Investigation and Remediation Workplan (Initial 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: WESTERN OPERATING COMPANY	Operator No: 95620	Phone Numbers Phone: (303) 726-8650 Mobile: ( )
Address: 1165 DELAWARE STREET #200		
City: DENVER	State: CO Zip: 80204	
Contact Person: Steven James	Email: steve@westernoperating.com	

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: Initial Form 27 Document #: 402869394

#### 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: Wellhead cut and cap associated with plugging and abandonment

#### SITE INFORMATION

No Multiple Facilities

Facility Type: WELL	Facility ID:	API #: 061-06792	County Name: KIOWA
Facility Name: LANCASTER 1	Latitude: 38.542030	Longitude: -102.099860	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: NENW	Sec: 35	Twp: 17S	Range: 42W Meridian: 6 Sensitive Area? No

#### SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Agricultural

Is domestic water well within 1/4 mile? No Is surface water within 1/4 mile? No

Is groundwater less than 20 feet below ground surface? No

#### **Other Potential Receptors within 1/4 mile**

The Lancaster #1 tank battery and wellhead share a location and is surrounded by vacant land in all directions. There are no residences within a quarter mile of the Site. There are no groundwater well permits mapped within a quarter mile of the Site. Groundwater depth is unknown, but groundwater permit 163526 approximately 0.67 miles west of the Site, reported a static water level of 59 feet below ground surface (ft-bgs) at the time of completion. There is no surface water mapped within a quarter mile of the Site. There are no additional sensitive areas or wildlife habitats identified within a quarter mile of the Site.

## 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	Unknown	Not yet determined
UNDETERMINED	SOILS	Unknown	Not yet determined

### INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

Western Operating proposes to plug and abandon (P&A), and conduct closure of the Lancaster #1 well and battery. Plugging and abandonment of the well will likely occur in December of 2021. Cut and cap, and tank battery closure activities, are planned to commence and be completed approximately 8 days after P&A activities are complete. Western Operating will conduct site investigation activities, field screening, and confirmation soil sampling activities during closure in accordance with COGCC 900 Series Rules. Discreet soil samples and, if necessary, groundwater samples, will be collected and analyzed pursuant to Rule 915, following the general sample collection guidance in Rule 915.e.(2) and Rule 915.e.(3). All waste generated during the closure activities will be managed and disposed of in accordance with Rules 905 and 906. See the attached Figure 1 for an illustration of the location of the Site.

### 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 ):

A minimum of 9 discrete soil samples will be collected for field screening and at least 4 discrete soil samples will be collected for laboratory analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, and total volatile petroleum hydrocarbons (TVPH [C6-C10]) by EPA Method 8260 and total extractable petroleum hydrocarbons (TEPH [C10-C36]) by EPA Method 8015. Analytical results for TVPH and TEPH will be added together to calculate total petroleum hydrocarbons (TPH). In addition, a soil sample will be collected from the base of the produced water AST and the sidewall of the wellhead excavation and will be analyzed for the Soil Suitability for Reclamation Parameters; Electrical Conductivity (EC), Sodium Absorption Ratio (SAR), and pH by Saturated Paste Method, and boron by Hot Water-Soluble Soil Extract Method. See the attached Figure 2 for an illustration of the proposed discreet soil sample locations for field screening and for laboratory analysis.

#### Proposed Groundwater Sampling

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

If needed, groundwater samples will be collected for analysis of BTEX, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene by EPA Method 8260.

#### 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 ):

## 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**

### **SOURCE REMOVAL SUMMARY**

Describe how source is to be removed.

Operator will either dig and haul impacted soils to a commercial landfill or treat impacted soils above COGCC Table 915-1 concentration levels onsite.

### **REMEDATION 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.

A remediation or closure plan will be developed based on the results of the confirmation soil sampling results.

### **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  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ 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.

## **REMEDATION 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 \_\_\_\_\_

### **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: \_\_\_\_\_

## 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.

If necessary, the site will be reclaimed in accordance with COGCC 1000-Series Rules.

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.                     

Actual Spill or Release date, or date of discovery.                     

### **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). 01/10/2022

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**

The landowner will be notified prior to plugging and abandonment activities. Follow-up reporting will be submitted via a Form 27 Supplemental within 90 days after work is completed.

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: Steven James

Title: President

Submit Date:

Email: [steve@westernoperating.com](mailto:steve@westernoperating.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:

**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**

402869403	SITE MAP
402876668	SOIL SAMPLE LOCATION MAP

Total Attach: 2 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)