

# State of Colorado Oil and Gas Conservation Commission

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Document Number:

401981504

Receive Date:

05/20/2019

Report taken by:

RICK ALLISON

## 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.

Refer to Rules 340, 905, 906, 907, 908, 909, and 910

### OPERATOR INFORMATION

Name of Operator: WESTERN OPERATING COMPANY	Operator No: 95620	<b>Phone Numbers</b> Phone: (303) 893-2438 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 #: 13634 Initial Form 27 Document #: 401981504

#### PURPOSE INFORMATION

- |  |  |
|--|--|
| <input type="checkbox"/> 901.e. Sensitive Area Determination                                       | <input type="checkbox"/> 909.c.(5), Rule 910.b.(4): Remediation of impacted ground water                   |
| <input checked="" type="checkbox"/> 909.c.(1), Rule 905: Pit or PW vessel closure                  | <input type="checkbox"/> Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b. |
| <input type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation                            | <input type="checkbox"/> Rule 909.e.(2)B.: Closure of remediation project                                  |
| <input type="checkbox"/> 909.c.(3), Rule 907.e.: Land treatment of oily waste                      | <input type="checkbox"/> Rule 906.c.: Director request   |
| <input type="checkbox"/> 909.c.(4), Rule 908.g.: Centralized E&P Waste Management Facility closure | <input type="checkbox"/> Other _____   |

#### SITE INFORMATION

N Multiple Facilities ( in accordance with Rule 909.c. )

Facility Type: PIT	Facility ID: 111624	API #: _____	County Name: WELD
Facility Name: HOOZIE-BJOLIN 1		Latitude: 40.536872	Longitude: -103.643533
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: SENE	Sec: 33	Twp: 7N	Range: 56W Meridian: 6 Sensitive Area? Yes

#### SITE CONDITIONS

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

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

None identified.

# 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      ☐ Piggings 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	SOILS	Undetermined	Undetermined

## INITIAL ACTION SUMMARY

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

A site assessment will be conducted which will consist of advancing 5 soil borings in the vicinity of the production pit. One soil boring will be advanced in the center of the pit, and the remaining four soil borings will be advanced on top of the pit berm in cardinal directions of the pit center. Each soil boring will be advanced manually using a hand auger and soil will be field screened every vertical 1-foot interval for evidence of petroleum hydrocarbon impact such as staining, odor, and elevated VOC concentrations measured using a photo-ionization detector. Each soil boring will be advanced two vertical feet past any encountered impacts. In the absence of any soil impacts, the soil borings will be advanced to a minimum total depth of 5 feet below average surface grade at the site. A proposed soil boring location map is provided as an attachment.

## 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 ):

Two soil samples will be collected from each soil boring on the berm: one vertically composited sample from the top 18-inches of berm material, and one grab sample from the interval exhibiting the greatest field evidence of potential petroleum hydrocarbon impact. Two soil samples will be collected from the soil boring in the center of the pit: one vertically composited sample from ground surface to 1-foot bgs, and one grab sample from the interval exhibiting the greatest field evidence of potential petroleum hydrocarbon impact. If no field evidence of potential impact is observed in a soil boring, the grab sample will be collected from total depth of the soil boring. Following collection, the soil samples will be submitted for laboratory analysis of BTEX, TPH-GRO by EPA Method 8260, TPH-DRO and TPH-ORO by EPA Method 8015, pH by EPA Method 9045D, and EC by EPA Method 120.1. If any samples exceed the COGCC Table 910-1 EC standard, SAR will also be analyzed by EPA 6020B.

### Proposed Groundwater Sampling

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

### 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 June 9, 2018, Teter and Son Oilfield Service, Inc. (Teter), removed approximately 2 cubic yards of stained soil from the pit and stockpiled the material onsite. On 4/8/19 and 4/10/19, Teter hauled the stockpiled material offsite for disposal at Buffalo Ridge Landfill in Keenesburg, Colorado. During this period, Teter also removed additional oily soil from the pit to allow access for a hand auger assessment to be conducted. Teter marked the area where the material was stockpiled with a stake. During the hand auger assessment, LTE personnel will collect GPS location data to document where the soil was stockpiled. LTE will also collect 2 or three surficial soil samples (0"-6" bgs) beneath the area where the soil was stockpiled. The samples will be submitted for laboratory analysis of BTEX, TPH-GRO/DRO/ORO, EC, pH, and SAR.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected \_\_\_\_\_ 0

Number of soil samples exceeding 910-1 \_\_\_\_\_ 0

Was the areal and vertical extent of soil contamination delineated? \_\_\_\_\_

Approximate areal extent (square feet) \_\_\_\_\_ 0

### NA / ND

\_\_\_\_\_ Highest concentration of TPH (mg/kg) \_\_\_\_\_

\_\_\_\_\_ Highest concentration of SAR \_\_\_\_\_

\_\_\_\_\_ BTEX > 910-1 \_\_\_\_\_

\_\_\_\_\_ Vertical Extent > 910-1 (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 910-1 \_\_\_\_\_

\_\_\_\_\_ 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 910-1

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.

NA

## 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.

If petroleum hydrocarbon impact to soil is identified, a remediation plan will be developed following evaluation of the site assessment results and presented in a Form 27 supplemental.

## Soil Remediation Summary

☐ In Situ

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

☒ Ex Situ

Yes \_\_\_\_\_ Excavate and offsite disposal  
If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 25  
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.

NA

## REMEDATION PROGRESS UPDATE

### PERIODIC REPORTING

**Frequency:** ☐ Quarterly ☐ Semi-Annually ☐ Annually ☒ Other As needed

**Report Type:** ☐ Groundwater Monitoring ☐ Land Treatment Progress Report ☐ O&M Report

☒ Other Pit Assessment Report

### 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:

## 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.

TBD

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 approve the seed mix?

If NO, does the seed mix comply with local soil conservation district recommendations?

## IMPLEMENTATION SCHEDULE

### PRIOR DATES

Date of Surface Owner notification/consultation, if required.

Actual Spill or Release date, if known.

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/20/2019

Date of commencement of Site Investigation.

Date of completion of Site Investigation.

### REMEDIAL ACTION DATES

Date of commencement of Remediation.

Date of completion of Remediation.

### SITE RECLAMATION DATES

Date of commencement of Reclamation.

Date of completion of Reclamation.

**OPERATOR COMMENT**

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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: 05/20/2019

Email: 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: RICK ALLISON

Date: 05/21/2019

Remediation Project Number: 13634

**COA Type****Description**

	Submit a Form 27 Supplemental Report with assessment results within 90 days (August 19, 2019)
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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**

401981504	FORM 27-INITIAL-SUBMITTED
401983355	SITE MAP
401983356	SOIL SAMPLE LOCATION MAP
402040818	DISPOSAL MANIFESTS

Total Attach: 4 Files

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

Environmental	Form 27 with required revisions	05/21/2019
Environmental	Return to Draft: 1. Operator to clarify sampling protocol for berm material and pit area beneath berms relative to final grade. Inorganic analysis shall also include SAR 2. Based on COGCC inspection, oily waste/impacted soil is present in the pit, Operator to clarify or revise sampling protocol based on presence of known impact 3. Operator to clarify location of previously stockpiled or land treated oily waste and propose sampling protocol of soils in this location.	03/29/2019

Total: 2 comment(s)