

# State of Colorado Oil and Gas Conservation Commission

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Document Number:

403273080

Receive Date:

01/13/2023

Report taken by:

ALEX FISCHER

## 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: <u>WESTERN OPERATING COMPANY</u>	Operator No: <u>95620</u>	<b>Phone Numbers</b>
Address: <u>1165 DELAWARE STREET #200</u>		Phone: <u>(303) 893-2438</u>
City: <u>DENVER</u>	State: <u>CO</u>	Zip: <u>80204</u>
Contact Person: <u>Steve James</u>	Email: <u>steve@westernoperating.com</u>	Mobile: <u>( )</u>

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 27155 Initial Form 27 Document #: 403273080

#### 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: <u>PIT</u>	Facility ID: <u>100310</u>	API #: _____	County Name: <u>LOGAN</u>
Facility Name: <u>PROPST 1A</u>		Latitude: <u>40.892996</u>	Longitude: <u>-103.264618</u>
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: <u>SWSW</u>	Sec: <u>26</u>	Twp: <u>11N</u>	Range: <u>53W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>
Facility Type: <u>PIT</u>	Facility ID: <u>100316</u>	API #: _____	County Name: <u>LOGAN</u>
Facility Name: <u>PROPST C1X</u>		Latitude: <u>40.892544</u>	Longitude: <u>-103.264343</u>
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: <u>SWSW</u>	Sec: <u>26</u>	Twp: <u>11N</u>	Range: <u>53W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: PIT	Facility ID: 256304	API #:	County Name: LOGAN
Facility Name: PROPST 1-A	Latitude: 40.892798	Longitude: -103.264685	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: SWSW	Sec: 26	Twp: 11N	Range: 53W
	Meridian: 6	Sensitive Area? Yes	

## **SITE CONDITIONS**

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

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. The nearest water wells permitted with the Colorado Division of Water Resources (DWR) are located approximately 0.5 miles south-southwest of the site (DWR Permit Receipt # 9045707) and 0.7 miles northwest of the site (DWR Permit Receipt # 9044315). The DWR well constructions logs report groundwater depths of 70 feet below ground surface (bgs) for DWR Permit Receipt # 9045707 (constructed in 1981) and 80 feet bgs for DWR Permit Receipt # 9044315 (constructed in 1965).

# 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	SOILS	Unknown	Pending assessment

## 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 close the unlined Propst 1A pit. Downgradient salt impacts from the pit were identified by the COGCC and are being addressed in a separate Form 27 (Document Number 403271852). Prior to conducting an assessment of the pit, any produced water remaining in the pit will be properly evacuated and disposed of pursuant to the methods outlined in Rule 905.c, and any oily waste present will be disposed of in accordance with Rule 905.e. Any liquid or solid waste removed from the site will be transported offsite for disposal at the Pawnee Waste facility in Grover, Colorado. If more than 10 cubic yards of oily waste is removed, a Form 19 will be submitted. If needed, the pit will be evacuated of water and any oily soil prior to the assessment activities described below, which will be completed by the end of August 2023.

## 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 ):

Hand auger soil borings will be advanced at 5 locations throughout the pit bottom. Soil samples will be collected at 0.5 feet below the pit bottom and from 3 feet below the surface for laboratory analysis. One soil boring will be advanced in the center of the pit to a total depth of 15 feet below the pit base (or to hand auger refusal), and samples will be collected from the interval exhibiting the highest magnitude of field impact such as staining, odor, and/or elevated photoionization detector readings and total depth. If no evidence of impact is observed, samples will be collected from 0.5 feet below the pit bottom, 3 feet below the pit bottom, and total depth of the boring. Additionally, eight soil samples will be collected from the pit berm material collected at 3 feet below the top of berm. All soil samples will be submitted for the complete COGCC Table 915-1 list of analytes.

The proposed soil sample locations are shown on the attached figure.

### Proposed Groundwater Sampling

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

Inspection Doc #690900222 included the following corrective action (CA): As part of this Initial Form 27, the operator shall propose the advancement of soil borings and installation of groundwater monitoring wells down gradient of Pit Facility #256304.

Prior to proposing the installation of groundwater monitoring wells, Western Operating proposes to complete the initial pit closure assessment and the assessment of the downgradient salt kill area ( proposed in F27 Document Number 403271852). The pit closure assessment includes one soil boring to 15 feet bgs in the center of the pit. The assessment of the downgradient salt kill area includes three soil borings to 15 feet bgs downgradient of the pit. Groundwater monitoring activities will be proposed following review of the initial assessment results. If groundwater is encountered during the initial assessment, grab groundwater samples will be collected from each location for analysis of the complete 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 ):

Four background soil borings will be advanced away from the potential impacts related to the site to characterize local inorganic concentrations. Samples will be collected from each background boring at 1 foot bgs, 3 feet bgs, 10 feet bgs, and 15 feet bgs for analysis of the COGCC Table 915-1 Soil Suitability for Reclamation parameters and metals.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 0

Number of soil samples exceeding 915-1 0

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

Approximate areal extent (square feet) 14000

### 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.

Water and any oily soil within the pit will be removed for offsite disposal in accordance with COGCC Rule 905. If impacts are identified within or below the pit, additional remedial measures for will be determined following the assessment.

### 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.

See above.

### 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.

## 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.

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

### 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.

Following remediation, the pit will be reclaimed in accordance with COGCC 1000 series 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. \_\_\_\_\_

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

## SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/01/2023

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**

Please route to Environmental Supervisor Alex Fischer and Reclamation Specialist Dylan Edwardson

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

Signed: Steve James

Title: President

Submit Date: 01/13/2023

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: ALEX FISCHER

Date: 01/27/2023

Remediation Project Number: 27155

**COA Type****Description**

	Operator shall provide 72hr notice prior to sampling operations via email to Environmental Supervisor Alex Fischer (alex.fischer@state.co.us) and Reclamation Specialist Dylan Edwardson (dylan.edwardson@state.co.us).
	Additional soil samples should be collected where effluent is discharged into the pit.  A deep soil boring shall be advance and samples collected at the lowest portion of the pit.
	It is stated, "Hand auger soil borings will be advanced at 5 locations throughout the pit bottom."  Operator may want to take into consideration using direct-push technology or other to collect continuous representative soil samples as opposed to hand auger borings.
	This Form 27 Supplemental is being approved as submitted. However, the next Form 27 Supplemental must be populated with the Adequacy of Operator's General Liability Insurance and Financial Assurance data field under the Remediation Progress Update tab to describe how Operator's Financial Assurance meets the requirements of Rule 703.b. and General Liability Insurance meets the requirements of Rule 705.b.
	It is stated that, "Any liquid or solid waste removed from the site will be transported offsite for disposal at the Pawnee Waste facility in Grover, Colorado."  Provide verification of Pawnee Waste facility accepting liquid waste.  Provide an explanation in why the liquid waste would not be disposed via UIC Disposal ID: 159442 (05-075-09204) Propst 1.
	Operator shall comply with 900 Series Rules. Determine vertical and horizontal extent of spill to establish points of compliance and conduct soil analysis with discrete sampling and photo documentation to provide in future Supplemental Form 27s.
	Operator shall update the Periodic Reporting section on a Supplemental Form 27. Operator will provide quarterly reports until the site investigation is complete and the implementation schedule can be updated. Operator will include historical and recent soil analytical data in a table format in Quarterly updates. Operator shall submit field notes of all field activities reported during a Quarterly Update.
	Background samples are sufficient at this time. However, the COGCC reserves the right to request additional background samples.
8 COAs	

**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**

403273080	FORM 27-INITIAL-SUBMITTED
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403276148	SOIL SAMPLE LOCATION MAP
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Total Attach: 2 Files

### **General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Environmental	FEE/FEE National Wetlands Inventory shows Riverine 120 feet west from impacted vegetation and 250 feet west of the SW corner of Pit Facility ID: 256304	01/24/2023
Environmental	Under Project, Purpose, & Site Information Tab, COGCC Staff changed Multiple Facilities from NO to YES to include Pit Facility ID: 100310 and 100316 as these two additional pits will be closed under this F27.	01/24/2023
Environmental	returned to draft, incorrect facility id	01/06/2023

Total: 3 comment(s)