

State of Colorado
Energy & Carbon Management Commission

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



Document Number:
404489755
Receive Date:
12/30/2025
Report taken by:
Krystal Heibel

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 ECOM 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: Steve James	Email: steve@westernoperating.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 26893 Initial Form 27 Document #: 403124055

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 #: 075-06999	County Name: LOGAN
Facility Name: ROBERTS 1	Latitude: 40.904210	Longitude: -103.342430	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWNW	Sec: 30	Twp: 11N	Range: 53W Meridian: 6 Sensitive Area? No
Facility Type: PIT	Facility ID: 100315	API #: _____	County Name: LOGAN
Facility Name: ROBERTS 1	Latitude: 40.904319	Longitude: -103.342207	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWNW	Sec: 30	Twp: 11N	Range: 53W Meridian: 6 Sensitive Area? No

Facility Type: LOCATION Facility ID: 312230 API #: County Name: LOGAN
Facility Name: ROBERTS-611N53W 30NWNW Latitude: 40.904210 Longitude: -103.342430
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: NWNW Sec: 30 Twp: 11N Range: 53W Meridian: 6 Sensitive Area? No

SITE CONDITIONS

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

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 Robert 1 wellhead is surrounded by vacant land in all directions. There are no residences within a quarter mile of the wellhead. There is one residential groundwater well permit (45215) mapped 0.45 miles northeast of the wellhead and reported a static water level of 313 feet below ground surface at the time of completion. There is 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 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
UNDETERMINED	SOILS	No confirmed impacts	Investigation ongoing

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) the Roberts 1 well and decommission the related tank battery facility. Cut and cap activities and removal of production facility equipment are planned to commence approximately 10 days after P&A activities are complete. Western Operating will conduct site investigation activities, field screening, and confirmation soil sampling activities during closure of each qualifying production equipment type 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). Western Operating will completely remove flowlines with landowner approval and will conduct flowline abandonment activities in accordance with COGCC 1105 Series Rules. Pit closure samples will be collected in accordance with Rule 911.c. Pit Closure Guidance document. 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 13 discreet soil samples will be collected for field screening from qualifying production equipment. At least seven samples will be submitted to accredited laboratory for analysis of TPH (C6-C36), Table 915-1 Organic Compounds in Soil, Table 915-1 metals, and Table 915-1 Soil Suitability for Reclamation (full Table 915-1). Discrete soil samples will be field screened approximately every 250 feet (ft) along the removed flowline path and submitted if impacts are suspected. Samples collected from areas most likely to have been impacted during the life of the flowline, in accordance with COGCC Operator Guidance Rule 911.a.(4), will be submitted for analysis of full Table 915-1 soil constituents. Flowline confirmation samples may be collected jointly with required qualifying production equipment samples.

Proposed Groundwater Sampling

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

If groundwater is encountered during decommissioning activities, a grab sample will be collected as soon as practical. If contaminated soil is in contact with groundwater or if free product/hydrocarbon sheen are observed, the release will be reported in accordance with Rule 912.b. Groundwater samples will be submitted for laboratory analysis of Table 915-1 Organic Compounds in Groundwater and Groundwater Inorganic Parameters.

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):

A minimum of eight soil samples will be collected from the earthen pit. A five-point composite sample will be collected from each of the four berms and submitted for laboratory analysis of full Table 915-1 soil constituents. Grab samples from the floor of the pit will be collected from approximately 1 ft and 3 ft below ground surface (bgs) at four discrete locations. Shallow floor samples will be submitted for full Table 915-1 soil analysis. At least one deeper floor sample will be submitted for analysis of the full Table 915-1 soil constituents. Additionally, confirmation soil samples will be collected from the center of an area identified in historical imagery as a potential earthen pit. Grab samples will be collected at approximately 1ft and 3ft bgs and both submitted for full Table 915-1 soil analysis. See the attached Figure 2 Proposed Soil Sampling Location Diagram.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 4
Number of soil samples exceeding 915-1 0
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 0

NA / ND

-- Highest concentration of TPH (mg/kg) 177
-- Highest concentration of SAR 1.09
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 0

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
0 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?

Three background samples have been collected from various depths at one soil boring location undisturbed by oil and gas activities and submitted for analysis of pH, arsenic, barium, and cadmium. Analytical results demonstrate that pH, arsenic, barium, and cadmium concentrations above Table 915 standards exist naturally at this location. Please see Table 4 for site specific background levels.

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?

Additional soil samples will be collected to characterize and/or delineate potential impacts in accordance with ECMC 900 Series Rules. Additional investigation of production equipment as proposed is currently pending removal of remaining equipment from the location.

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 through soil screening and/or laboratory analysis, impacted soil will be segregated for proper off site disposal, and the lateral and vertical extent of impacts will be determined with appropriate confirmation soil sampling. If all source material cannot be removed by excavation, alternative plans will be proposed in subsequent Form 27 supplemental.

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.

As needed, a remediation or closure plan will be developed based on the results of the confirmation soil sampling results and submitted to ECMC via Supplemental Form 27.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Excavate and offsite disposal

_____ Chemical oxidation
_____ Air sparge / Soil vapor extraction
_____ Natural Attenuation
_____ Other _____

If Yes: Estimated Volume (Cubic Yards) _____
Name of Licensed Disposal Facility or ECMC 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.

Is additional groundwater monitoring to be conducted? _____

Operator shall comply with the ECMC 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.

Reclamation activities will be completed in accordance with 1000 Series Rules, in collaboration with the landowner.

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. 01/24/2022

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/31/2023

Proposed site investigation commencement. 02/03/2025

Proposed completion of site investigation. 08/29/2026

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:

Proposed site investigation dates changed due to weather constraints and contractor scheduling.

OPERATOR COMMENT

This Form 27 Supplemental is being submitted as a quarterly update of activities performed at the Roberts 1 decommissioning project.

As noted in the attached secured laboratory analytical report 2501290R2, and previously reported in Form 27 Supplemental 404360017, laboratory analysis using EPA 8260B Methods for samples collected on 1/17/2025 were performed outside of EPA recommended hold-times due to laboratory backlog.

In effort to expedite completion of the decommissioning of the Roberts 1 location and compliance with ECMC, Western Operating Company respectfully retracts its request to review the Quality Assurance for data validity with consideration of the provisions outlined in SW-846 Chapter 4 and Method 5035A, as outlined in Form 27 document 404360017. In lieu, on 12/10/2025 Western Operating Company consultant geologist recollected grab confirmation soil samples WH01R@6 and WH01-WR@4 using sub-meter accurate GPS navigational tools to navigate to the locations of the original samples (previous sample locations were still visible in the excavation as well) and collected new grab confirmation soil samples for analysis of EPA 8260B and 8015 constituents (BTEX, naphthalene, 1,2,4 and 1,3,5 trimethylbenzene, GRO, DRO, and ORO). Samples were immediately placed on ice to be delivered for laboratory analysis conducted within EPA recommended hold times. Additionally, WH01R@6 was analyzed for cadmium, and WH01-WR@4 was analyzed for pH and cadmium to investigate further if detection values reported in the original sample results are representative of conditions in the soils. Analytical results demonstrate that pH and cadmium results in the 1/17/2025 samples were de minimis in volume, may not represent cumulative conditions in soils, and are not related to E&P waste as no other constituents of concern were reported above ECMC soil screening and background limits and there were no detections of organic constituents in final sample results. Western Operating requests use of 12/10/2025 analytical results for pH and/or cadmium to demonstrate compliance at these respective grab confirmation soil samples.

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

Signed: Ryan Finley

Title: Senior Project Geologist

Submit Date: 12/30/2025

Email: rfinley@entradainc.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with ECMC Rules and applicable orders and is hereby approved.

ECMC Approved: Krystal Heibel

Date: 02/16/2026

Remediation Project Number: 26893

COA Type

Description

	<p>Based on the information presented, it appears the elevated pH sample from the wellhead area appears to be de minimis in quantity or within the range of background pH; therefore, elevated pH may not be associated with E&P activities.</p> <p>"Western Operating requests use of 12/10/2025 analytical results for pH and/or cadmium to demonstrate compliance at these respective grab confirmation soil samples. "</p>
	<p>Operator shall attach the Proposed Soil Sampling Location Diagram to the next Form 27-S.</p> <p>"A minimum of eight soil samples will be collected from the earthen pit. A five-point composite sample will be collected from each of the four berms and submitted for laboratory analysis of full Table 915-1 soil constituents. Grab samples from the floor of the pit will be collected from approximately 1 ft and 3 ft below ground surface (bgs) at four discrete locations. Shallow floor samples will be submitted for full Table 915-1 soil analysis. At least one deeper floor sample will be submitted for analysis of the full Table 915-1 soil constituents. Additionally, confirmation soil samples will be collected from the center of an area identified in historical imagery as a potential earthen pit. Grab samples will be collected at approximately 1ft and 3ft bgs and both submitted for full Table 915-1 soil analysis. See the attached Figure 2 Proposed Soil Sampling Location Diagram."</p>
2 COAs	

ATTACHMENT 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

404489755	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404489824	LABORATORY ANALYTICAL REPORT
404489827	LABORATORY ANALYTICAL REPORT
404489830	LABORATORY ANALYTICAL REPORT
404489832	LABORATORY ANALYTICAL REPORT

404489835	MAP
404489837	SOIL SAMPLE LOCATION MAP
404489839	ANALYTICAL DATA SUMMARY TABLE(S)
404546410	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 9 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	"Western Operating will completely remove flowlines with landowner approval and will conduct flowline abandonment activities in accordance with COGCC 1105 Series Rules. Pit closure samples will be collected in accordance with Rule 911.c. Pit Closure Guidance document. "	02/16/2026

Total: 1 comment(s)