

State of Colorado
Energy & Carbon Management Commission

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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 ECMC 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: CENTRAL OPERATING INC	Operator No: 14855	Phone Numbers
Address: 1600 BROADWAY STE 1050		Phone: (303) 8949576
City: DENVER	State: CO	Zip: 80202
Contact Person: Cullin Johnson	Email: coidenverproduction@gmail.com	Mobile: ()

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 35820 Initial Form 27 Document #: 403793239

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: LOCATION	Facility ID: 317067	API #: _____	County Name: WASHINGTON
Facility Name: STATE-63S51W 36SWNW	Latitude: 39.751720	Longitude: -103.045272	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SWNW	Sec: 36	Twp: 3S	Range: 51W
Meridian: 6	Sensitive Area? Yes		

Facility Type: SPILL OR RELEASE	Facility ID: 454308	API #: _____	County Name: WASHINGTON
Facility Name: Oil Tanks	Latitude: 39.753103	Longitude: -103.047285	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SWNW	Sec: 36	Twp: 3S	Range: 51W
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? No

Is groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

Per NRCS USDA Web Soil Survey: Planter loam, 0 to 3 percent slopes.

Moderately low ability to transmit water (Ksat) with depth to water table at more than 80 inches.

Relevant depth to groundwater, according to local water well #9056309, ~2950 feet to the southeast of the State location is 76 feet. 3670 feet to the northwest, water well # 9057281 indicates depth to groundwater at 150 feet.

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	NA	Lab analysis if encountered
Yes	SOILS	18"	Lab analysis

INITIAL ACTION SUMMARY

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

The treater lost gas pressure and oil tanks leaked 10 bbls oil. The wells were shut in and all valves on treater were shut in. All fluid was contained inside the berms and then recovered with a vacuum truck. Contaminated dirt was immediately removed and stockpiled on location.

Soil samples were collected on 4/15/2024 & 7/24/2024. Excavation was conducted in September and additional soil samples were collected on 10/11/2024 and analyzed for Boron, EC, pH and SAR.

Excavation of the impacted area was completed in September 2024, and additional sampling was completed on 10/11/2024. Four excavation wall samples, and one floor sample were taken at 3' & 4' depth of the excavation area. These samples were analyzed for SSR constituents.

Following points are determined to have impacts still:

EX01 @ 3' (pH) & 4' (pH & SAR), EX03 @ 3' & 4' (pH & SAR), F01 @ 3' & 4' (pH & SAR), SP7 @ 18" & 2' (SAR), SP6 @ 18" (pH & SAR) & 2' (SAR), SP8 @ 18" (SAR), SP9 @ 18" & 2' (SAR), SP5 @ 18" (SAR & pH), SP2 @ 18" (pH & SAR) & 2' (SAR), and SP3 @ 18" (pH & SAR) & 2' (SAR).

Confirmation sampling at the North end, Northeast end, South, and Southeast points will be completed. A proposed sampling map has been attached.

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):

Additional samples will be collected to fully delineate the lateral and vertical extent of impact. Confirmation sampling at the North end, Northeast end, South, and Southeast points will be completed. A proposed sampling map has been attached. Central requests a reduced analytical suite for pH and SAR only.

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):

Follow up sampling will be conducted after the excavation has been complete. Per Doc #403773409, ECMC agreed to the reduced analyte list of sample for only Table 915-1 soil solubility for reclamation analytes. Central requests a reduced analytical suite for pH and SAR only.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 28

Number of soil samples exceeding 915-1 18

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 75

NA / ND

ND Highest concentration of TPH (mg/kg)

-- Highest concentration of SAR 13.97

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 2

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?

2 background samples have been collected as part of the investigation. Both samples were collected at depths of 18", 2', 3', and 4'.

☒ Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) 164

Volume of liquid waste (barrels) 0

☒ Is further site investigation required?

Confirmation sampling at the North end, Northeast end, South, and Southeast points will be completed. A proposed sampling map has been attached. Further site investigation, including excavation, removal of contaminated soils, and additional sampling is expected to be completed.

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.

Impacted soil was excavated and cleaned up on same day as spill was discovered. Contaminated soil was commingled with excavated soil from onsite skim pit, which was mid-closure. Contaminated soil was hauled to CSI Landfill. Soil sampling will continue to be done until results prove no exceedances of Table 915 thresholds.

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.

Following points are determined to have impacts still:
EX01 @ 3' (pH) & 4' (pH & SAR), EX03 @ 3' & 4' (pH & SAR), F01 @ 3' & 4' (pH & SAR), SP7 @ 18" & 2' (SAR), SP6 @ 18" (pH & SAR) & 2' (SAR), SP8 @ 18" (SAR), SP9 @ 18" & 2' (SAR), SP5 @ 18" (SAR & pH), SP2 @ 18" (pH & SAR) & 2' (SAR), and SP3 @ 18" (pH & SAR) & 2' (SAR).
Additional samples will be collected to fully delineate the lateral and vertical extent of impact. Central requests a reduced analytical suite for pH and SAR only.

Soil Remediation Summary

☒ In Situ

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

☒ Ex Situ

Yes _____ Excavate and offsite disposal
_____ If Yes: Estimated Volume (Cubic Yards) _____ 164
_____ Name of Licensed Disposal Facility or ECMC Facility ID # _____ 983767674
No _____ 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.

Maggie has financial assurance bonding per Rule 702 and carries General Liability Insurance compliance with Rule 705. No claim is anticipated for this cleanup effort.

Operator anticipates the remaining cost for this project to be: \$ 1000

WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? Yes

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

Contaminated soil was combined with soil from onsite skim pit closure, and hauled to CSI Landfill.

Volume of E&P Waste (solid) in cubic yards 164

E&P waste (solid) description hydrocarbon bearing soil

ECMC Disposal Facility ID #, if applicable: 983767674

Non-ECMC Disposal Facility:

Volume of E&P Waste (liquid) in barrels 0

E&P waste (liquid) description

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility:

REMEDIATION COMPLETION REPORT

REMEDIATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? No

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?

Does the previous reply indicate consideration of background concentrations?

Does Groundwater meet Table 915-1 standards?

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 Plan to be determined after the extent of impact is confirmed. The site will be reclaimed in accordance with ECMC 1000 Series Reclamation Rules or per surface owner direction. The State 1&3 will remain an active tank battery location, so full reclamation will not occur at this time.

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. 01/01/2025

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. 03/12/2018

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/12/2018

Proposed site investigation commencement. 03/12/2018

Proposed completion of site investigation. 12/01/2025

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

F27S Doc No. 404005828 was submitted 11/27/2024. It was denied by ECMC on 3/13/2025 for the following reason:
"ECMC has denied this Form 27 for data validation. Attached analytical is not secured. Operator will provide laboratory analytical report(s) as a stand-alone attachment(s) on the replacement Supplemental Form 27. The Laboratory Report PDF(s) must be secured by the issuing laboratory; If there is a difference between the creation date and secured date of the PDF, operator shall provide an explanation in the case narrative of the associated report. ECMC will not review combined PDFs with lab reports."

Elevations Lab has provided secured PDF files of the lab results, attached herein. No analytical PDF's are in the Site Investigation Report.

F27S Doc No. 404094589 was submitted on 2/24/25. The document is still In Progress with ECMC.

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

Signed: Mackenzie Smith

Title: Staff Engineer

Submit Date: _____

Email: msmith@ardorenvironmental.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: _____

Date: _____

Remediation Project Number: 35820

COA Type**Description**

0 COA	

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**

404131157	SITE INVESTIGATION REPORT
404131158	SOIL SAMPLE LOCATION MAP
404146072	ANALYTICAL RESULTS
404146073	ANALYTICAL RESULTS

Total Attach: 4 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)