

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 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: CITATION OIL & GAS CORP	Operator No: 17180	Phone Numbers
Address: 14077 CUTTEN RD		
City: HOUSTON	State: TX	Zip: 77069
Contact Person: Bob Redweik	Email: bredweik@cogc.com	Phone: (281) 891-1550
		Mobile: (713) 702-7534

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 40613 Initial Form 27 Document #: 404166298

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

No Multiple Facilities

Facility Type: WELL	Facility ID: _____	API #: 017-07199	County Name: CHEYENNE
Facility Name: ARAPAHOE UNIT 178	Latitude: 38.822016	Longitude: -102.111356	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SENE	Sec: 21	Twps: 14S	Range: 42W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications ML Most Sensitive Adjacent Land Use Agricultural crop land

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

Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

Surface water features include Ladder Creek, which flows roughly 0.22 miles north of the site, and a stock pond located approximately 0.24 miles to the northwest. There are no Colorado Parks and Wildlife (CPW) High Priority Habitats (HPH), domestic water wells, or occupied buildings within a ¼-mile radius 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
Yes	SOILS	See attached data	Lab reports and field screening

INITIAL ACTION SUMMARY

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

Decommissioning activities were conducted at the Arapahoe Unit 178 wellhead on August 21, 2025. Two (2) soil samples were collected, one (1) soil sample from the base of the wellhead excavation (AU_178_WH_B01@6') and one (1) soil sample from the location where the flowline was disconnected at the wellhead riser (AU_178_WH_Riser@4'). Both soil samples were submitted for full Table 915-1 and were in compliance with Table 915- 1 with the exception of pH and SAR. As such, additional soil sampling was completed and will continue to delineate inorganic exceedances.

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):

Twenty-seven (27) discrete soil samples were collected as part of the site assessment activities. Several soil samples indicate pH and SAR levels above ECMC Table 915-1 and site-specific background levels. The only contaminants of concern are inorganics. As such, delineation samples were initially submitted for pH, SAR, and EC to screen inorganic concentrations. If inorganics were in compliance, the soil sample was submitted for the remaining Table 915-1 analytes.

Proposed Groundwater Sampling

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

Should groundwater be encountered during future site assessment activities, a sample will be collected as soon as practical and shall be submitted for laboratory analysis of Table 915-1 Inorganic Parameters and Organic Compounds in Groundwater.

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):

Eight (8) locations were field screened using a PID during wellhead decommissioning including four (4) sidewall locations and four (4) locations at ground surface adjacent to the cut and cap excavation area in each cardinal direction. Hydrocarbon impacted soil was not observed at the soil screening locations, and therefore no additional soil samples were submitted for laboratory analysis.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 27

Number of soil samples exceeding 915-1 9

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

Approximate areal extent (square feet) 110

NA / ND

-- Highest concentration of TPH (mg/kg) 251.2
 4

-- Highest concentration of SAR 47.29

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 20

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? Yes

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?

Three (3) background soil samples were collected on September 15 and November 11, 2025, generally to the east and west of the wellhead pad. Background soil samples were analyzed for pH, SAR, EC, boron, and arsenic. Analytical results indicated elevated levels of pH, SAR, and arsenic.

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 delineation site assessment activities are pending and will be summarized in the following Form 27 Supplemental update.

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.

Approximately 40 cubic yards of impacted material were excavated from this location and transported off site to an ECMC approved or permitted facility for disposal. Soil disposal records are available upon request.

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.

The extent of the impacted area will continue to be delineated using a hand auger and photoionization detector (PID). Soil samples will continue to be collected as needed to characterize and/or demonstrate confirmation of impacts. Future excavations will be completed to remove inorganic impacted soils within the rootzone and in some cases below the root zone when possible.

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 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.

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 Project status update

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.

Citation carries general liability insurance of \$2,000,000, with excess liability insurance of \$35,000,000. Citation also carries pollution/waste liability insurance of \$20,000,000, and environmental related liability insurance of \$3,000,000 for all active wells and \$1,000,000 for all plugged and abandoned wells. Citation maintains \$1,135,000 in surety bonds with the COGCC. There is no site-specific financial assurance associated with this remediation project. Citation does not intend to file an insurance claim for this remediation project.

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 _____

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: _____

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

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? No _____

Does the previous reply indicate consideration of background concentrations? _____

Does Groundwater meet Table 915-1 standards? Yes

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.

A reclamation plan will be prepared pending the outcome of the site investigation.

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). 04/17/2025

Proposed site investigation commencement. 04/17/2025

Proposed completion of site investigation. 06/30/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/01/2025

Proposed date of completion of Remediation. 06/30/2026

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:

Plugging and abandonment resource availability was delayed.

OPERATOR COMMENT

This Form 27 Supplemental is being submitted to report the wellhead decommissioning and site investigation results at the Arapahoe Unit 178.

Analytical results from the soil samples collected from the wellhead decommissioning activities indicated that soil sample results are in compliance with Table 915-1 except for pH and SAR. An excavation was completed in the location of sample AU_178_WHB_W to remove inorganics and was completed to a depth of 14' BGS. Confirmation soil samples were collected at 18' and 20' and confirmed compliance with Table 915-1 and/or site-specific background levels.

Site investigation activities will continue and be reported in a forthcoming Form 27 Supplemental Quarterly Report. Soil samples will continue to be collected as-needed to characterize and/or demonstrate confirmation of impacts and removal. Citation is requesting a reduced analyte list for further site characterization of soil to be limited to the following Table 915-1 parameters: pH, SAR & EC.

Soil sample locations are provided in Attachment A, sample details are included in Attachment B, analytical results are summarized in Attachment C, photo documentation is provided in Attachment D, and analytical reports are provided in Attachment E-G.

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

Signed: Bob Redweik

Title: VP – EHS and Regulatory

Submit Date: _____

Email: bredweik@cogc.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: 40613

COA Type

Description

0 COA	
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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

404534661	SOIL SAMPLE LOCATION MAP
404534663	OTHER
404534664	ANALYTICAL DATA SUMMARY TABLE(S)
404534666	PHOTO DOCUMENTATION
404534668	LABORATORY ANALYTICAL REPORT
404534671	LABORATORY ANALYTICAL REPORT
404534673	LABORATORY ANALYTICAL REPORT

Total Attach: 7 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)