

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
404118872

Receive Date:

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

**PROJECT, PURPOSE & SITE INFORMATION**

**PROJECT INFORMATION**

Remediation Project #: 38695 Initial Form 27 Document #: 404065748

**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 #: 017-06275	County Name: CHEYENNE
Facility Name: MCCORMICK 24-3 6	Latitude: 38.852615	Longitude: -102.880506	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESW	Sec: 3	Twp: 14S	Range: 49W Meridian: 6 Sensitive Area? Yes
Facility Type: SPILL OR RELEASE	Facility ID: 488390	API #: _____	County Name: CHEYENNE
Facility Name: MCCORMICK 24-3 #6	Latitude: 38.852615	Longitude: -102.880506	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESW	Sec: 3	Twp: 14S	Range: 49W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE	Facility ID: 489205	API #:	County Name: CHEYENNE
Facility Name: McCormick 24-3 #6	Latitude: 38.852615	Longitude: -102.880506	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: SESW	Sec: 3	Twp: 14S	Range: 49W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE	Facility ID: 489976	API #:	County Name: CHEYENNE
Facility Name: McCormick 24-3 #6 Flowline	Latitude: 38.852615	Longitude: -102.880506	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: SESW	Sec: 3	Twp: 14S	Range: 49W Meridian: 6 Sensitive Area? Yes

**SITE CONDITIONS**

General soil type - USCS Classifications CL Most Sensitive Adjacent Land Use Rangeland  
 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? Yes

**Other Potential Receptors within 1/4 mile**

The closest water well is a stock well located approximately 830 feet North of the site and has a depth to static water measurement of 18 feet. There are no occupied buildings within 1 mile of the site. The location is within the CPW HPH lesser prairie chicken connectivity area and estimated occupied range.

**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	Refer to Tables and Figures	Laboratory analysis and field screening
Yes	SOILS	~5,000 square feet	Laboratory analysis 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.

During a site inspection conducted on 8/19/2024 by an ECMC representative, a spill was noted at the location. Initial cleanup, investigation, and excavation of the soil staining was completed 10/10/2024. A Form 19 Spill/Release (ID 488390) was initiated on 10/25/2024. On 11/26/2025, investigation sampling was completed where stained soil was previously removed around the wellhead and compressor shed. Further investigation sampling of the wellhead was completed on 1/14/2025. On 1/28/2025, an equipment malfunction occurred that resulted in oil being released in a spray from the pumping unit under extremely windy conditions. A Form 19 Spill/Release (ID 489205) was submitted on 1/30/2025 and on 1/29/2025 soil samples were collected within the sprayed area, on the pad surface, and offsite in the native vegetation. All soil samples were submitted for analysis of full Table 915-1. Soil samples were in compliance with Table 915-1 constituents with the exception of inorganic exceedances in MCC24-3\_SS01@3', MCC24-3\_SS01@4', MCC24-3#6\_SS01@5', MC24-3\_SD05@6" and TPH exceedance in soil sample MC24-3\_SD01@6". All of the samples exceeding regulatory limits were located onsite directly adjacent to the pumping unit. Based on TPH exceedances at soil sample locations MCC24-3#6WH@2' and MC24-3\_SD01@6", further investigation and excavation was initiated 1/30/2025.

**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 ):

All soil samples were submitted for analysis of full Table 915-1 until the location was adequately characterized and no organics exceedances were observed. Then soil samples were submitted for consistently failing inorganic parameters being analyzed for pH, SAR, and EC. Delineation continued until a sample passed for inorganics parameters and a final confirmation sample was then collected and submitted for full Table 915-1. Organics have been excavated and disposed of offsite. All confirmation soil samples were in compliance with Table 915-1 organic constituent standards. Confirmation soil samples were in compliance with Table 915-1 inorganic constituent standards and/or site-specific background levels, with the exception of the following sample locations: MC24-3\_04, MC24-3\_04-1, MC24-3\_04-2, MC24-3\_08, MC24-3\_08-1, MC24-3\_13, MC24-3\_16, MC24-3\_17, and MC24-3\_17-1. Remaining delineation of inorganics is ongoing, further investigation and remediation will be summarized forthcoming.

**Proposed Groundwater Sampling**

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

Between 4/23/2025 and 7/2/2025, groundwater was observed in the excavation at between approximately 20 and 23-feet below ground surface (bgs). Two (2) groundwater samples (MC\_24-3\_GW01 and MC\_24-3\_GW02) were collected and submitted for laboratory analysis of BTEX, naphthalene, 1,2,4- and 1,3,5-TMB, by USEPA Method 8260, as well as TDS, chloride, and sulfate (inorganics). Analytical results indicated groundwater samples were in compliance with ECMC Table 915-1 standards and/or site-specific background standards (x 1.25 for inorganics), with the exception of inorganics in groundwater sample GW01.

**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 photoionization detector (PID) for field screening has been utilized to assess soil samples throughout excavation activities and will continue to be used until remediation of the location. Additional excavation and site investigation activities are ongoing and shall be conducted to confirm removal of impacted material.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 106

Number of soil samples exceeding 915-1 31

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

Approximate areal extent (square feet) 400

### NA / ND

-- Highest concentration of TPH (mg/kg) 1262

-- Highest concentration of SAR 39.58

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 13

### Groundwater

Number of groundwater samples collected 2

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 20

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 915-1 1

ND Highest concentration of Benzene (µg/l) \_\_\_\_\_

ND Highest concentration of Toluene (µg/l) \_\_\_\_\_

ND Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_

ND Highest concentration of Xylene (µg/l) \_\_\_\_\_

NA 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?

Seven (7) background soil samples were collected between 11/26/2024 and 1/31/2025 off-location to the north at approximately 2, 6, 9, 12, and 15 feet below ground surface (bgs) and analyzed for Table 915-1 metals and soil suitability constituents. Analytical results indicated samples exhibited elevated levels of pH and arsenic. In addition, one (1) background groundwater was collected from a stock well. The background groundwater sample was submitted for full Table 915-1 constituents. Background sample results are provided in Attachment C.

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 site investigation activities shall be conducted to delineate the extent of inorganic impacts to soil and groundwater. Inorganic impacted soils will be removed within the rootzone, and groundwater will be remediated insitu.

## 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 3,380 cubic yards of impacted material were excavated from the spill area and transported off site to the Kit Carson County Landfill in Burlington, CO. Soil disposal records are available upon request.

### 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.

The extent of the impacted area will continue to be delineated using a hand auger and photoionization detector (PID), before and during excavation. Soil samples will continue to be collected as needed to characterize and/or demonstrate confirmation of impacts. All soil samples will be analyzed for all ECMC Table 915-1 parameters to determine regulatory compliance in confirmation samples unless a reduced analyte list is approved by the ECMC. Further investigations for delineating inorganic impacts may require a drill rig, that will also be used for the installation of groundwater monitoring wells.

## Soil Remediation Summary

In Situ

Ex Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

Yes \_\_\_\_\_ Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation

\_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 3380

\_\_\_\_\_ Air sparge / Soil vapor extraction

\_\_\_\_\_ Name of Licensed Disposal Facility or ECMC Facility ID # \_\_\_\_\_

\_\_\_\_\_ Natural Attenuation

\_\_\_\_\_ Excavate and onsite remediation

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ 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.

Five (5) groundwater monitoring wells will be installed to delineate and characterize inorganic groundwater impacts at this location. Proposed monitoring well locations include one (1) within the former excavation and four (4) around the excavation in each approximate cardinal direction from the wellhead. The proposed monitoring well locations are provide in Attachment A.

# 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 ECMC. 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? Yes

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

Transportation to landfill.

Volume of E&P Waste (solid) in cubic yards 3380

E&P waste (solid) description E&P impacted soils.

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-ECMC Disposal Facility: Kit Carson County Landfill in Burlington, CO

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? No

Does the previous reply indicate consideration of background concentrations? \_\_\_\_\_

Does Groundwater meet Table 915-1 standards? No

Is additional groundwater monitoring to be conducted? Yes

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.

The facility is presently in use and reclamation activities are not currently warranted at this location.

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. 11/05/2024

Actual Spill or Release date, or date of discovery. 08/19/2024

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/07/2024

Proposed site investigation commencement. 11/25/2024

Proposed completion of site investigation. 04/30/2027

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 10/07/2024

Proposed date of completion of Remediation. 04/30/2027

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:

The initial estimated schedule was proposed in early 2025 before groundwater was encountered and prior to understanding the extent of impacts. The new implementation schedule considers the results from the 2025 investigations and groundwater monitoring investigations to be completed in 2026. The schedule for investigation/remediation activities is highly weather and site condition dependent. Timing of progress may need to be adjusted accordingly to facilitate successful and safe work conditions.

**OPERATOR COMMENT**

This Form 27 Supplemental Report is being submitted to include a summary of the ongoing remediation activities at three (3) releases for this location including Spill/Release ID # 488390, 489205, and 489976.

At the time of this report, all organic impacts have been excavated and removed from the location. The excavation for organic impact removal was backfilled, and the location was placed back into operation. Remaining activities include the delineation of inorganics (pH, SAR, and EC) exceedances away from production equipment and excavation of inorganic exceedances on the west side of previous excavation within the root zone. Future site investigation activities will be reported in a Form 27-Supplemental Quarterly Report. Soil samples will continue to be collected as needed to characterize and/or demonstrate confirmation of impacts. 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, and EC.

Groundwater was encountered during excavation activities. Analytical results indicate inorganic exceedances at the sampling location GW01, collected at ~23' below ground surface (bgs). Analytical results indicate Table 915 compliance at sampling location GW02, collected at ~20' bgs. Background groundwater results (GW\_BG) indicated that chloride, sulfate, and TDS were above Table 915-1 limits. Five (5) monitoring wells will be installed to further investigate groundwater characteristics at this location. In addition, groundwater background samples will be collected to further investigate background inorganics.

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

Signed: Joel Mason

Title: Sr. Project Manager

Submit Date: \_\_\_\_\_

Email: joel.mason@absarokasolutions.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: 38695

**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**

404482152	SITE MAP
404482153	OTHER
404482154	ANALYTICAL DATA SUMMARY TABLE(S)
404482155	DISPOSAL MANIFESTS
404482156	ANALYTICAL RESULTS
404482157	ANALYTICAL RESULTS
404482158	ANALYTICAL RESULTS
404482159	ANALYTICAL RESULTS
404482160	ANALYTICAL RESULTS
404482161	ANALYTICAL RESULTS
404482162	ANALYTICAL RESULTS
404482163	ANALYTICAL RESULTS
404482165	ANALYTICAL RESULTS
404482166	ANALYTICAL RESULTS
404482167	ANALYTICAL RESULTS
404482168	PHOTO DOCUMENTATION
404482170	ANALYTICAL RESULTS

Total Attach: 17 Files

**General Comments**

**User Group**

**Comment**

**Comment Date**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
		Stamp Upon Approval

Total: 0 comment(s)