

# State of Colorado Energy & Carbon Management Commission

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Document Number:

403575333

Receive Date:

10/29/2023

Report taken by:

Chris Sanchez

## 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: CITATION OIL & GAS CORP	Operator No: 17180	Phone Numbers Phone: (719) 767-3401 Mobile: (719) 340-1150
Address: 14077 CUTTEN RD		
City: HOUSTON	State: TX	Zip: 77069
Contact Person: Herschel Kennedy	Email: hkennedy@cogc.com	

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 32621 Initial Form 27 Document #: 403575333

#### 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: LOCATION	Facility ID: 321676	API #: _____	County Name: CHEYENNE
Facility Name: ARAPAHOE UNIT-614S42W 28NENE	Latitude: 38.811505	Longitude: -102.111605	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENE	Sec: 28	Twp: 14S	Range: 42W Meridian: 6 Sensitive Area? Yes

#### SITE CONDITIONS

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

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

Surface water is present in the form of a freshwater emergent wetland 0.44 miles E of the location and the Ladder Creek classified as a riverine habitat approximately 0.73 mi W of the site. There are 7 water wells within a mile radius of the site and the closest is a commercial well located 0.68 miles NE of the site. The closest livestock and occupied buildings are located 0.86 miles WNW of the site. There are no CPW HPHs, within a 1-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	Undetermined	N/A

### 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 severe thunderstorm on the evening of 6/4/23, lightning struck the fiberglass produced water tank and caused its catastrophic failure. Production to the facility was immediately shut-down. Upon initial inspection, the contents of the tank appear to have remained within the secondary containment dikes.

### 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 ):

On August 11, 2023, two (2) soil samples (SS01 & SS02) were collected from the surface of the former produced water vessel containment area at a depth of 0-6 inches below ground surface. The samples were submitted for laboratory analysis of the full COGCC Table 915-1 suite. SS01 exhibited TPH and Boron concentrations above regulatory limits, and both samples exhibited SAR levels above regulatory limits. Both samples also exhibited Arsenic levels above standards however, a background soil sample (BKG01) was collected upgradient and off location and demonstrated that elevated Arsenic levels are naturally occurring in the area. Soil sampling locations are displayed on the attached soil sample location map, and analytical results are presented in the attached analytical tables and laboratory reports.

#### 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 ):

Following excavation activities, additional confirmation soil sampling shall be conducted per COGCC Table 915-1 requirements.

## SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 2

Number of soil samples exceeding 915-1 2

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

Approximate areal extent (square feet) 530

### 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

### NA / ND

-- Highest concentration of TPH (mg/kg) 1360

-- Highest concentration of SAR 61.4

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 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?

One background sample (BKG01) was collected upgradient and off location and demonstrated that elevated Arsenic levels are naturally occurring in the area. Soil sampling locations are displayed on the attached soil sample location map, and analytical results are presented in the attached analytical tables and laboratory reports.

☐ 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?

Following approval to transport impacted material to a certified waste disposal facility, excavation activities shall take place to remove impacted material. Following impacted material removal additional confirmation soil sampling shall be conducted per Table 915-1 requirements.

## REMEDIAL ACTION PLAN

### SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Source material shall be excavated and transported to a certified waste disposal facility.

### REMEDIAL ACTION 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.

Excavation and confirmation soil sampling activities shall be completed as soon as source material can be hauled off site.

### Soil Remediation Summary

☐ In Situ

☐ Ex Situ

Bioremediation ( or enhanced bioremediation )

Excavate and offsite disposal

Chemical oxidation

If Yes: Estimated Volume (Cubic Yards)

\_\_\_\_\_ Air sparge / Soil vapor extraction  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ Other \_\_\_\_\_

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.

Remediation activities for substantial impacts, if required, will likely involve the excavation of impaired soils for transport to an approved disposal facility. Following excavation and removal of any impacted soils, confirmation sampling will be conducted to confirm successful remediation. Excavated areas will then be backfilled with clean soil as necessary and seeding of the remediated area to re-establish a proper seedbed will be conducted.

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.

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). 08/11/2023

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**

Citation is currently awaiting approval from Waste Management to dispose of contaminated soils. A soil profile has been submitted and waste manifests shall be provided soon. Due to the delay in receipt of lab results and approval to deliver waste, this form has been submitted late. Once soils can be transported off site, excavation and additional soil sampling shall be conducted to fully delineate the release and remove impacted material.

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

Signed: Randolph Moses

Title: Agent

Submit Date: 10/29/2023

Email: randolph.moses@absarokasolutions.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: Chris Sanchez

Date: 11/16/2023

Remediation Project Number: 32621

**COA Type****Description**

	Per Rule 913.h.(4) operator shall submit Form 27 Supplemental requesting closure of remediation within 30 days of conclusion of remediation activities.
	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.
	Operator shall submit Quarterly Updates for this remediation project every 90 days as required by Rule 913.e. Quarterly updates shall include a current map of the subject location including current excavation limits and/or sample locations, proposed/actual soil boring locations and monitoring well locations. GPS data used to create the map must comply with ECMC Rule 216. 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.
3 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**

403575333	FORM 27-INITIAL-SUBMITTED
403575365	ANALYTICAL RESULTS
403575366	SOIL SAMPLE LOCATION MAP
403575367	ANALYTICAL RESULTS

Total Attach: 4 Files

**General Comments**

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	<p>The submittal of this Form 27 is late. Spill 484570 occurred on 6/04/2023.</p> <p>Per COA in Document # 403422396; 90 DAY CLOSURE Pursuant to Rule 912.b.(6) Operator is required to submit a Form 19 Supplemental Report for the associated spill within 90 days of the spill date requesting closure pursuant to Rule 913.h and supported by adequate documentation to demonstrate that the Spill or Release has been fully cleaned up and complies with Table 915-1; or A Form 27 if any of the criteria listed in Rules 912.b.(6).B.i–iii apply. If Remediation will continue under an approved Form 27, the Operator will also submit a Form 19 – Supplemental which requests closure of the Spill or Release and includes the</p> <p>Remediation project number assigned by the Director.</p> <p>Form 19 Supplemental is due by September 2, 2023.</p>	11/07/2023

Total: 1 comment(s)