FORM 27 Rev 5/22

State of Colorado
Oil and Gas Conservation Commission

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Report taken by: Kari Brown

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 INFORMATON

Name of Operator: CITATION OIL & GAS CORP Operator No: 17180
Address: 14077 CUTTEN RD
City: HOUSTON State: TX Zip: 77069
Contact Person: Bob Redweik Email: BRedweik@COGC.com

Phone Numbers
Phone: (281) 8911550
Mobile: (713) 7027534

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 23666 Initial Form 27 Document #: 403078948

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.
- [X] 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: SPILL OR RELEASE Facility ID: 481838 API #: County Name: CHEYENNE
Facility Name: MPU Water System Flow Line Leak Latitude: 38.880508 Longitude: -102.743113
** correct Lat/Long if needed: Latitude: 38.880564 Longitude: -102.743400
QtrQtr: NENE Sec: 35 Twp: 13S Range: 48W Meridian: 6 Sensitive Area? No

SITE CONDITIONS

General soil type - USCS Classifications: SC
Most Sensitive Adjacent Land Use: Livestock grazing
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

SITE INVESTIGATION PLAN

TYPE OF WASTE:

[X] **E&P Waste**	[ ] **Other E&P Waste**	[ ] **Non-E&P Waste**
[X] 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	40' x 25'	Initial delineation and sampling

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 emergency response operations, the pipeline was excavated and repaired. On April 12, 2022 samplers dug five (5) boreholes both within and outside the area excavated for emergency repair. Field EC and PID screening was used to identify and collect grab samples from the most impacted depth interval of each borehole. Sample results indicate that all samples are above Table 915-1 Maximum Contaminant Levels (MCLs) for EC, SAR, arsenic, and boron. Sampling activities conducted on 4/12/22 are reported in Attachments B-F.

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

[X] Will soil samples be collected as part of this investigation? (Number, type (grab/composite), analyses, and locations of samples):

Five (5) boreholes are to be dug outside of the previously sampled area to totally delineate the E&P impacted soils. Field EC and PID screening will be used to identify and collect grab samples from the most impacted depth interval of each borehole. If field conditions indicate that soils are above Table 915-1 MCLs, the boreholes may be dug further away from the release source. Two additional background samples are to be collected. A proposed sample location diagram is include in Attachment G.

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):

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected: 5
Number of soil samples exceeeding 915-1: 5
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet): 1000

NA / ND

ND — Highest concentration of TPH (mg/kg)
-- — Highest concentration of SAR: 64.2
BTEX > 915-1: No
Vertical Extent > 915-1 (in feet): 3

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?

One background sample was collected north and upgradient of the release location.

☐ 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?

Five (5) boreholes are to be dug outside of the previously sampled area to totally delineate the E&P impacted soils. Field EC and PID screening will be used to identify and collect grab samples from the most impacted depth interval of each borehole. If field conditions indicate that soils are above Table 915-1, the boreholes may be dug further away from the release source. Two additional background samples are to be collected. A proposed sample location diagram is include in Attachment G.

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

The origin of the release (flowline collar) has been repaired. Impacted soils are to be removed via dig and haul to the WM Colorado Springs Landfill.

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.

Impacted soils are to be removed via dig and haul to the WM Colorado Springs Landfill. A vac truck and/or hand tools may be used to excavate soil immediately adjacent to flowlines. Remediation activities are to take place during Q3 of 2022. Citation expects project closure to occur by December 31, 2022.

Soil Remediation Summary

☐ **In Situ** ☒ **Ex Situ**

Bioremediation (or enhanced bioremediation)
Yes — Excavate and offsite disposal

Chemical oxidation

Air sparge / Soil vapor extraction

Natural Attenuation

Other

If Yes: Estimated Volume (Cubic Yards) 300

Name of Licensed Disposal Facility or COGCC Facility ID #

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:

[X] 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.

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. This remediation project is very close to completion and is anticipated to be closed in Q3 of 2022.

Operator anticipates the remaining cost for this project to be: $ 5000

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.

Upon completion of remediation activities, all compacted soil will be cross-ripped to a depth of 18 inches. The area shall be seeded using a seed mix provided by the surface owner or local soil conservation district.

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. _____

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

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/01/2022

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

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: 06/21/2022 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: Jason Kosola Date: 06/22/2022

Remediation Project Number: 23666

Condition of Approval

COA Type	Description
	Per Rule 905.b.(3) Generators of E&P waste that is transported off-site shall maintain, for not less than five (5) years, copies of each invoice, bill, or ticket and such other records as necessary to document disposal. Such records shall be signed by the transporter, made available for inspection by the Director during normal business hours, and copies thereof shall be furnished to the Director upon request.
	913.e.(3) Reporting Schedule In accordance with Rule 913.e.(3), Operator will adopt a quarterly reporting schedule.
	Operator shall fully populate the implementation schedule in accordance with Rule 913.d on the next Form 27.
	Upon receipt of this approved Form 27, Operator shall submit Form 19 Supplemental requesting closure of Spill 481838
4 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
403078948	FORM 27-INITIAL-SUBMITTED
403079066	SITE MAP
403079075	SOIL SAMPLE LOCATION MAP
403079077	OTHER
403079078	ANALYTICAL RESULTS
403079079	ANALYTICAL RESULTS
403079091	PHOTO DOCUMENTATION
403079092	SOIL SAMPLE LOCATION MAP

Total Attach: 8 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)