

State of Colorado Oil and Gas Conservation Commission

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Report taken by:

Jason Kosola

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 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: WESTERN OPERATING COMPANY	Operator No: 95620	Phone Numbers Phone: (303) 893-2438 Mobile: ()
Address: 1165 DELAWARE STREET #200		
City: DENVER	State: CO Zip: 80204	
Contact Person: Steve James	Email: steve@westernoperating.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 20716 Initial Form 27 Document #: 402861082

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: 324798	API #: _____	County Name: KIOWA
Facility Name: KING-PYLES-619S45W 9SWSW		Latitude: 38.413112	Longitude: -102.471045
		** correct Lat/Long if needed: Latitude: 38.414630	Longitude: -102.469544
QtrQtr: SWSW	Sec: 9	Twp: 19S	Range: 45W Meridian: 6 Sensitive Area? No

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Cattle grazing.

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

The site is located within an area mapped as Lesser Prairie Chicken Estimated Occupied Range. Depth to groundwater is unknown, but the nearest permitted DWR water well (Receipt # 9087905) with a reported depth to static water, which is located approximately 1.25 miles west of the site, reported a static water depth of 14 feet below ground surface in 1966. No other potential receptors were identified.

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	Approximately 25,000 square feet	Soil samples

INITIAL ACTION SUMMARY

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

A COGCC inspection on 10/27/2021 and identified two off location areas with stressed vegetation that are likely related to historical spills.

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 November 9, 2021, confirmation soil samples were collected from the two areas with stressed vegetation. Three samples (SS1-1 through SS3-3) were collected from the eastern area and three samples (SS4-1 through SS6-1) were collected from the western area. One background sample (BG1-1) was collected away from the impacted areas and potential oil and gas operations to characterize natural soil conditions. All samples were collected from ground surface to 1 foot below ground surface. The samples were transported with a completed chain-of-custody form to Summit Scientific in Golden, Colorado, for analysis of electrical conductivity (EC), sodium adsorption ratio (SAR), and pH. Samples SS1-1 through SS1-6 were also analyzed for hot water soluble boron.

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

SoilNumber of soil samples collected 6Number of soil samples exceeding 915-1 3Was the areal and vertical extent of soil contamination delineated? YesApproximate areal extent (square feet) 25000**NA / ND**NA Highest concentration of TPH (mg/kg) -- Highest concentration of SAR 24.8BTEX > 915-1 NoVertical Extent > 915-1 (in feet) 1**Groundwater**Number of groundwater samples collected 0Was extent of groundwater contaminated delineated? NoDepth 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 (BG1-1) was collected to characterize natural soil conditions.

☐ 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?**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.

Impacts will be treated in-situ.

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.

The areas will be tilled to mitigate the undesirable weed growth. Gypsum soil amendment will be mechanically incorporated into the top 18-inches of soil at a rate of approximately 2 tons per acre to mitigate elevated sodium levels and the area will be reseeded. The areas will be fenced and erosion controls will be installed.

Soil Remediation Summary☐ In Situ☐ Ex Situ Bioremediation (or enhanced bioremediation) Excavate and offsite disposal Chemical oxidationIf 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.

REMEDATION 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 _____

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: _____

REMEDATION COMPLETION REPORT

REMEDATION 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 COGCC 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 areas will be tilled to mitigate the undesirable weed growth. Gypsum soil amendment will be mechanically incorporated into the top 18-inches of soil at a rate of approximately 2 tons per acre to mitigate elevated sodium levels and the area will be reseeded with native species. The areas will be fenced and erosion controls will be installed.

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. 10/27/2021

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/27/2021

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

Gypsum has been ordered from a supplier in Fort Collins and transportation to the site is currently being arranged. Reclamation activities will begin this spring as soon as possible once the gypsum is delivered to the site and a work crew is available. Work with heavy equipment in this area is difficult to schedule and is dependent on contractor availability.

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

Signed: Steve James _____

Title: President _____

Submit Date: 02/09/2022 _____

Email: steve@westernoperating.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: 02/14/2022 _____

Remediation Project Number: 20716 _____

Condition of Approval

COA Type

Description

	No proposed dates are listed for the proposed work.
	Per Rule 913.d.(2) Operator shall submit a Supplemental Form 27 with an updated Implementation Schedule at least 14 days in advance of any schedule changes.
	Operator shall install fencing sufficient to keep cattle from impacting remediation area.
2 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

402949280	FORM 27-SUPPLEMENTAL-SUBMITTED
402949364	ANALYTICAL RESULTS
402949365	SOIL SAMPLE LOCATION MAP
402949367	ANALYTICAL RESULTS
402949389	PHOTO DOCUMENTATION

Total Attach: 5 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)