FORM 27 Rev 4/21

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 Form27.
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: WESTERN OPERATING COMPANY Operator No: 95620
Address: 1165 DELAWARE STREET #200
City: DENVER State: CO Zip: 80204
Contact Person: Steve James

Phone Numbers
Phone: (303) 893-2438
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PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 20712 Initial Form 27 Document #: 402860904

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: WELL Facility ID: API #: 061-06023 County Name: KIOWA
Facility Name: DAWSON A 1 Latitude: 38.424060 Longitude: -102.466500
** correct Lat/Long if needed: Latitude: 38.423673 Longitude: -102.465408
QtrQtr: NENW 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? Yes
Is surface water within 1/4 mile? No
Is groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

One DWR Permitted well (Receipt # 0420224) is located approximately 1,150 feet west-southwest of the Site. Site specific depth to groundwater is unknown as no depth to water is reported for DWR well Receipt # 0430224, but may be present at less than 20 feet below ground surface based (bgs) on the well log of DWR well Receipt # 9087905 (located ~1.7 miles west-southwest of site), which reported a water depth of 14 feet bgs in 1966. A residential home is located approximately 890 feet west-northwest of the site. The site is located within mapped Lesser Prairie Chicken High Priority Habitat Area. No other potential receptors or sensitive areas were identified.

The landowner has two groundwater wells on his property which are screened at 30 feet bgs and 90 feet bgs per COGCC. The wells are located approximately 1,190 feet and 1,345 feet west-northwest of the tank battery.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- [X] **E&P Waste**
  - [X] Produced Water
  - [X] Oil
  - [ ] Condensate
  - [ ] Drilling Fluids
  - [ ] Drill Cuttings
- [ ] **Other E&P Waste**
  - [ ] Workover Fluids
  - [ ] Tank Bottoms
  - [ ] Pigging Waste
  - [ ] Rig Wash
  - [ ] Spent Filters
  - [ ] Pit Bottoms
  - [ ] Other (as described by EPA) _____
- [ ] **Non-E&P Waste** _____

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	SOILS	Unknown	Visual observation

INITIAL ACTION SUMMARY

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

COGCC inspected the site on October 27, 2021 (Field Inspection Form Document Number 690202223) and identified oily soil present west of the tank battery. It is believed that this material is residual from the closed remediation project 3546. Western Operating is currently conducting source removal operations. As of February 25, 2022, approximately 20 cubic yards has been excavated for offsite removal.

On February 18, 2022, a release occurred at the site from the free water knockout tank at the tank battery due to a failed pressure relief valve. Approximately 20 bbl of crude oil and produced water was released which spread throughout the containment, escaped the containment on the southern side, and flowed approximately 250 feet east-northeast. Cleanup activities began the same day the release was discovered. A hydrovac truck was used along with a hot water flush to recover as much of the released fluids as possible and the remaining impacted soil is being scraped up for offsite disposal. As of February 25, 2022, approximately 10 cubic yards has been excavated for offsite removal. The spill was reported to COGCC in a Form 19 (Document ID 402960182). COGCC advised that sampling for the new spill be submitted under the open remediation project number 20712.

Additional scraping is being conducted to remove impacts from both the historical and recent release.

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):

Following excavation activity, confirmation samples will be collected from scraped/excavated areas and from within the tank battery containment per COGCC Rule 915.e.(2) and submitted for analysis of benzene, toluene, ethylbenzene, total xylenes, total petroleum hydrocarbons (C6-C36), electrical conductivity, sodium adsorption ratio, pH, and hot water soluble boron. Samples from the new release area will also be submitted for analysis of all Table 915-1 Organic Compounds and Metals in Soil.

Proposed Groundwater Sampling

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

If groundwater is encountered during source removal activities, one grab sample will be collected for analysis of the Table 915-1 organic compounds in water.

Groundwater samples will be collected from the landowner's wells for analysis of the Table 915-1 Organic Compounds in Groundwater and the Table 915-1 Inorganic Groundwater Parameters.

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 0

Number of soil samples exceeeding 915-1 0

Was the areal and vertical extent of soil contamination delineated?

Approximate areal extent (square feet) 5000

NA / ND

Highest concentration of TPH (mg/kg)

Highest concentration of SAR

BTEX > 915-1

Vertical Extent > 915-1 (in feet)

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?

☐ 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.

The oily soil will be removed by excavation and transported offsite to a properly permitted waste disposal facility. As of February 25, 2022, approximately 20 cubic yards of soil has been excavated from the old release and 10 cubic yards of soil has been excavated from the new release.

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.

See above.

Soil Remediation Summary

☐ **In Situ**

Bioremediation (or enhanced bioremediation)

☒ **Ex Situ**

Yes Excavate and offsite disposal

Chemical oxidation

Air sparge / Soil vapor extraction

Natural Attenuation

Other

If Yes: Estimated Volume (Cubic Yards) 30

Name of Licensed Disposal Facility or COGCC Facility ID # 0

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

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:

None.

Volume of E&P Waste (solid) in cubic yards 30

E&P waste (solid) description Oil and produced water impacted soil

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: Waste Management's Buffalo Ridge Landfill

Volume of E&P Waste (liquid) in barrels 0

E&P waste (liquid) description

COGCC Disposal Facility ID #, if applicable:

Non-COGCC 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?

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.

Location will be reclaimed in accordance with 1000 series rules following remediation.

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. 10/27/2021

SITE INVESTIGATION DATES

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

Proposed site investigation commencement. 03/14/2022

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

Confirmation soil sampling of the tank battery area was completed on 4/21/2022. Analytical results are pending and will be submitted in a supplemental Form 27 upon receipt from the laboratory. Additional scraping south and west of the tank battery continues where some visual oily soil remains. Confirmation sampling of the remaining impacted areas will be completed once visual impacts are removed. Additional attempts to contact the landowner to schedule water well sampling were made on March 23 and April 18, 2022. Messages were left but no response has been received yet.

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:` 04/29/2022 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: 05/13/2022

Remediation Project Number: 20712

Condition of Approval

COA Type	Description
	In lieu of sampling landowner water wells, Operator may instead demonstrate that soils below spill area are compliant with Table 915-1 which would indicate that impacts did not travel into groundwater aquifer.

1 COA

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
403033175	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 1 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)