

State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

402877652

Receive Date:

11/29/2021

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 #: 18958 Initial Form 27 Document #: 402722451

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: WELL	Facility ID: _____	API #: 061-06174	County Name: KIOWA
Facility Name: BUTLER USA 1-X		Latitude: 38.421440	Longitude: -102.444060
		** correct Lat/Long if needed: Latitude: 38.418263	Longitude: -102.448198
QtrQtr: SWNE	Sec: 10	Twp: 19S	Range: 45W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

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

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

Depth to water is estimated. The nearest permitted DWR water well (permit receipt #9088102) located 1.8 miles south reported a depth to water of 56 feet in 1974 at the time of well construction. Chivington Reservoir is located approximately 0.75 miles southeast.

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	SOILS	30 x 75 feet	Visual observation

INITIAL ACTION SUMMARY

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

A leak was discovered by the pumper while at the Bertha Pyles facility. Oil was observed running down the cattle trail. The initial Form 19 (Document Number 2224175) indicates that the release origin was located approximately 550 feet north of the Bertha Pyles facility. Upon discovery, the Butler 1X well was shut in and a vacuum truck was used to recover the released fluids. The area was then treated with Reclaim-O.

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):

Three hand auger soil borings will be advanced within the area impacted by the release. Each boring will be advanced to 5-feet below ground surface (bgs). A photoionization detector will be used to screen soil from ground surface to total depth of each boring. Visual observations of soil type and potential hydrocarbon impact such as staining and odor will be recorded. One soil sample will be collected from each soil boring from the vertical interval with the greatest field evidence of hydrocarbon impact. If no field impact is observed the soil sample will be collected from 1-foot bgs. Three additional surficial soil samples will be collected along drainages leading away from the release. A proposed soil sample location map is attached.

All samples will be submitted to an accredited laboratory using COGCC approved methods for analysis of BTEX, TPH-GRO/DRO/ORO, EC, SAR, and pH.

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 11

Number of soil samples exceeding 915-1 1

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

Approximate areal extent (square feet) 5800

NA / ND

-- Highest concentration of TPH (mg/kg) 1400

-- Highest concentration of SAR 6.76

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 2

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 1

Number of groundwater monitoring wells installed 1

Number of groundwater samples exceeding 915-1 1

Highest concentration of Benzene (µg/l) 1

Highest concentration of Toluene (µg/l) 1

Highest concentration of Ethylbenzene (µg/l) 1

Highest concentration of Xylene (µg/l) 1

Highest concentration of Methane (mg/l) 1

Surface Water

0 Number of surface water samples collected

0 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) 1

Volume of liquid waste (barrels) 1

☐ 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.

Released fluids were collected by a hydrovacuum rig.

REMEDIAL 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.

Reclaim-O was applied to the affected area.

Soil Remediation Summary

☐ In Situ

☐ Ex Situ

_____ Bioremediation (or enhanced bioremediation)
_____ Chemical oxidation
_____ Air sparge / Soil vapor extraction
_____ Natural Attenuation
_____ Other _____

_____ Excavate and offsite disposal
_____ If Yes: Estimated Volume (Cubic Yards) _____
_____ 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

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 0

E&P waste (solid) description

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility:

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? Yes

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? Yes

Does the previous reply indicate consideration of background concentrations? Yes

Does Groundwater meet Table 915-1 standards? Yes

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 area with stressed vegetation (approximately 3,000 square feet) will be reseeded with an NRCS approved seed mix and crimped with straw to prevent erosion. Following reclamation activities, the worked area will be fenced to prevent livestock interfering with vegetation regrowth. Work will commence in 2022, the exact schedule is to be determined.

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. 03/05/2012

Actual Spill or Release date, or date of discovery. 03/05/2012

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/05/2012

Proposed site investigation commencement. 07/21/2021

Proposed completion of site investigation. 10/22/2021

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

On July 21, 2021, Entrada Consulting Group, Inc. (Entrada) conducted a hand auger site assessment to investigate potential impact related to the historical spill. Three soil borings were advanced to a total depth of 5 feet below ground surface (ft-bgs) in an area adjacent to and downgradient of the release origin, where stressed vegetation was observed. Three surficial soil samples were also collected in drainages leading away from the release area. Entrada personnel screened the soil at each sample location for evidence of petroleum hydrocarbon impact such as staining, odor, and elevated photoionization detector (PID) readings. The maximum PID reading of 31.7 parts per million was observed at 2 ft bgs in soil boring SB01 (adjacent the release origin) and no staining or odor was observed in any of the samples. Based on the PID readings at SB01, soil samples were collected from SB01 at 2 ft-bgs and 5 ft bgs for laboratory analysis. All remaining soil samples collected from soil borings were collected at 2 ft bgs. The samples were collected into laboratory provided containers and transported under chain of custody protocol so Summit Scientific (Summit) in Golden, Colorado, for analysis. Soil sample SB01-5 was only analyzed for total petroleum hydrocarbons (TPH) as gasoline range organics, and TPH as diesel range organics. All remaining samples were analyzed for benzene, toluene, ethylbenzene, total xylenes, TPH as gasoline range organics, TPH as diesel range organics, TPH as oil range organics, electrical conductivity, sodium adsorption ratio, and pH. Analytical results indicated that all samples were compliant with applicable COGCC Table 910-1 standards except TPH in sample SB01-2 which had a concentration of 1,400 milligrams per kilogram (mg/kg), above the applicable Table 910-1 standard of 500 mg/kg.

Based on these results, on October 22, 2021, Entrada personnel collected three additional soil samples at 2 ft-bgs to laterally delineate the potential TPH impact in SB01-2 and resampled SB01-2 to assess the current TPH level. All samples were submitted to Summit for analysis of TPH as gasoline range organics, TPH as diesel range organics, and TPH as oil range organics. All analytical results were compliant with applicable COGCC Table 910-1 standards.

The soil analytical results summary table, soil sample location map, laboratory analytical reports, and photographic log are attached.

Based on the data presented herein which demonstrates compliance with COGCC Table 910-1, Western Operating respectfully requests that the COGCC grant closure to the remediation portion of this project with no requirement of further soil sampling or analysis. The remediation project number will remain open to track reclamation compliance with COGCC's 1000 series rules.

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: 11/29/2021

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: 12/21/2021

Remediation Project Number: 18958

Condition of Approval

COA Type

Description

NO FURTHER ACTION

Based on the information presented, it appears that no further action is necessary at this time and the COGCC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards or if ground water is found to be impacted, then further investigation and/or remediation activities may be required. In addition, the surface area disturbed by the remediation activity shall be reclaimed in accordance with the 1000 Series Reclamation Rules.

For locations with active ongoing oil and gas operations, comply with Rule 1003 interim reclamation requirements.

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.

<u>Att Doc Num</u>	<u>Name</u>
402877652	FORM 27-SUPPLEMENTAL-SUBMITTED
402881187	ANALYTICAL RESULTS
402881189	ANALYTICAL RESULTS
402881190	ANALYTICAL RESULTS
402881192	ANALYTICAL RESULTS
402881205	SOIL SAMPLE LOCATION MAP

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Environmental	Added corrected coordinates. Operator did not provide correct coordinates on original Form 27 and project plots at the wrong location. Location of southeast corner of spill is at Latitude: 38.418263 Longitude: -102.448198	12/21/2021

Total: 1 comment(s)