

State of Colorado Oil and Gas Conservation Commission

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Document Number:

403344151

Receive Date:

03/23/2023

Report taken by:

Jason Kosola

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: <u>GUNNISON ENERGY LLC</u>	Operator No: <u>10515</u>	Phone Numbers
Address: <u>1801 BROADWAY #1150</u>		Phone: <u>(303) 296-8807</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>()</u>
Contact Person: <u>Tyson Johnston</u>	Email: <u>tyson.johnston@oxbow.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 28376 Initial Form 27 Document #: 403344151

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: Initial Release Characterization Results Q1 2023 (Spill/Release ID: 483533)

SITE INFORMATION

No Multiple Facilities

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>483533</u>	API #: <u></u>	County Name: <u>GUNNISON</u>
Facility Name: <u>DGU 18H</u>	Latitude: <u>39.016832</u>	Longitude: <u>-107.378433</u>	
** correct Lat/Long if needed: Latitude: <u></u>		Longitude: <u></u>	
QtrQtr: <u>SWNE</u>	Sec: <u>18</u>	Twp: <u>12S</u>	Range: <u>89W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications CL Most Sensitive Adjacent Land Use Rangeland

Is domestic water well within 1/4 mile? Yes Is surface water within 1/4 mile? Yes

Is groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

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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	180x40x0.5	Laboratory Analytical Results

INITIAL ACTION SUMMARY

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

Please see Spill/Release Point ID: 483533 for initial response activities completed.

On December 28, 2022, seven confirmation soil samples were collected from the identified release path. One confirmation soil sample was collected immediately adjacent to point of release (POR) [20221228-DGU 18H(POR)@0.5'], three collected within the center of the presumed spill path [20221228-DGU 18H(SP-01)@0.5', 20221228-DGU 18H(SP-02)@0.5', and 20221228-DGU 18H(SP-03)@0.5'], and three in various directions along the presumed edge of the spill path [20221228-DGU 18H(SP-NE)@0.5', 20221228-DGU 18H(SP-NW)@0.5', and 20221228-DGU 18H(SP-SW)@0.5']. Due to the vast snow cover the release footprint was estimated based on photo-ionization detector (PID) soil screening results and snow discoloration. All soil samples were submitted for the analysis of Table 915-1 for soil.

In addition one produced water sample was collected from produced water tank which contains the same produced water that was release from the frozen suction line per Form 19 Document Number (DN) 403271200 Conditions of Approval (COAs) pursuant to COGCC Rule 915.e.(2). The produced water sample was also submitted for laboratory analysis of pH, arsenic, total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, total xylenes (BTX), naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, chloride, sulfate, and total dissolved solids (TDS).

Please see the attached report of work completed (ROWC) for additional initial investigative activities.

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):

When site conditions are favorable and all snow has melted from pad footprint additional soil samples will be collected to confirm if impacts remain associated with the produced water that occurred on December 28, 2022. A minimum of seven additional soil samples will be collected from the release footprint. One at the POR, three within the center of the presumed spill footprint, and three in various directions along the presumed edge of the spill footprint. All soil samples will be characterized by visually inspecting the soil and field screening the soil head space using a handheld PID to monitor for the presence or absence of volatile organic compounds (VOCs).

Please see the attached ROWC for additional details regarding the planned sampling.

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):

If sheen and odor are observed during melting conditions within the release footprint at the Site then representative surface water samples will be collected and analyzed constituents listed in COGCC Table 915-1 for water.

Additional Investigative Actions

☐ Additional alternative investigative actions described in attached Site Investigation Plan (summary):

Please see the "Proposed Soil Sampling" and "Remediation Summary" sections of this form and the attached ROWC for additional details on future assessment activities at the Site.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 7

Number of soil samples exceeding 915-1 7

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

Approximate areal extent (square feet) 9561

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

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.

NA / ND

-- Highest concentration of TPH (mg/kg) 54.4

-- Highest concentration of SAR 0.618

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 0

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)

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?

Please see the "Proposed Soil Sampling" and "Remediation Summary" sections of this form and the attached ROWC for additional details on future assessment activities at the Site.

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

The above ground cracked pump suction line was removed and replaced. Once replaced the associated equipment was placed back into service.

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.

No remediation is necessary at this time. If impacts are observed during the subsequent sampling event then a plan to address those impacts will be implemented.

Carry over from the "Proposed Soil Sampling" section:

Based on the analytical results of the POR investigative soil samples, Gunnison Energy LLC (Gunnison) is requesting the Director to analyze all future soil samples under a reduced analytical suite of barium, chromium (VI), selenium, TPH, BTEX, 2-methylnaphthalene, and naphthalene.

Up to three site-specific background hand augured soil borings will be advanced to total depths of 3 feet bgs from nearby locations relative to the Site to establish representative background soil data per COGCC 915 Rule.e(2).D. Discrete soil samples from the three site-specific background auger boring locations will be collected at every 1-foot interval and at the boring terminus. All background samples will be submitted for Table 915-1 metals, electrical conductivity (EC), sodium adsorption ratio (SAR), pH, and boron (water soluble).

See the "Conclusions" section of the attached ROWC for discussion of relief of containments of concern (COC), specifically arsenic and pH per COGCC Rule 915.e.(2).C.

Soil Remediation Summary

☐ **In Situ**

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

_____ Other _____

☐ **Ex Situ**

_____ 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.

Groundwater is not anticipated, if encountered, representative grab samples will be collected and analyzed under COGCC Table 915-1 for water.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

☒

Quarterly

☐

Semi-Annually

☐

Annually

☐

Other

Initial submittal per COGCC Rule 912.b.(6).

☐

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 Initial submittal per COGCC Rule 912.b.(6).

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.

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

WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? No _____

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.

No reclamation is currently being planned.

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. 12/24/2022

Actual Spill or Release date, or date of discovery. 12/24/2022

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 12/28/2022

Proposed site investigation commencement. 12/28/2022

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

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

Signed: Dustin Held

Title: Sr. Consultant, Geologist

Submit Date: 03/23/2023

Email: dustin.held@wsp.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: 03/28/2023

Remediation Project Number: 28376

COA Type**Description**

	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.
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**

403344151	FORM 27-INITIAL-SUBMITTED
403347795	SITE INVESTIGATION REPORT

Total Attach: 2 Files

General Comments**User Group****Comment****Comment Date**

Environmental	COGCC approves reduced analyte list. Future sampling shall include barium, chromium (VI), selenium, TPH, BTEX, 1-methylnaphthalene, 2-methylnaphthalene and naphthalene.	03/28/2023
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Total: 1 comment(s)