

State of Colorado Oil and Gas Conservation Commission

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Receive Date:

Report taken by:

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: GREAT WESTERN OPERATING COMPANY LLC	Operator No: 10110	Phone Numbers Phone: (720) 595-2132 Mobile: ()
Address: 1001 17TH STREET #2000		
City: DENVER	State: CO Zip: 80202	
Contact Person: Jason Davidson	Email: jdavidson@gwp.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 9466 Initial Form 27 Document #: 200438847

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: PIT	Facility ID: 104726	API #: _____	County Name: ADAMS
Facility Name: CHAMPLIN 67 "F"		Latitude: 39.866301	Longitude: -104.451354
		** correct Lat/Long if needed: Latitude: 39.866301	Longitude: -104.451354
QtrQtr: NWNW	Sec: 21	Twp: 2S	Range: 63W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SM

Most Sensitive Adjacent Land Use Agricultural (cultivated and pasture)

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

The Champlin 67F former location is surrounded by cultivated fields and pastureland in all directions. There is one mapped ephemeral stream and associated wetland located approximately 720 feet west. Depth to ground water is unknown, however, borings advanced in November 2016 to 9 feet did not encounter ground water. Based on the Division of Water Resources, Groundwater Levels in the Lost Creek Designated Groundwater Basin paper published in 2020, it is anticipated that the depth to water will be approximately 80 feet. However, a water well 2,340 feet southeast of the facility had a static water level of 120 feet in 1980 when it was drilled. There are no sensitive areas or wildlife habitats identified within a quarter mile of the former location. See the attached Figures 1 and 2 for an illustration of the Site.

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	Orgs- 12'x12'x10', Inorgs- Unknown	Subsurface Investigation Activities

INITIAL ACTION SUMMARY

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

The equipment has been removed from the Champlin 67F site. A site investigation conducted in 2016 indicated the presence of soil impacts greater than the COGCC Table 910-1 standards beneath the former produced water pit to a depth of approximately 5 feet but no contamination was present at a depth of 9 feet.

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):

Please refer to the Operator Comments section under the Submit tab of this Form 27 for a summary of the proposed soil sampling activities at the Site.

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 14

Number of soil samples exceeding 915-1 14

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet) 1320

NA / ND

-- Highest concentration of TPH (mg/kg) 5136

-- Highest concentration of SAR 82.9

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 20

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

NA Highest concentration of Benzene (µg/l) 1

NA Highest concentration of Toluene (µg/l) 1

NA Highest concentration of Ethylbenzene (µg/l) 1

NA Highest concentration of Xylene (µg/l) 1

NA Highest concentration of Methane (mg/l) 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.

OTHER INVESTIGATION INFORMATION

☐ Were impacts to adjacent property or offsite impacts identified?

☒ Were background samples collected as part of this site investigation?

One background soil sample was collected from an area representative of naturally occurring conditions to the north of the tank battery. Please refer to the attached Table 1 for a summary of the background soil sample analytical results.

☐ 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?

Please refer to the Operator Comments section under the Submit tab of this Form 27 for a summary of the proposed additional site investigation activities at the Site.

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.

Great Western will either dig and haul impacted soils to a commercial landfill or treat impacted soils above COGCC Table 915-1 concentration levels onsite.

REMEDICATION 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.

A remediation or closure plan will be developed based on the analytical results of confirmation soil samples collected during the proposed additional site investigation activities summarized in the Operator Comments section under the Submit tab of this Form 27.

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
_____ No Land Treatment
_____ No Bioremediation (or enhanced bioremediation)
_____ No Chemical oxidation
_____ No 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 was not encountered during this investigation. A Division of Water Resources Report in 2020 indicated that the expected depth to water in the vicinity of this Site would be approximately 125 feet.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

☐ Quarterly

☐ Semi-Annually

☐ Annually

☒ Other

Following additional proposed subsurface investigation activities

☐ **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 Site Investigation Report

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: _____

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.

If necessary, the site will be reclaimed in accordance with COGCC 1000-Series Rules.

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. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/01/2016

Proposed site investigation commencement. 10/31/2021

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

Initial subsurface investigation activities were conducted at the Site on October 13, 2021. See the attached Figure and Tables for an illustration of the Site and a summary of the laboratory analytical results. A copy of the laboratory analytical report is attached.

Based on the analytical results of confirmation soil samples collected at the Site on October 13, 2021, Great Western proposes to conduct SAR, EC, pH, and boron delineation activities utilizing a Geoprobe drill rig. Ten soil borings will be advanced to a depth of 8 feet below ground surface (bgs) and soil samples will be collected at 1 foot, 3 feet, and 8 feet bgs in each boring. All samples will be submitted for laboratory analysis of SAR, EC, pH, and boron. Great Western will conduct subsurface investigation activities, field screening, and confirmation sampling activities in accordance with COGCC 900 Series Rules. The proposed soil boring locations are illustrated on the attached Figure 5.

Great Western proposes to conduct the delineation activities within 45 days of approval of this Form 27. Following the receipt of the laboratory analytical results, Great Western will submit a report via Supplemental Form 27 summarizing the October 13, 2021 subsurface investigation activities, the proposed delineation activities, and the proposed next steps. Great Western plans to submit the Supplemental Form 27 within 90 days of completing the field activities.

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

Signed: Jason Davidson

Title: Senior EHS Specialist

Submit Date:

Email: jdavidson@gwp.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:

Date:

Remediation Project Number: 9466

COA Type**Description**

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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**

402913928	ANALYTICAL RESULTS
402913930	ANALYTICAL RESULTS
402913937	SOIL SAMPLE LOCATION MAP

Total Attach: 3 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)