

State of Colorado Oil and Gas Conservation Commission

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Receive Date:

02/13/2019

Report taken by:

CHRIS CANFIELD

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.

Refer to Rules 340, 905, 906, 907, 908, 909, and 910

OPERATOR INFORMATION

Name of Operator: GREAT WESTERN OPERATING COMPANY LLC	Operator No: 10110	Phone Numbers
Address: 1001 17TH STREET #2000		Phone: (720) 595-2078
City: DENVER	State: CO	Zip: 80202
Contact Person: Ben Huggins	Email: bhuggins@gwogco.com	Mobile: ()

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 12455

Initial Form 27 Document #: 401913615

PURPOSE INFORMATION

- | | |
|--|--|
| <input type="checkbox"/> 901.e. Sensitive Area Determination | <input type="checkbox"/> 909.c.(5), Rule 910.b.(4): Remediation of impacted ground water |
| <input checked="" type="checkbox"/> 909.c.(1), Rule 905: Pit or PW vessel closure | <input type="checkbox"/> Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b. |
| <input type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation | <input checked="" type="checkbox"/> Rule 909.e.(2)B.: Closure of remediation project |
| <input type="checkbox"/> 909.c.(3), Rule 907.e.: Land treatment of oily waste | <input type="checkbox"/> Rule 906.c.: Director request |
| <input type="checkbox"/> 909.c.(4), Rule 908.g.: Centralized E&P Waste Management Facility closure | <input type="checkbox"/> Other _____ |

SITE INFORMATION

N Multiple Facilities (in accordance with Rule 909.c.)

Facility Type: LOCATION	Facility ID: 320281	API #: _____	County Name: ADAMS
Facility Name: SELTZER-61S67W 4NENE		Latitude: 39.997660	Longitude: -104.887930
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENE	Sec: 4	Twp: 1S	Range: 67W
Meridian: 6		Sensitive Area? Yes	

SITE CONDITIONS

General soil type - USCS Classifications CH

Most Sensitive Adjacent Land Use Agricultural - livestock grazing

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? No

Other Potential Receptors within 1/4 mile

Residences are located .33 miles to the southwest of tank battery.

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
No	SOILS	Not impacted above 910 levels	Confirmation soils 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.

Five discreet confirmation soil samples were collected on 01/17/19 (4 wall and 1 base) from the produced water tank excavation. The base, south wall, and east wall samples were analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), gasoline range organics (GRO), and diesel range organics (DRO). In addition, the south wall and east wall samples were also analyzed for pH, Electrical Conductivity (EC), and Sodium Absorption Ratio (SAR). Concentrations of BTEX, GRO, DRO, pH, EC, and SAR were either not detected at or above laboratory reporting limits or were reported below their respective COGCC Table 910-1 concentration levels from the base and south wall sample. DRO concentrations were detected above COGCC Table 910-1 concentrations in the sample from the east wall of the excavation, but it was determined that the impacted soils were the result of a release from the separator flow line and not from the produced water pit as reported on the associated Form 19 (Document No. 4018722112, Release point ID: 459957). Impacted soil associated with the separator flow line release will be addressed under a separate Form 27. See the attached laboratory report, soil analytical table, and Figure 3.

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):

See initial Action Summary.

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 3

Number of soil samples exceeding 910-1 1

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

Approximate areal extent (square feet) 0

NA / ND

-- Highest concentration of TPH (mg/kg) 1529

-- Highest concentration of SAR 7.79

BTEX > 910-1 No

Vertical Extent > 910-1 (in feet) 0

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 0

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 910-1 0

Highest concentration of Benzene (µg/l) 0

Highest concentration of Toluene (µg/l) 0

Highest concentration of Ethylbenzene (µg/l) 0

Highest concentration of Xylene (µg/l) 0

Highest concentration of Methane (mg/l) 0

Surface Water

0 Number of surface water samples collected

0 Number of surface water samples exceeding 910-1

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) 0

Volume of liquid waste (barrels) 0

☐ 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.

Concentrations of BTEX, GRO, DRO, pH, EC, and SAR were either not detected at or above laboratory reporting limits or were reported below their respective COGCC Table 910-1 concentration levels in the soil samples from the base and south wall of the produced water tank excavation. Impacted soil discovered at the east wall of the excavation was determined to be associated with a release from the separator flowline and will be addressed under a separate Form 27.

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.

Concentrations of BTEX, GRO, DRO, pH, EC, and SAR were either not detected at or above laboratory reporting limits or were reported below their respective COGCC Table 910-1 concentration levels in the soil samples from the base and south wall of the produced water tank excavation. Impacted soil discovered at the east wall of the excavation was determined to be associated with a release from the separator flowline and will be addressed under a separate Form 27.

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 was not encountered.

REMEDATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: ☐ Quarterly ☐ Semi-Annually ☐ Annually ☐ Other _____

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? 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: _____

REMEDATION COMPLETION REPORT

REMEDATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? Yes

Do all soils meet Table 910-1 standards? Yes

Does the previous reply indicate consideration of background concentrations? No

Are the only residual soil impacts pH, SAR, or EC at depths greater than 3 feet below ground surface? _____

Does Groundwater meet Table 910-1 standards? Yes

Is additional groundwater monitoring to be conducted? No

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 approve the seed mix? No

If NO, does the seed mix comply with local soil conservation district recommendations? Yes

IMPLEMENTATION SCHEDULE

PRIOR DATES

Date of Surface Owner notification/consultation, if required. _____

Actual Spill or Release date, if known. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/17/2019

Date of commencement of Site Investigation. 01/17/2019

Date of completion of Site Investigation. 01/17/2019

REMEDIAL ACTION DATES

Date of commencement of Remediation. _____

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

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

Signed: Trent Watne

Title: Project Scientist

Submit Date: 02/13/2019

Email: twatne@olssonassociates.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: CHRIS CANFIELD

Date: 03/05/2019

Remediation Project Number: 12455

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

401935864	FORM 27-SUPPLEMENTAL-SUBMITTED
401935958	SOIL SAMPLE LOCATION MAP
401935960	ANALYTICAL RESULTS
401935963	ANALYTICAL RESULTS

Total Attach: 4 Files

General Comments

User Group

Comment

Comment Date

Environmental	The Colorado Oil & Gas Conservation Commission (COGCC) has reviewed and hereby approves your 02/13/2019 request for a determination of No Further Action at the above-referenced location. However, should future conditions indicate that contaminant concentrations in soils exceed COGCC standards, or if ground water is found to be impacted, further investigation and/or remediation activities could be required. Remediation Project 12455 will be closed in the COGIS database. Note that surface reclamation must meet the COGCC 1004 series rules.	03/05/2019
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Total: 1 comment(s)