

State of Colorado
Oil and Gas Conservation Commission

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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
Address: 1001 17TH STREET #2000		Phone: (720) 595-2132
City: DENVER	State: CO	Zip: 80202
Contact Person: Jason Davidson	Email: jdavidson@gwp.com	Mobile: ()

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 16834 Initial Form 27 Document #: 402603711

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 #: 123-23784	County Name: WELD
Facility Name: DILKA 22-6	Latitude: 40.517000	Longitude: -104.481690	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SENW	Sec: 6	Twp: 6N	Range: 63W
Meridian: 6	Sensitive Area? Yes		

SITE CONDITIONS

General soil type - USCS Classifications SC Most Sensitive Adjacent Land Use Agricultural

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

The Dilka 22-6 wellhead and ~933-foot flowline are surrounded by vacant pasture in all directions. The flowline runs northeast from the wellhead, through the open pasture, to the Dilka 21 tank battery. The tank battery, which is located ~910 feet northeast of the wellhead, will remain in place. A livestock feedlot is in place ~600' southwest of the wellhead. There are 2 mapped wetlands. One ~475' southeast and one ~760' west. Depth to groundwater is unknown, but well construction records for water well permit 262396, located 1,025' southwest of the wellhead, reported a static water level of 23' below ground surface in 2005. The wellhead and flowline are mapped in the Pronghorn Winter Concentration High Priority Habitat. There are no additional sensitive areas or wildlife habitats identified within a quarter mile of the wellhead and flowline. See the attached Figure 1 for an illustration of the location 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
No	SOILS	Remediated	Confirmation Soil Sampling

INITIAL ACTION SUMMARY

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

Great Western proposes to conduct closure of the Dilka 22-6 wellhead and flowline. Plugging and abandonment of the well will commence on 3/13/2021 and will be completed by 3/15/2021. Flowline removal activities and cut and cap activities are planned to commence on 3/22/2021 and be completed by 3/24/2021. Great Western will conduct site investigation activities, field screening, and confirmation sampling activities during closure in accordance with COGCC 900 Series Rules. Discrete soil samples will be collected and analyzed pursuant to Rule 915, following the general sample collection guidance in Rule 915.e.(2). All waste generated during the closure activities will be managed and disposed of at Waste Management's North Weld Landfill in Ault, CO in accordance with Rules 905 and 906.

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):

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 5
Number of soil samples exceeding 915-1 0
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 0

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 3.48
BTEX > 915-1 No
Vertical Extent > 915-1 (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) _____
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
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?

Please refer to the attached Excavation Report for a discussion of the background soil samples collected during this site investigation.

Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) 18 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.

Please refer to the attached Excavation Report for a summary of the source removal activities conducted at the Site. Copies of the waste disposal manifests are attached.

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.

Please refer to the attached Excavation Report for a summary of the remediation activities conducted at the Site.

Soil Remediation Summary

In Situ

Ex Situ

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

Yes _____ Excavate and offsite disposal
If Yes: Estimated Volume (Cubic Yards) _____ 18
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 during site investigation activities.

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:

Volume of E&P Waste (solid) in cubic yards _____ 18

E&P waste (solid) description Hydrocarbon impacted soil

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: Waste Management's North Weld Landfill in Ault, CO

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? No

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.

Great Western has conducted final reclamation of the land and soil affected by the facility in accordance with COGCC 1000-Series Rules. The excavation has been backfilled and all disturbed areas have been reclaimed as nearly as practical to their original condition for their designated final land use. All areas compacted by oil and gas operations have been cross-ripped and topsoil has been applied to all disturbed areas. Great Western will reseed the disturbed areas with a native grass species consistent with the Natural Resource Conservation Service (NRCS) recommended seed mix for the area in late-Fall/early-Winter 2021. Inspections will take place periodically in accordance with COGCC and Colorado Department of Public Health and Environment (CDPHE) requirements. The site will be monitored to identify areas of poor growth and the presence of noxious weeds. These areas will be reseeded as needed and weed control measures will be implemented in compliance with the Colorado Noxious Weed Act. Great Western will ensure that erosion and sedimentation controls are implemented as necessary before and after seeding operations, as detailed in the Stormwater Management Plan.

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? No

If YES, does the seed mix comply with local soil conservation district recommendations? _____

Did the local soil conservation district provide the seed mix? No

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 08/05/2021

Proposed date of completion of Reclamation. 11/15/2021

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. 02/04/2021

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/13/2021

Proposed site investigation commencement. 03/31/2021

Proposed completion of site investigation. 08/05/2021

REMEDIAL ACTION DATES

Proposed start date of Remediation. 03/31/2021

Proposed date of completion of Remediation. 08/05/2021

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:

