

State of Colorado
Oil and Gas Conservation Commission

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Document Number:
403014187
Receive Date:
05/05/2022

Report taken by:
Kari Brown

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: DCP OPERATING COMPANY LP	Operator No: 4680	Phone Numbers
Address: 6900 E LAYTON AVE SUITE 900		Phone: (303) 605-1718
City: DENVER State: CO Zip: 80237		Mobile: (303) 619-3042
Contact Person: Steve Weathers	Email: swweathers@dcpmidstream.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 14898 Initial Form 27 Document #: 402282471

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: 1Q22 Groundwater Monitoring Summary and Remediation Work Plan

SITE INFORMATION

No Multiple Facilities

Facility Type: GAS PROCESSING PLANT	Facility ID: 469293	API #: _____	County Name: WELD
Facility Name: SPILL/RELEASE POINT	Latitude: 40.267356	Longitude: -104.735617	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NESE	Sec: 35	Twp: 4N	Range: 66W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SM

Most Sensitive Adjacent Land Use Agriculture farmland and an irrigation ditch to the north of the Site.

Is surface water within 1/4 mile?

Is domestic water well within 1/4 mile? Yes

Yes

Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

The Colorado Division of Water Resources Water Well Database was consulted for depth to groundwater around the Site. The nearest registered water well (Permit #141254) has a noted static water level of 107 feet below ground surface. However, another registered water well (Permit #34070-MH), located approximately 1,650 feet southwest of the spill area has a noted static water level of 21 feet below ground surface. A water supply canal named the Platte Valley Canal owned by the Farmer's Reservoir & Irrigation Company (FRICO) is located to the north of the Gas Plant.

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	GROUNDWATER	See Attached Figures	Monitoring Wells and Lab Analysis
Yes	SOILS	175' x 200'	Soil sample analysis

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 release was discovered on November 17, 2019, when Operations noticed a drain valve on a condensate stabilizer re-boiler was leaking by the produced water sump and overflowing the sump with a mixture of condensate and produced water. Operations immediately actuated the valve stopping the release. A vac truck was quickly deployed to remove the liquids within the sump and on the ground. Due to consistent freezing temperatures after the release, further Site investigation and remediation activities were delayed due to a thick frost layer and an initial site investigation was completed in May 2020 to assist in defining the extent of the impacted soils area. Initial actions and completed remedial measures were submitted and approved by the COGCC in the Form 19 Initial (#402242020) and Form 19 Supplemental (#402283236). The Initial Form 27 Site Investigation and Remediation Work Plan (#402282471), approved by the COGCC issued Spill tracking facility ID #469293 and Remediation Project #14898 for the Site. Ongoing Site Investigations and remedial activities completed through December 2021 have been previously provided to the COGCC and approved in subsequent Form 27 Supplemental reports (most recently #402940700). Details of groundwater monitoring activities completed on 3/15/2022 (1Q22) are provided herein. The groundwater analytical data are summarized on Tables 1 and 2 and displayed on Figure 4. This Form 27-S is being submitted in accordance with the approved Form 27-S Documents and the Site-Specific Sampling and Analysis Plan (SAP) for groundwater and soil.

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):

A total of 14 soil borings with groundwater monitoring wells have been installed through the 1Q22, and soil results have been reported in previous Form 27 reports. Based on the 4Q21 results, four additional wells and two boreholes without wells were advanced during April 2022 (second quarter) with samples collected from the terminal depth and the highest PID reading at each borehole and analyzed per the SAP (Table 4). Laboratory data, lithologic logs, and well construction diagrams from that investigation will be presented in the 2Q22 Form 27-S.

Proposed Groundwater Sampling

Will groundwater samples be collected as part of this investigation? (Number, analyses, and locations of samples):

Through 1Q22, 14 monitoring wells have been installed for groundwater characterization and were sampled during the 1Q22. Based on the approval of the 4Q21 Form 27-S (#402940700), four additional wells (see Figure 2) were installed during April 2022 that will be sampled and reported in the 2Q22. The 1Q22 groundwater samples were submitted for laboratory analysis of the COCs listed in the approved SAP (Table 4). Groundwater elevation data are presented on Table 1 and Figure 3, and analytical data is presented on Tables 2 and 3 and illustrated on Figure 4. Based on the data collected and the FRICO Canal, DCP will continue to collect monthly water levels and quarterly groundwater monitoring at the existing well locations.

Proposed Surface Water Sampling

Will surface water samples be collected as part of this investigation? (Number, analyses, and locations of samples):

The FRICO owned Platte Valley Canal is approximately 80 feet north of the northeast corner of the Mewbourn Gas Plant facility boundary. Surface water within the canal is intermittent and is only present when FRICO is running water through the canal to fill a downstream reservoir. A surface water sample (SW-01) was collected from the canal on March 19th, 2021. The sample was collected from flowing water in the bottom of the canal, but FRICO was not running water through the canal at full volume at that time. DCP collected the surface water sample to determine if surrounding groundwater was infiltrating and impacting the bottom of the canal. Based on the surface water data and the January and March 2021 meetings with FRICO personnel, the Canal likely acts as a losing stream when water is flowing through it and is not impacted by groundwater. DCP does not anticipate sampling the surface water within the canal at this time or without written approval from FRICO.

Additional Investigative Actions

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

Based on approval of the 4Q21 Form 27-S (#402940700) and landowner approval, four additional wells were installed during April 2022 with two additional boreholes advanced without monitoring well construction. Details of that investigation will be presented in the 2Q22 Form 27-S. Soil borings were logged for lithology and samples collected per the approved SAP. During the 1Q22, DCP also removed the source area produced water vessels (PWVs) and collected samples for the full Table 915 parameters during these activities, and the details have been provided in a separate approved F19-S associated with spill/release point ID #481427. That spill ID was closed with approved Form 19-S # 402960891, and future site activities will continue under remediation # 14898.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 0
 Number of soil samples exceeding 915-1 0
 Was the areal and vertical extent of soil contamination delineated? No
 Approximate areal extent (square feet) 95000

NA / ND

NA Highest concentration of TPH (mg/kg) _____
 NA Highest concentration of SAR _____
 BTEX > 915-1 No
 Vertical Extent > 915-1 (in feet) 24

Groundwater

Number of groundwater samples collected 14
 Was extent of groundwater contaminated delineated? No
 Depth to groundwater (below ground surface, in feet) 15
 Number of groundwater monitoring wells installed 14
 Number of groundwater samples exceeding 915-1 6

-- Highest concentration of Benzene (µg/l) 15700
 -- Highest concentration of Toluene (µg/l) 2.18
 -- Highest concentration of Ethylbenzene (µg/l) 383
 -- Highest concentration of Xylene (µg/l) 9410
 NA Highest concentration of Methane (mg/l) _____

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?

Soil samples were also collected for pH, EC, SAR, and boron at eight of the monitoring well locations during the 1Q21 event to establish the vertical and lateral concentrations across the Site for background consideration. Based on the results being within the COGCC standards at multiple locations across the Site, COGCC approved DCP's proposal to remove those parameters from the Site-Specific Soil SAP (Table 4) in future sampling and investigative events.

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

Volume of solid waste (cubic yards) 2000 Volume of liquid waste (barrels) 0

Is further site investigation required?

During the 1Q22, the PWVs that were the source of the original release at the site, were removed in accordance with the approved Form 27-S work plan (#402886141), and details of that effort were provided and approved by COGCC in Form 19 reports associated with spill/release ID # 481427. That spill ID was closed with approved Form 19-S # 402960891, and future site activities will continue under remediation # 14898. Based on the recent investigation and field observations, further investigation may be warranted.

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

During the excavation activities in December 2020, approximately 2,000 cubic yards (yd³) of material were removed for disposal. Soil samples from the southeast, southwest, and northwest sidewalls of the excavation indicate that impacted shallow soil above 16 feet bgs has been removed. Based on the samples collected from the southeast wall, additional impacted material remains below 16 feet bgs. However, due to the proximity to facility infrastructure, any remaining source material at that location will likely require in-situ remediation. Once a point to the south was reached that further excavation could no longer be performed safely, the southern portion was backfilled, and excavation efforts were focused to the north on DCP property. Excavation activities were suspended due to proximity to facility infrastructure and the FRICO canal. Due to the facility and surrounding infrastructure, remaining impacts to soil and groundwater will likely require in-situ remediation.

During the 1Q22, the produced water vessels (PWVs), that were the source of the original release at the site, were removed in accordance with the approved Form 27-S work plan (#402886141). During removal, impacts to soil were discovered based on visual observation, field screening, and laboratory confirmation samples, and a Form 19 reports (#402927836, #402934259, and #402960891) were submitted and approved. Form 19-S # 402960891 was approved by COGCC for closure of spill/release ID # 481427 to continue investigation and remediation under the current remediation number (#14898) for this Site.

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.

The release was discovered on November 17, 2019, when Operations noticed a drain valve on a condensate stabilizer re-boiler was leaking by to the produced water sump and overflowing the sump with a mixture of condensate and produced water. Operations immediately actuated the valve stopping the release. A vac truck was quickly deployed to remove the liquids within the sump and on the ground. Due to consistent freezing temperatures after the release, further Site investigation and remediation activities were delayed due to a thick frost layer. A Site Investigation was completed on May 13, 2020, to assist in defining the extents of the impacted soils vertically and horizontally. Impacted soils encountered during the December 2020 excavation were removed via mechanical and hydro vacuum excavation, and hand shoveling near facility infrastructure. Based on the soil and groundwater sample analytical results from the 4Q20 through 1Q22 remediation and investigation activities as provided in this Form 27, additional Site characterization is warranted prior to implementing further remedial actions. Four additional groundwater monitoring wells were installed during April 2022, and results of that investigation will be reported in the 2Q22 Form 27-S and evaluated for Site remedial actions.

Following 1Q22 PWV removal, the void space left by the tanks and excavated soil was backfilled with pea gravel, and two 375-gallon reinforced plastic tanks with 1/4" holes were buried in the excavation for delivery of Micro-blaze® bioremediation amendment to the subsurface. An EPA approved UIC permit is included as Appendix C, and with COGCC approval injection of up to 750 gallons of Micro-blaze® diluted with potable water is anticipated to occur at the two injection locations illustrated on Figure 2 during the 2Q22.

Soil Remediation Summary

<input type="checkbox"/> In Situ _____ Bioremediation (or enhanced bioremediation) _____ Chemical oxidation _____ Air sparge / Soil vapor extraction _____ Natural Attenuation _____ Other _____	<input checked="" type="checkbox"/> Ex Situ Yes _____ Excavate and offsite disposal If Yes: Estimated Volume (Cubic Yards) _____ 2000 Name of Licensed Disposal Facility or COGCC Facility ID # _____ _____ Excavate and onsite remediation _____ Land Treatment _____ Bioremediation (or enhanced bioremediation) _____ Chemical oxidation _____ Other _____
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Groundwater Remediation Summary

No _____ Bioremediation (or enhanced bioremediation)
 No _____ Chemical oxidation
 No _____ Air sparge / Soil vapor extraction
 No _____ Natural Attenuation
 No _____ 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.

As of the 1Q22 sampling event, a total of 14 monitoring wells were present at the Site, and groundwater monitoring activities were conducted on 3/15/2022 at the well locations illustrated on Figure 2. Water levels were measured to evaluate the hydraulic characteristics and fluctuations at the Site. The depth to groundwater measurements and calculated elevations are presented on Table 1, a groundwater elevation contour map is provided as Figure 3, and the groundwater analytical data are presented on Table 2 and Figure 4. The laboratory reports for the 1Q22 groundwater event are provided in Appendix A. Groundwater samples were submitted to Origins Laboratory Inc. for analysis of the parameters listed in COGCC Table 915 and per the approved SAP (Table 4), using USEPA Methods. Analytical results for groundwater were reported below applicable COGCC Table 915-1 standards and/or laboratory detection limits at 8 of the 14 well locations that were sampled. Groundwater monitoring will continue on a quarterly basis, and DCP also proposes to collect groundwater elevations at the Site monitoring wells with landowner permission on a monthly basis through the 2Q22 for evaluation. Based on the COGCC approval of the 4Q21 Form 27-S (#402940700), DCP installed four additional monitoring wells (MW15, MW16, MW17, and MW18) to define the horizontal impacts to groundwater during April 2022, which are illustrated on Figure 2. The newly installed wells will be sampled and reported in the 2Q22 Form 27-S report.

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 1Q22 Quarterly Groundwater Monitoring Summary and Remediation Work Plan _____

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:

Approximately 2,000 cubic yards of soil was transported to the Waste Management Buffalo Ridge Landfill in Keenesburg, CO for disposal.

Volume of E&P Waste (solid) in cubic yards _____ 2000

E&P waste (solid) description Petroleum Hydrocarbon Impacted Soil

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: Waste Management Buffalo Ridge Landfill

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? 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.

The excavated area at the northern boundary of the facility has been backfilled with clean structural fill, and the facility perimeter wall and fence that were removed to allow for excavation have been reconstructed. Following implementation of remedial actions at the Site, landscaping and grading on the outside of the facility will be completed to match pre-remediation conditions.

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. 11/17/2019

Actual Spill or Release date, or date of discovery. 11/17/2019

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/18/2019

Proposed site investigation commencement. 05/13/2020

Proposed completion of site investigation. _____

REMEDIAL ACTION DATES

Proposed start date of Remediation. 12/01/2020

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

This Form 27-S is being submitted to present the groundwater monitoring activities conducted on 3/15/2022 and to update the COGCC on future remediation and investigation plans at the Site. Soil and groundwater data from monitoring wells and boreholes installed during April 2022 will be presented in a subsequent Form 27-S report during the 2Q22. With COGCC approval, injection of Micro-blaze® bioremediation amendment is anticipated to occur during the 2Q22 at the two injection locations presented on Figure 2. DCP will continue quarterly groundwater monitoring at the Site until NFA is approved as a part of the groundwater monitoring program and will also perform groundwater elevation gauging on a monthly basis to evaluate the effect the FRICO canal has on the groundwater system around the Site through the end of 2Q22. The results of the quarterly groundwater monitoring data will be presented to the COGCC via quarterly Form 27S reports.

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

Signed: Steve Weathers

Title: Environmental Specialist

Submit Date: 05/05/2022

Email: COGCCnotification@dcpmidstream.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: Kari Brown

Date: 06/15/2022

Remediation Project Number: 14898

Condition of Approval**COA Type****Description**

	On the next Form 27 Supplemental Operator will provide a revised Proposed date of Remediation Completion based on soil and groundwater analytical data obtained from the monitoring wells.
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**

403014187	FORM 27-SUPPLEMENTAL-SUBMITTED
403038619	ANALYTICAL RESULTS

Total Attach: 2 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)