

State of Colorado
Oil and Gas Conservation Commission

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403129374
Receive Date:
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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 Phone: (303) 605-1718 Mobile: (303) 619-3042
Address: 6900 E LAYTON AVE SUITE 900		
City: DENVER	State: CO	Zip: 80237
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: 2Q22 Groundwater Monitoring and Soil Investigation Summary

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 March 2022 have been previously provided to the COGCC and approved in subsequent Form 27 Supplemental reports (most recently #403014187). Details of groundwater monitoring activities completed on 6/16/2022 (2Q22) are provided herein. The groundwater analytical data are summarized on Tables 3 and 4 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 18 soil borings with groundwater monitoring wells have been installed through the 2Q22. Four groundwater monitoring wells were installed during the 2Q22, and two boreholes were advanced without monitoring wells constructed. Up to two samples were collected from each location and analyzed for Table 915-1 VOCs, TPH, and select PAHs per the approved SAP (Table 6). Soil results are summarized on Tables 1 and 2 and presented on Figure 5. Based on 2Q22 groundwater results, DCP proposes additional monitoring wells upgradient of MW18 at the locations presented on Figure 6; the lithology at those locations will be logged and samples will be collected according to the approved SAP at up to two locations including the interval with the highest PID reading and the terminal depth.

Proposed Groundwater Sampling

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

Through the current reporting period, 18 monitoring wells have been installed for groundwater characterization and were sampled during the 2Q22. Based on the approval of the 4Q21 Form 27-S (#402940700), four additional wells (see Figure 2) were installed during April 2022 and were sampled during the 2Q22 sampling event on 6/16/2022. The 2Q22 groundwater samples were submitted for laboratory analysis of the COCs listed in the approved SAP (Table 6). Groundwater elevation data are presented on Table 3 and Figure 3, and analytical data are presented on Tables 4 and 5 and illustrated on Figure 4. Based on the data collected and the FRICO Canal, DCP will continue to collect quarterly groundwater monitoring at the existing well locations. However, monthly groundwater gauging was discontinued based on the approved 1Q22 Form 27-S (403014187). Based on 2Q22 groundwater results, DCP proposes additional monitoring wells upgradient of MW18, presented on Figure 6.

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 are presented in this 2Q22 Form 27-S. Soil borings were logged for lithology and samples collected per the approved SAP.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil	NA / ND
Number of soil samples collected <u>8</u>	-- Highest concentration of TPH (mg/kg) <u>402</u>
Number of soil samples exceeding 915-1 <u>3</u>	NA Highest concentration of SAR <u> </u>
Was the areal and vertical extent of soil contamination delineated? <u>No</u>	BTEX > 915-1 <u>Yes</u>
Approximate areal extent (square feet) <u>95000</u>	Vertical Extent > 915-1 (in feet) <u>24</u>
Groundwater	
Number of groundwater samples collected <u>18</u>	-- Highest concentration of Benzene (µg/l) <u>11300</u>
Was extent of groundwater contaminated delineated? <u>No</u>	-- Highest concentration of Toluene (µg/l) <u>2.43</u>
Depth to groundwater (below ground surface, in feet) <u>15</u>	-- Highest concentration of Ethylbenzene (µg/l) <u>347</u>
Number of groundwater monitoring wells installed <u>18</u>	-- Highest concentration of Xylene (µg/l) <u>5320</u>
Number of groundwater samples exceeding 915-1 <u>7</u>	NA Highest concentration of Methane (mg/l) <u> </u>
Surface Water	
<u>0</u> Number of surface water samples collected	
<u> </u> 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 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 6) 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?

Based on the 2Q22 groundwater results, DCP has proposed additional well locations upgradient of MW18 to fully delineate groundwater impacts at the site (Figure 6).

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.

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 2Q22 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 are reported in this 2Q22 Form 27-S and will be 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 was obtained, and 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 second half of 2022.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Yes Excavate and offsite disposal

_____ Chemical oxidation

_____ If Yes: Estimated Volume (Cubic Yards) _____ 2000

_____ Air sparge / Soil vapor extraction

_____ Name of Licensed Disposal Facility or COGCC Facility ID # _____

_____ Natural Attenuation

_____ Excavate and onsite remediation

_____ Other _____

_____ Land Treatment

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Other _____

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 current reporting period, a total of 18 monitoring wells are present at the Site, and groundwater monitoring activities were conducted on 6/16/2022 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 3, a groundwater elevation contour map is provided as Figure 3, and the groundwater analytical data are presented on Table 4 and Figure 4. The laboratory reports for the 2Q22 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 11 of the 18 well locations that were sampled. Groundwater monitoring will continue on a quarterly basis. 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 were sampled in the 2Q22 and are reported in this Form 27-S report. Based on 2Q22 groundwater results at MW18, DCP proposes installation of additional monitoring wells at the locations presented on Figure 6.

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 2Q22 Quarterly Groundwater Monitoring Summary and Remediation Work Plan

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.

DCP maintains appropriate comprehensive general liability insurance to satisfy the requirements of Rule 705.B, with at least \$5MM in coverage and including coverage for sudden and accidental release events. The cost provided below for remediation is a preliminary estimate only, costs may change upwards or downward based on site-specific information. DCP makes no representation or guarantees as to the accuracy of the preliminary estimate.

Operator anticipates the remaining cost for this project to be: \$ 100000

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 a Final Closure Request for this Remediation Project? No _____

- 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. 12/31/2027

REMEDIAL ACTION DATES

Proposed start date of Remediation. 12/01/2020

Proposed date of completion of Remediation. 12/31/2027

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:

Proposed completion of remediation and investigation have been updated based on COA to 1Q22 Form 27-S (403014187).

OPERATOR COMMENT

This Form 27-S is being submitted to present the groundwater monitoring activities conducted on 6/16/2022 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 are presented in this Form 27-S report. As presented in the approved 1Q22 Form 27-S (403014187), Micro-blaze® bioremediation amendment is anticipated to occur during the second half of 2022 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. The results of the quarterly groundwater monitoring data will be presented to the COGCC via quarterly Form 27S reports. Additionally, in response to the COA on the 1Q22 Form 27-S (403014187), the completion of remediation date has been updated in this form to 12/31/2027 with consideration that this is an active DCP facility and final remediation completion will not occur until the plant has been decommissioned.

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: 08/12/2022

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: 09/09/2022

Remediation Project Number: 14898

Condition of Approval

COA Type

Description

1 COA	Operator shall field log soil borings during monitoring well installation and provide boring logs/well construction diagrams with the next monitoring report.
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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

403129374	FORM 27-SUPPLEMENTAL-SUBMITTED
403134743	OTHER

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)