

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



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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: DCP OPERATING COMPANY LP	Operator No: 4680	Phone Numbers
Address: 370 17TH STREET - SUITE 2500		Phone: (303) 605-1718
City: DENVER State: CO Zip: 80202		Mobile: ()
Contact Person: Stephen Weathers	Email: swweathers@dcpmidstream.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION
Remediation Project #: 13272 Initial Form 27 Document #: 402004215

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 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 checked="" type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation	<input 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: SPILL OR RELEASE	Facility ID: 463819	API #: _____	County Name: WELD
Facility Name: CR42 and CR13	Latitude: 40.292285	Longitude: -104.941832	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESE	Sec: 24	Twp: 4N	Range: 68W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SC Most Sensitive Adjacent Land Use Private residence located at 20008 Colorado Blvd (CR13), Johnstown, CO

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? Yes

Other Potential Receptors within 1/4 mile

Livestock approximately 260 feet east. Agricultural land adjacent to the west and south of the leak location.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste | <input type="checkbox"/> Other E&P Waste | <input type="checkbox"/> Non-E&P Waste |
| <input type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids | _____ |
| <input type="checkbox"/> Oil | <input type="checkbox"/> Tank Bottoms | |
| <input checked="" type="checkbox"/> Condensate | <input type="checkbox"/> Pigging Waste | |
| <input type="checkbox"/> Drilling Fluids | <input type="checkbox"/> Rig Wash | |
| <input type="checkbox"/> Drill Cuttings | <input type="checkbox"/> Spent Filters | |
| | <input type="checkbox"/> Pit Bottoms | |
| | <input type="checkbox"/> Other (as described by EPA) | _____ |

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	GROUNDWATER	85000 sq ft	Hydrocarbon condensate material observed at ~12' bgs - 3 MW's & 1 piezometer (destroyed)
Yes	SOILS	94000 sq ft	Laboratory 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.

Initial actions and completed remedial measures were submitted to the COGCC in the Form 19 Initial (#401997249) dated April 6, 2019 and Form 19 Supplemental (#402004043 and #4020498919) approved on April 26 and May 29, 2019, respectively. The Initial Form 27 Site Investigation and Remediation Work Plan (#402004215) approved April 18, 2019 and COGCC issued Spill and tracking facility ID# 463819 and remediation project #13272 for the Site. A Form 27S (#402051228) approved on June 13, 2019 described the soil vapor intrusion and ambient air investigation. A Form 27S (#402033546) Interim Summary Report and Workplan was approved on July 24, 2019, detailed the Site Investigation and delineation activities from previous remediation efforts completed between April 4 and May 28, 2019 including excavation of impacted soils and installation of 15 monitoring wells. A Form 27S (#402125018) Interim Summary Report was also approved on October 2, 2019, that detailed the Site Investigation and delineation activities from remediation efforts completed between June and September 2019 including the installation of and sample collection from 17 additional soil borings with subsequent monitor well completions. Details of Site investigation activities, remediation workplan activities, and the fourth quarter 2019 groundwater monitoring activities performed on December 2 and 3, 2019 were provided in the January 9, 2020 approved Form 27S #402279826. Additional remedial workplan activities are provided herein and the attached Remediation Workplan Summary Letter.

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):

Soil samples will be submitted for laboratory analysis of BTEX and TPH-GRO/DRO by USEPA Methods 8260B and 8015. In accordance with guidelines set forth in the executed license agreements between DCP and the private landowners at the Site, the soil clean-up standards shall be the COGCC Table 910-1 Standards with the added exception relating to TPH and benzene, which will be one order of magnitude more stringent than the Table 910-1 Standards; specifically, TPH will be no greater than 50 mg/kg and benzene will be no greater than 0.017 mg/kg. Additional soil sampling activities are provided in the attached Remediation Workplan Summary Letter.

Proposed Groundwater Sampling

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

Groundwater samples will be collected from the Site groundwater monitoring well network and samples will be submitted for laboratory analysis of USEPA Method 8260B. However, existing groundwater monitoring wells may be destroyed during impacted soil excavation remediation activities. As further described in the attached Remediation Workplan Summary Letter, groundwater monitoring wells will be installed as applicable subsequent to excavation and backfilling activities for ongoing quarterly monitoring of groundwater quality across the Site.

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 47
Number of soil samples exceeding 910-1 9
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 22000

NA / ND

-- Highest concentration of TPH (mg/kg) 2628
NA Highest concentration of SAR
BTEX > 910-1 Yes
Vertical Extent > 910-1 (in feet) 18

Groundwater

Number of groundwater samples collected 40
Was extent of groundwater contaminated delineated? Yes
Depth to groundwater (below ground surface, in feet) 12'
Number of groundwater monitoring wells installed 17
Number of groundwater samples exceeding 910-1 14

-- Highest concentration of Benzene (µg/l) 11600
-- Highest concentration of Toluene (µg/l) 4730
-- Highest concentration of Ethylbenzene (µg/l) 209
-- Highest concentration of Xylene (µg/l) 1360
NA Highest concentration of Methane (mg/l)

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?

Impacted soils were delineated to approximately 165 feet east, 130 feet west, 50 feet south, and 350 feet north of the DCP pipeline release locations and between an average depth of 8 and 14 feet below ground surface. Based on data collected during the fourth quarter 2019, groundwater impacts have migrated north beyond the former POC wells located on the east side of CR13. LNAPL has been observed within five groundwater monitoring wells (MW01, MW02, MW08, MW14, and MW24). Additional details are provided in the attached Remediation Workplan Summary Letter.

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) 510 Volume of liquid waste (barrels) 0

Is further site investigation required?

Additional groundwater monitoring well installation and sampling. Additional details are provided in the attached Remediation Workplan Summary Letter.

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.

Per the approved license agreements between DCP and private landowners at the Site, the preferred remedial method for impacted soil will consist of excavation "dig and haul" methods with subsequent off-Site disposal at an approved landfill and backfilling and compaction with clean fill material. Based on previously reported investigation activities, clean overburden soil has been observed throughout the Site between the surface and a minimum of 8-feet bgs. Prior to accessing impacted soil for dig and haul remediation, the overburden soil will be removed and staged on-Site to be used as backfill material once impacted soil excavation and removal is complete. Additional details are provided in the attached Remediation Workplan Summary Letter.

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.

As described above, the preferred remediation alternative is excavation and disposal. Site preparation activities were initiated on January 6, 2019 and excavation activities are planned to be initiated in February 2020. In accordance with Site license agreements between DCP and the private landowners, DCP may add amendments to the base of the excavations to assist in achieving groundwater clean-up standards. Remediation amendments may include, but not be limited to the use of hydrogen peroxide, sodium persulfate, and sodium hydroxide. Additional details are provided in the attached Remediation Workplan Summary Letter.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes _____ Excavate and offsite disposal

_____ Chemical oxidation

_____ If Yes: Estimated Volume (Cubic Yards) _____ 510

_____ 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.

A total of 32 monitoring wells have been installed at the Site and the fourth quarter 2019 groundwater monitoring activities were provided in approved Form 27 Document #402279826. Additional details for future planned groundwater monitoring activities are provided in the attached Remediation Workplan Summary Letter.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: Quarterly Semi-Annually Annually Other Reporting requirements will be determined following completion of Site investigation

Report Type: Groundwater Monitoring Land Treatment Progress Report O&M Report
 Other Form 27 Remediation Workplan

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:

Impacted soils have been disposed of at the Waste Management North Weld County Landfill.

Volume of E&P Waste (solid) in cubic yards 510

E&P waste (solid) description Petroleum hydrocarbon impacted soils

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: Waste Managment North Weld County 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

Do all soils meet Table 910-1 standards?

Does the previous reply indicate consideration of background concentrations?

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?

Is additional groundwater monitoring to be conducted?

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.

Investigation and delineation of impacted soils and groundwater are on-going at the Site. Subsequent to implementation of a Site remediation work plan, a reclamation plan will be issued to the COGCC.

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?

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

IMPLEMENTATION SCHEDULE

PRIOR DATES

Date of Surface Owner notification/consultation, if required. 04/02/2019

Actual Spill or Release date, if known. 04/02/2019

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/02/2019

Date of commencement of Site Investigation. 04/04/2019

Date of completion of Site Investigation. _____

REMEDIAL ACTION DATES

Date of commencement of Remediation. 04/04/2019

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

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

Signed: Stephen Weathers

Title: Environmental Specialist

Submit Date: 02/06/2020

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: CHRIS CANFIELD

Date: 02/24/2020

Remediation Project Number: 13272

COA Type

Description

<u>COA Type</u>	<u>Description</u>

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.

<u>Att Doc Num</u>	<u>Name</u>
402306148	FORM 27-SUPPLEMENTAL-SUBMITTED
402306177	REMEDIAL ACTION PLAN

Total Attach: 2 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)