

# State of Colorado Oil and Gas Conservation Commission

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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	<b>Phone Numbers</b> Phone: (303) 605-1718 Mobile: ( )
Address: 370 17TH STREET - SUITE 2500		
City: DENVER	State: CO Zip: 80202	
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 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 checked="" type="checkbox"/> Other Excavation, soil sampling, drilling, and groundwater monitoring well installation summary report. |

#### 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:

- ☒ 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	Undetermined	Hydrocarbon condensate material observed at ~12' bgs in two monitoring wells and one piezometer
Yes	SOILS	22000 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.

On April 4 and 5, 2019, DCP performed impacted soil excavation activities at the area illustrated on Figure 2. Soil samples were collected from the excavation extents illustrated on Figure 2 and the laboratory analytical results are summarized on Table 1. Subsequent to soil vapor intrusion and ambient air investigation activities described in the Form 27 Document #402051228, investigation activities transitioned to soil and groundwater delineation using hand augur, direct push, and hollow stem augur (HSA) drilling methods. Between April 6th and May 8, 2019, soil borings were advanced at the locations illustrated on Figure 3 using the methods indicated. Soil samples were collected from each location to delineate lateral and vertical extents of hydrocarbon impacts. The soil sample analytical data is summarized on Table 2. Laboratory analytical reports for excavation and soil boring soil samples are provided as an attachment. Based on collected samples, hydrocarbon impacts to soil have generally been delineated laterally. Except for soil borings near the release point and/or borings that reached refusal during hand augur and direct push drilling, the vertical extent of hydrocarbon impacts appear to have been delineated. A defined saturated zone within the subsurface was not encountered during drilling activities. However, due to moist soil observed at varying depth intervals and observed condensate material as described in Document #402051228, groundwater monitoring wells were set within the HSA soil borings. A total of 15 groundwater monitoring wells were installed at the locations illustrated on Figure 3. A Form 27 Interim Summary Report and Workplan has been provided as an attachment detailing Site investigation and delineation activities.

### 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 ):

Grab soil samples were collected from the excavation extents illustrated on Figure 2 and the soil borings illustrated on Figure 3. Soil sample analytical data are summarized on tables 1 and 2 and the laboratory analytical data are provided as an attachment. Additional soil samples will be collected during subsequent investigation and delineation activities.

#### Proposed Groundwater Sampling

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

On May 28, 2019, a groundwater monitoring event was performed at the 15 monitoring wells on-Site (MW01 - MW15) and, at the request of the landowner for the private residence located east of CR13, groundwater samples were submitted for full suite by Method 8260B laboratory analysis. Additional details for the groundwater monitoring event are provided in the attached Form 27 Interim Summary Report and Workplan. Based on groundwater laboratory analytical results, additional monitoring wells are required as presented in the attached Report.

#### 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 ):

Proposed additional groundwater monitoring well locations are provided on the attached Figure 6 of the Form 27 Interim Summary Report and Workplan. Additional investigation activities are also required on the west side of CR13 as presented in the attached Report.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 98  
Number of soil samples exceeding 910-1 23  
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) 3218  
NA Highest concentration of SAR           
BTEX > 910-1 Yes  
Vertical Extent > 910-1 (in feet) 18

### Groundwater

Number of groundwater samples collected 15  
Was extent of groundwater contaminated delineated? No  
Depth to groundwater (below ground surface, in feet) 12'  
Number of groundwater monitoring wells installed 15  
Number of groundwater samples exceeding 910-1 7

-- Highest concentration of Benzene (µg/l) 6720  
-- Highest concentration of Toluene (µg/l) 2620  
-- Highest concentration of Ethylbenzene (µg/l) 111  
-- Highest concentration of Xylene (µg/l) 868  
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 soil was encountered up to approximately 120 feet east of the DCP pipeline where the source originated and at 14 feet below ground surface. Impacted groundwater has been delineated east of the release location and LNAPL has been observed within two groundwater monitoring well and one temporary piezometer. Additional details are presented in the attached Form 27 Interim Summary Report and Work plan.

☐ 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 is required to the north and south on the east side of CR13 and on the west side of CR13. Site investigation and delineation activities conducted through May 28, 2019 and proposed investigation and delineation activities are presented in the attached Form 27 Interim Summary Report and Workplan.

# 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.

Following notification of the suspected pipeline release, the pipeline and source of contamination was isolated, blown down and placed out of service until further repairs can be made. Initial efforts have been conducted to remove visibly impacted surface soils, delineate subsurface impacts, and to locate the point of pipeline release. To date, approximately 510 cubic yards (CY) of petroleum impacted soils were removed from the site and disposed at the approved Waste Management (WM) North Weld County Landfill location. Subsequent to additional investigation and delineation activities, various methods for the remediation of impacted soils will be evaluated, and the method best suited for this application will be presented to the COGCC in a subsequent Form 27 remediation work plan, for review.

## 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.

Additional investigation and delineation activities at the Site are required. Contingent on ongoing investigation activities and finalized negotiations with landowners for access agreements to private land adjacent to the pipeline release, multiple remediation alternatives will be evaluated. The remediation alternative best suited for the Site, contingent on access agreements, will be presented to the COGCC for review in a Supplemental Form 27 Report.

## Soil Remediation Summary

☐ In Situ

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

☒ Ex Situ

Yes Excavate and offsite disposal  
\_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) 510  
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

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 15 monitoring wells have been installed at the Site. Based on initial groundwater results, additional wells are required. Proposed monitoring well locations are included on the attached Figure 6. Groundwater monitoring at the Site will include, at a minimum, laboratory analysis of BTEX by USEPA Method 8260B.

## REMEDIATION PROGRESS UPDATE

### PERIODIC REPORTING

**Frequency:** ☐ Quarterly ☐ Semi-Annually ☐ Annually ☒ Other Reporting requirements will be determined following completion of further Site investigations

**Report Type:** ☐ Groundwater Monitoring ☐ Land Treatment Progress Report ☐ O&M Report

☒ Other Form 27 Interim Summary 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 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

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

Signed: Stephen Weathers, P.G.

Title: Environmental Specialist

Submit Date: 06/18/2019

Email: swweathers@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: 07/24/2019

Remediation Project Number: 13272

### 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

402053546	FORM 27-SUPPLEMENTAL-SUBMITTED
402079559	SITE INVESTIGATION REPORT

Total Attach: 2 Files

### General Comments

#### User Group

#### Comment

#### Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)