

# 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:

Candice (Nikki) Graber

## 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>
Address: 370 17TH STREET - SUITE 2500		
City: DENVER	State: CO Zip: 80202	
Contact Person: Branden Hayes	Email: bshayes@dcpmidstream.com	
		Phone: (970) 379-6389
		Mobile: (970) 373-8905

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 12644

Initial Form 27 Document #: 401940170

#### PURPOSE INFORMATION

- |  |  |
|--|--|
| <input type="checkbox"/> 901.e. Sensitive Area Determination                                       | <input checked="" 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: GAS PROCESSING PLANT	Facility ID: 255957	API #: _____	County Name: WELD
Facility Name: GREELEY GAS PLANT		Latitude: 40.363548	Longitude: -104.728707
		** correct Lat/Long if needed: Latitude: 40.363785	Longitude: -104.729330
QtrQtr: SWSW	Sec: 25	Twp: 5N	Range: 66W Meridian: 6 Sensitive Area? No

#### SITE CONDITIONS

General soil type - USCS Classifications SW

Most Sensitive Adjacent Land Use Agricultural land and water treatment plant to the south, residential development to the north

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

Residential development 0.25 miles to the north.

## 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) Petroleum hydrocarbon impacted soil

### DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	GROUNDWATER	unknown	monitoring well installation and groundwater sampling
Yes	SOILS	minimal	soil sample investigation

### INITIAL ACTION SUMMARY

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

A detailed description of the initial response activities was previously provided in the Form 27 (Document # 401940170) dated February 22, 2019. The Form 27 was conditionally approved by the COGCC in their response dated February 27, 2019.

### 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 ):

Previous soil investigation activities were submitted in the Form 27 (#401940170) dated February 22, 2019. Remediation objectives were conditionally approved by the COGCC on February 27, 2019 with the request to further delineate the extent of impacts to soil and groundwater. The proposed monitoring well locations are illustrated on attached Figure 2. Additionally, supplemental delineation activities for impacted soil will be performed utilizing hand augur drilling methods near the current MW-04 monitoring well location and the initial soil sampling locations performed on December 2, 2015. Soil borings for the proposed well installations illustrated on Figure 2 as well as supplemental hand augur locations will be screened by PID and standard soil sampling techniques. Soil samples from each borehole will be submitted for laboratory analysis of BTEX and TPH-GRO by 8260B and TPH-DRO by 8015.

#### Proposed Groundwater Sampling

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

Previous groundwater monitoring activities were described in the submitted Form 27 (Document # 401940170) dated February 22, 2019. Form 27 remediation objectives were conditionally approved by the COGCC on February 27, 2019 with the request to install additional monitoring well locations to further delineate impacts to groundwater. Figure 2 illustrates proposed groundwater monitoring well locations. All monitoring wells will be surveyed and gauged to determine the depth of product (if present), static water levels, hydraulic gradient, and flow direction. Collected groundwater samples will be submitted for laboratory analysis of BTEX by 8260B. Additionally, as requested by COGCC personnel, one sample collected from monitoring well MW01 will be submitted for laboratory analysis of the full suite of VOC analytes by 8260B. Groundwater monitoring results will be presented to the COGCC in a subsequent Form 27 monitoring 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 ):

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 8

Number of soil samples exceeding 910-1 1

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 625

### NA / ND

-- Highest concentration of TPH (mg/kg) 4705

NA Highest concentration of SAR

BTEX > 910-1 Yes

Vertical Extent > 910-1 (in feet) 2

### Groundwater

Number of groundwater samples collected 8

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 10'

Number of groundwater monitoring wells installed 4

Number of groundwater samples exceeding 910-1 7

-- Highest concentration of Benzene (µg/l) 6290

-- Highest concentration of Toluene (µg/l) 1050

-- Highest concentration of Ethylbenzene (µg/l) 648

-- Highest concentration of Xylene (µg/l) 4800

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?

☐ 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)

Volume of liquid waste (barrels)

☒ Is further site investigation required?

Remediation objectives were conditionally approved by the COGCC on February 27, 2019 with the request to further delineate the extent of impacts to soil and groundwater.

# 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.

A description of source removal was provided in the previously submitted Form 27 (Document # 401940170) dated February 22, 2019. The Form 27 remediation objectives were conditionally approved by the COGCC on February 27, 2019. However, additional source area remediation activities will be evaluated subsequent to additional delineation activities.

## 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.

Based on the COGCC conditional approval of the Form 27, additional soil and groundwater investigation and delineation activities at the Site are required. Further delineation of impacts to soil groundwater will be achieved by the installation of four additional groundwater monitoring wells at proposed locations illustrated on the attached Figure 2. Additionally, hand augur soil bores will be installed near the MW-04 location and the previous soil sample locations performed on 12/2/2015. During monitoring well and hand augur installation activities, soil borings will be evaluated to further delineate the vertical and horizontal extent of impacts to soil, as previously described. Subsequent to groundwater monitoring well installation, standard groundwater sampling activities will be conducted along with continued sampling of previously constructed monitoring wells MW01 through MW04. Groundwater samples will be submitted for laboratory analysis of BTEX using USEPA Method 8260B and one sample collected from MW01 will be submitted for a full suite of VOC analytes. The soil investigation and groundwater monitoring results will be issued to the COGCC via a Form 27 and monitoring summary report. Groundwater remediation methods will be evaluated based on additional groundwater monitoring activities and will be provided in a supplemental Form 27.

## 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) \_\_\_\_\_ 30  
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

Yes \_\_\_\_\_ Other \_\_\_\_\_ Ongoing Monitoring. Four additional monitoring wells are proposed to be installed and sampled.  
\_\_\_\_\_

## 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 sampling activities will be conducted at new proposed monitoring well locations along with continued sampling of previously constructed monitoring wells MW01 through MW04. Groundwater samples will be submitted for laboratory analysis of BTEX using USEPA Method 8260B with one sample from MW01 submitted for full suite VOC analysis. The soil investigation and groundwater monitoring results will be issued to the COGCC via a Form 27 and monitoring summary report. Monitoring locations are illustrated in the attached Figure 2.

## REMEDATION PROGRESS UPDATE

### PERIODIC REPORTING

**Frequency:** ☐ Quarterly ☐ Semi-Annually ☐ Annually ☒ Other To be determined

**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? No

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

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

E&P waste (solid) description \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_

E&P waste (liquid) description \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

## REMEDATION COMPLETION REPORT

### REMEDATION 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.

The Site is currently located within an active DCP gas plant. No plans for reclamation are necessary at this time.

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. 11/03/2015

Actual Spill or Release date, if known. 11/03/2015

### **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). 11/03/2015

Date of commencement of Site Investigation. 11/03/2015

Date of completion of Site Investigation. \_\_\_\_\_

### **REMEDIAL ACTION DATES**

Date of commencement of Remediation. \_\_\_\_\_

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: ` Brian Humphrey for DCP \_\_\_\_\_

Title: Project Manager \_\_\_\_\_

Submit Date: ` 04/01/2019 \_\_\_\_\_

Email: bhumphrey@tasman-geo.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: Candice (Nikki) Graber \_\_\_\_\_

Date: 04/02/2019 \_\_\_\_\_

Remediation Project Number: 12644 \_\_\_\_\_

**COA Type****Description**

	<p>The following conditions of approval apply to this remediation:</p> <ul style="list-style-type: none"><li>- Per Rule 910.b(3).B: Samples shall be collected from areas most likely to have been impacted and the horizontal and vertical extent of contamination shall be determined. This includes characterizing soil impacts within the saturated interval and capillary fringe.</li><li>- The original COA date (April 13, 2019) for establishing horizontal and vertical extent of both groundwater and soil impacts in accordance with 909.b is extended to 30 day after the approval of this form (May 2, 2019) due to weather delays.</li><li>- Operator shall notify the COGCC no less than 72-hours prior to beginning monitoring well installation.</li></ul>
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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**

401964498	FORM 27-SUPPLEMENTAL-SUBMITTED
401990850	MAP
401990852	MAP

Total Attach: 3 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)