

# State of Colorado Oil and Gas Conservation Commission

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Document Number:

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Receive Date:

Report taken by:

## 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	<b>Phone Numbers</b>
Address: 370 17TH STREET - SUITE 2500		Phone: (303) 605-1718
City: DENVER State: CO Zip: 80202		Mobile: (303) 619-3042
Contact Person: Steve Weathers	Email: swweathers@dcpmidstream.com	

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

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

#### 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: \_\_\_\_\_

#### SITE INFORMATION

No Multiple Facilities

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 Livestock and Farmland adjacent to the Site.

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	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 4/6/19 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 4/18/19 and COGCC issued Spill and tracking facility ID# 463819 and remediation project #13272 for the Site. Ongoing Site investigations and remedial measures have continued to date and have included vapor intrusion investigations, soil and groundwater delineation activities, installation and sampling of a groundwater monitoring network, and excavation of impacted soils. Summary reports with completed field activities, investigations, monitoring results, and proposed F27-S Workplans have previously been reported to the COGCC for activities completed through the 4th quarter 2021, most recently documents #402898832 and #402898377. Details of the well construction and groundwater monitoring activities completed during the first quarter 2022 (1Q22) are provided herein and all of the well locations, including the new wells are presented on Figure 2. The soil boring and groundwater analytical data is summarized on Tables 1 through 4 and displayed on Figures 3 and 4. This Form 27-S is being submitted in accordance with the approved Form 27-S Documents and the interim Site-Specific Sampling and Analysis Plan (SAP).

### 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 ):

This F27-S is being provided to present the 1Q22 soil and groundwater monitoring activities performed at the well locations illustrated on Figure 2. During the 1Q22 investigation activities, 19 additional monitoring wells were installed and a total of 42 monitoring wells have been installed at varying depths within two water bearing zones: a shallow perched and intermittent zone, and a deeper true groundwater table. The deeper monitoring well locations were installed using hollow stem auger (HSA) with continuous core drilling and soil sampling methods. The shallow well locations, which were installed approximately 5-feet from a corresponding deeper well location, were not sampled with continuous core drilling. The laboratory analytical data from the soil samples collected during these activities are provided on Table 1 and in the attached laboratory reports. All the new point of compliance and interior soil borings exhibited results below the COGCC standards.

#### Proposed Groundwater Sampling

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

Groundwater samples from the Site monitoring wells were collected on March 29th and 30th, 2022, during the Site-wide 1Q22 groundwater event and included the newly install monitoring wells. Groundwater data and laboratory analytical results are summarized on Tables 2, 3 and 4 and presented on Figures 3 and 4. Details of the first quarter 2022 groundwater monitoring event are described below and provided in the attachments to this document. For the first quarter 2022 monitoring event and in accordance with the COGCC approved interim Site-Specific Groundwater Sampling and Analysis Plan (SAP), each monitoring well location was reported below COGCC Table 915-1 standards. DCP plans to continue quarterly groundwater monitoring at all 42 of the well locations until analytical results demonstrate concentrations below COGCC standards for four consecutive quarterly monitoring events, at which time a no further action (NFA) determination for the Site will be requested from the COGCC.

#### 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 ):

All of the point of compliance and interior monitoring wells at the Site exhibit results below the COGCC Table 915-1 groundwater standards. While the extents of groundwater impacts across the Site have been delineated, and soil remediation and backfilling has been completed, DCP plans to continue quarterly groundwater monitoring at well locations illustrated on Figure 2 and additional investigation at the Site is not anticipated.

## SITE INVESTIGATION REPORT

### SAMPLE SUMMARY

#### Soil

Number of soil samples collected 29

Number of soil samples exceeding 915-1 0

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

Approximate areal extent (square feet) 10000  
0

#### NA / ND

ND Highest concentration of TPH (mg/kg)

NA Highest concentration of SAR

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 0

#### Groundwater

Number of groundwater samples collected 41

Was extent of groundwater contaminated delineated? Yes

Depth to groundwater (below ground surface, in feet) 17

Number of groundwater monitoring wells installed 42

Number of groundwater samples exceeding 915-1 0

ND Highest concentration of Benzene (µg/l)

ND Highest concentration of Toluene (µg/l)

ND Highest concentration of Ethylbenzene (µg/l)

ND Highest concentration of Xylene (µg/l)

NA Highest concentration of Methane (mg/l)

#### Surface Water

0 Number of surface water samples collected

0 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?

Based on groundwater data collected from the Site, including the recent monitoring event, impacts to groundwater have been delineated in all four Cardinal directions of the release location. LNAPL was not observed within the monitoring network during the 1Q22 site-wide groundwater monitoring event and LNAPL has not been observed at the site since February of 2020. Following the finalization of the multiple utility re-routes and replacements, DCP is currently completing the county road reconstruction activities and anticipates the re-opening during the second quarter.

☒ Were background samples collected as part of this site investigation?

The point of compliance soil borings and well locations are considered representative of background conditions at the Site.

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

Volume of solid waste (cubic yards) 132110

Volume of liquid waste (barrels) 2241

☒ Is further site investigation required?

Subsequent to completion of impacted soil removal and backfilling/compaction activities, source area monitoring wells and additional POC wells have been installed at the locations illustrated on Figure 2. Monitoring wells installed within the excavation footprint were not separated into "shallow" and "deep" zones and constructed with 15-foot screened intervals set to total depths ranging from 25-30 feet bgs, depending on the location and depth to water. However, to further evaluate if a shallow intermittent perched zone continues to exist within the excavation footprint, a shallow well was installed near the source area. Three (3) additional paired POC wells were installed to the west of the excavation footprint and were separated into shallow and deep zones using hollow stem auger with continuous core sampling methods. The soil cores from the borings were field screened with a PID and soil samples were submitted for laboratory analysis from the zone with the highest observed PID reading and the terminal depth of the borehole. Soil boring and well construction logs including the laboratory reports are provided as an attachment. However, the final well casing survey has not been completed yet due to onsite activities and this information will be provided to the COGCC in the next F27-S 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.

Per the license agreements between DCP and private landowners at the Site, the preferred remedial method for impacted soil consisted of excavation "dig and haul" methods with subsequent off-Site disposal at an approved landfill and backfilling and compaction with clean fill material. Through the fourth quarter 2021, approximately 132,110 cubic yards of impacted soil were transported to an approved landfill for disposal. Excavation of impacted soil was completed in December 2021 and details of the completed soil excavation and remedial activities were summarized in the approved Form 27-S (#402898832). This Form 27-S is being submitted to detail the groundwater monitoring well installation and sampling during the first quarter 2022.

### 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 remediation option for subsurface soil consisted of excavation and disposal. Site preparation activities were initiated on January 6, 2020 and excavation activities to the northwest of CR42 and CR13 began in February 2020 and on the east side of CR13 in April 2020. DCP was granted access to remediate soil and groundwater beneath CR42 and CR13 from the Weld County Public Works Right-of-Way division in October 2020. As described in the approved February 24 and August 25, 2020 Form 27-S and Remediation Work Plan Letter, hydrogen peroxide has been applied to the base of the excavation areas subsequent to obtaining clean soil sample analytical results to assist in achieving groundwater clean-up standards through chemical oxidation (chemox). With approval from the CDPHE and Weld County Building and Permitting Division and in accordance with State Demolition procedures, demolition of the private residence was completed in March 2020 to facilitate remediation activities beneath the structure. Based on soil sample analytical data throughout the excavation area, shallow impacts to soil and the former perched groundwater zone have been remediated through excavation and disposal. Excavation of impacted soils was tracked and sampled per a 20' x 20' grid system (Figure 2), where each designated cell was cleared of impacted soils with laboratory confirmation samples from the excavation extents (sidewalls, if required, and base). A total of approximately 132,110 cubic yards of impacted soil was removed and transported to an approved landfill for disposal. Groundwater results from the first quarter 2022 indicate that all site monitoring wells which were installed outside of the excavation footprint and within the shallow, deep, or across both water bearing zones, were below the laboratory detection limits for the constituents of concern that were analyzed in accordance with the approved SAP.

### Soil Remediation Summary

<input type="checkbox"/> In Situ	<input checked="" type="checkbox"/> Ex Situ
_____ Bioremediation ( or enhanced bioremediation )	_____ Yes _____ Excavate and offsite disposal
_____ Chemical oxidation	_____ If Yes: Estimated Volume (Cubic Yards) _____ 132110
_____ 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

Yes \_\_\_\_\_ Other \_\_\_\_\_ Removal and disposal

### 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 42 monitoring wells are currently installed at the Site (Figure 2). As described in previous reports, many of the original wells were removed to facilitate remediation activities. Groundwater monitoring activities for the first quarter 2022 were conducted on March 28, 29 and 30, 2022 at the well locations illustrated on Figure 2. Water levels were measured to evaluate hydraulic characteristics and seasonal fluctuations at the Site and the 1Q22 depth to groundwater measurements and groundwater elevations are presented on Table 2 and illustrated on Figure 3. Groundwater laboratory analytical data are summarized on Table 3 and presented on Figure 4. Historical Site groundwater data are presented in Table 4. The laboratory reports for the groundwater samples collected during the 1Q22 are provided in the attachments to this report. Groundwater samples were submitted to Origins Laboratory for analysis of parameters listed in the approved site SAP using USEPA Method 8260B. Analytical results for groundwater were reported below applicable COGCC Table 915-1 standards and/or laboratory detection limits at all of the well locations with sufficient volume. As expected, MW63A could not be sampled due to insufficient volume at the time of sampling since this well was set in a shallow zone within the source area that exhibited water during the initial investigation which was subsequently removed during source removal activities. Soil remediation and removal was completed in December 2021 and backfilling was completed in the first quarter 2022. DCP plans to continue quarterly groundwater monitoring at all 42 of the well locations until analytical results demonstrate concentrations below COGCC standards for four consecutive quarterly monitoring events, at which time a no further action (NFA) determination for the Site will be requested from the COGCC.

## 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 Form 27-S Remediation Progress Report

### 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 and Buffalo Ridge Landfill. Approximately 756 barrels of groundwater were recovered via the recovery trenches discussed previously and another approximately 2705 barrels of groundwater were recovered and disposed of during excavation activities.

Volume of E&P Waste (solid) in cubic yards 132110

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

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: Waste Management North Weld County and Buffalo Ridge Landfills

Volume of E&P Waste (liquid) in barrels 2241

E&P waste (liquid) description Petroleum hydrocarbon impacted groundwater

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: Pawnee Waste

## 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? Yes

Does the previous reply indicate consideration of background concentrations? Yes

Does Groundwater meet Table 915-1 standards? Yes

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 Site reclamation plan which has been approved by the adjacent landowners and Weld County ROW for the reconstruction of County Roads 13 and 42 consists of reclaiming the surrounding farmland to pre-excavation/remediation conditions, re-seeding per landowner approval, and county roadway reconstruction per Weld County ROW approval.

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. 04/02/2019

Actual Spill or Release date, or date of discovery. 04/02/2019

### **SITE INVESTIGATION DATES**

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

Proposed site investigation commencement. 04/04/2019

Proposed completion of site investigation. 02/01/2022

### **REMEDIAL ACTION DATES**

Proposed start date of Remediation. 04/04/2019

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 through the first quarter 2022 event. With the approved F27-S reports and conditions of approval, DCP is adhering to the new Environmental Impact Prevention 900 Series Rules and Table 915-1 for the protection of groundwater and specifically, the approved Site-specific SAP for groundwater that includes monitoring the organic parameters listed on Table 915-1 on a quarterly basis. The final delineation and removal of impacted soil material has been completed and the results of excavation and soil sampling activities were provided in the approved Form 27S report (#402898832). Groundwater results indicate that remediation has been successful, and impacts were not observed during the recent 1Q22 event. DCP will continue to provide F27-S Site progress reports to the COGCC, and quarterly groundwater monitoring will continue until a period of four consecutive quarters in which groundwater impacts are not observed. At that time, a NFA request will be presented to COGCC.

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:

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:

Date:

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**

403009203	ANALYTICAL RESULTS
403009879	ANALYTICAL RESULTS

Total Attach: 2 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)