

# State of Colorado Oil and Gas Conservation Commission

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



Document Number:

402170857

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.

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		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 #: 9353 Initial Form 27 Document #: 200437992

#### 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 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 Quarterly groundwater monitoring and reporting                   |

#### SITE INFORMATION

N Multiple Facilities ( in accordance with Rule 909.c. )

Facility Type: GAS COMPRESSOR STATION	Facility ID: -99999	API #: _____	County Name: _____
Facility Name: _____	Latitude: _____	Longitude: _____	
** correct Lat/Long if needed: Latitude: 40.176587		Longitude: -104.489836	
QtrQtr: _____	Sec: _____	Twp: _____	Range: _____ Meridian: _____ Sensitive Area? No

#### SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use PASTURE

Is domestic water well within 1/4 mile? Yes 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 and domestic wells located 1/4 mile of release.

# 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 groundwater

## DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	GROUNDWATER	See Figure 4 and Table 2	Groundwater sampling

## 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 have previously been submitted to the COGCC in the Form 19 Initial (Document #400785370) dated February 3, 2015, Form 19 Supplementals (Document #40078873 and #400930163) dated February 10, 2015, and November 11, 2015. A Form 27 Site Investigation and Remediation Work Plan (Document #400927294) approved November 18, 2015 was issued to the COGCC and detailed completed excavation activities and the installation monitoring well locations to further delineate the extent of impacts to groundwater. The COGCC issued Spill tracking facility ID# 440770 and remediation project #9359 for the Site. Previous remediation efforts have included excavation of impacted soils, installation of 12 monitoring well locations, and vacuum enhanced fluid recovery (EFR) remediation activities. Ongoing groundwater monitoring is being performed at the Site on a quarterly basis. Details of the Second Quarter 2019 groundwater monitoring event are provided within this Form 27 submittal. Additionally, historical documents groundwater monitoring reports are provided as additional attachments.

## 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 ):

### Proposed Groundwater Sampling

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

Twelve groundwater monitoring wells were installed at the Site to monitor dissolved phase total petroleum hydrocarbon impacts to groundwater. Ongoing quarterly groundwater monitoring is being performed at the Site at well locations illustrated on the attached Figure 2. Groundwater samples are analyzed for BTEX using USEPA Method 8260B. Quarterly groundwater monitoring will continue until analytical results demonstrate BTEX concentrations below COGCC standards for four consecutive quarterly monitoring events, at which time a 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 ):

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 0  
Number of soil samples exceeding 910-1             
Was the areal and vertical extent of soil contamination delineated?             
Approximate areal extent (square feet)           

### NA / ND

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

### Groundwater

Number of groundwater samples collected 12  
Was extent of groundwater contaminated delineated? Yes  
Depth to groundwater (below ground surface, in feet) 9'  
Number of groundwater monitoring wells installed 12  
Number of groundwater samples exceeding 910-1 2

--            Highest concentration of Benzene (µg/l) 84  
--            Highest concentration of Toluene (µg/l) 4  
--            Highest concentration of Ethylbenzene (µg/l) 638  
--            Highest concentration of Xylene (µg/l) 2480  
NA            Highest concentration of Methane (mg/l)           

### Surface Water

0 Number of surface water samples collected  
           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?

# 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.

As previously reported in the Form 27 Remediation Work Plan initial source remediation efforts, performed February 2, 2015 removed surface stained soils via hydrovac excavation methods. Between May 6 and 22, 2015 an additional 210 cubic yards of impacted soils and 33 bbl of groundwater were removed from the Site. In the northwest corner of the Site, in-situ remediation activities were performed to address impacts to soils within the vadose zone that were not accessible due to facility infrastructure. 12 monitoring wells have been installed to delineate petroleum hydrocarbon impacts to groundwater. Between April 28, 2015 and May 17, 2017, regular EFR remediation activities were performed removing approximately 1,188 bbls of additional impacted groundwater from the 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.

In addition to the source removal remediation activities described above, air sparge (AS) and soil vapor extraction (SVE) activities were performed at the Site August 29, 2017 and February 7, 2018. Active remedial efforts were discontinued to evaluate subsurface conditions without the influence of active remediation. Ongoing groundwater monitoring has been performed at the Site on a quarterly basis through May 2019 and will continue until a period of four consecutive quarterly monitoring events have demonstrated that groundwater impacts are below COGCC Table 910-1 standards. At that time, a no further action (NFA) determination for the Site will be requested from the COGCC. Second Quarter 2019 groundwater monitoring activities are further described in the following Groundwater Monitoring section.

## Soil Remediation Summary

### ☐ In Situ

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

### ☐ Ex Situ

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

Ongoing quarterly groundwater monitoring is being performed at the Site at the 12 groundwater monitoring well locations illustrated on the attached Figure 2. Second quarter 2019 groundwater monitoring activities were conducted on May 28, 2019 and included Site-wide groundwater gauging and sampling. Groundwater levels were measured to evaluate hydraulic characteristics and provide information regarding seasonal fluctuations at the Site. Groundwater levels and converted elevations are summarized on Table 1 and a groundwater elevation contour map is attached as Figure 3. Groundwater samples were collected from the 12 well locations using standard hand-bailing sampling methods. Collected samples were submitted to Origins Laboratory Inc. (Origins) for BTEX analysis using USEPA method 8260B. Second Quarter 2019 laboratory analytical data is summarized in Table 2 and on Figure 4, historical Site groundwater data is summarized in Table 3, and the laboratory analytical report is attached. Analytical results indicated the benzene concentration in groundwater sample BH05 (39 µg/L) and BH06 (84 µg/L) exceeded the COGCC Table 910-1 standard of 5 µg/L. Total xylenes at BH06 (2,480 µg/L) were reported above COGCC Table 910-1 standard of 1,400 µg/L. All other well locations exhibited BTEX concentrations reported below applicable COGCC Table 910-1 standards and/or below laboratory detection limits. Ongoing groundwater monitoring will continue on a quarterly basis. In addition to this second quarter 2019 progress report, as requested by COGCC in an August 22, 2019 letter, supplemental information and previous unsubmitted quarterly reports are attached with this document.

## REMEDIATION PROGRESS UPDATE

### PERIODIC REPORTING

**Frequency:** ☒ Quarterly ☐ Semi-Annually ☐ Annually ☐ Other \_\_\_\_\_

**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: \_\_\_\_\_

## 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? No \_\_\_\_\_

Is additional groundwater monitoring to be conducted? Yes \_\_\_\_\_

## 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.

Groundwater impacts and monitoring are associated with an active compressor station. No reclamation activities are planned 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. \_\_\_\_\_

Actual Spill or Release date, if known. \_\_\_\_\_

### **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). \_\_\_\_\_

Date of commencement of Site Investigation. 02/02/2015 \_\_\_\_\_

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

### **REMEDIAL ACTION DATES**

Date of commencement of Remediation. 02/06/2015 \_\_\_\_\_

Date of completion of Remediation. \_\_\_\_\_

### **SITE RECLAMATION DATES**

Date of commencement of Reclamation. \_\_\_\_\_

Date of completion of Reclamation. \_\_\_\_\_

**OPERATOR COMMENT**

Attached, is the referenced Second Quarter 2019 monitoring report attachments, as well as compiled historic monitoring reports associated with this Site.

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: 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:

Date:

Remediation Project Number: 9353

**COA Type****Description**

--	--

**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**

402174766	LOGS
402174774	MONITORING REPORT
402174788	MONITORING REPORT
402174806	MONITORING REPORT
402174814	MONITORING REPORT
402174831	MONITORING REPORT
402174841	MONITORING REPORT
402174847	MONITORING REPORT
402174874	MONITORING REPORT
402174880	MONITORING REPORT
402174894	MONITORING REPORT
402174907	MONITORING REPORT
402174945	MONITORING REPORT
402174953	MONITORING REPORT
402174954	MONITORING REPORT
402175189	MONITORING REPORT

Total Attach: 16 Files

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

		Stamp Upon Approval
--	--	---------------------

Total: 0 comment(s)