

State of Colorado Oil and Gas Conservation Commission

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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	Phone Numbers
Address: 370 17TH STREET - SUITE 2500		Phone: (303) 6051718
City: DENVER State: CO Zip: 80202		Mobile: (303) 6193042
Contact Person: Steve Weathers	Email: swweathers@dcpmidstream.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 12644

Initial Form 27 Document #: 401940170

PURPOSE INFORMATION

- | | |
|--|--|
| <input checked="" 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 checked="" type="checkbox"/> Other Supplemental investigation and well install activities |

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? Yes

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? 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

Residential development 0.25 miles to the north; Evans Town Ditch 225' east; floodplain 500' east; public wastewater treatment facility 575' south; freshwater emergent wetland 913' south; two water wells within 1,400 feet (Permits 6012-R-R and 161539); South Platte River 1,500' south, and Ashcroft Draw 2,400' west.

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 and groundwater

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	GROUNDWATER	Unknown	monitoring well installation and groundwater sampling
Yes	SOILS	800 sf	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 approved Initial eForm 27, Document #401940170 dated February 22, 2019. The Form 27 was conditionally approved (COA) by the COGCC on February 27, 2019 and the Site was assigned remediation project number #12644. Additional Site investigation activities and remediation alternatives have been provided to the COGCC via approved eForm 27 Document numbers 401964498, 402092441, 402160136, 402187024, 402255676, 402341438, 402403576 and 402431486. Continued investigation and remediation alternatives are described herein.

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):

Previously completed soil investigations were submitted via the approved eForm 27 documents discussed in the Initial Action Summary. In accordance with the most recent approved eForm 27 and the associated COGCC COAs, DCP installed two additional monitoring wells located upgradient of MW09 to establish the horizontal extent of impacts to soil and groundwater in the western area of the network and are illustrated on Figure 2. During boring advancement, soil borings were logged to evaluate geological conditions and identify any potential impacts to soil and groundwater at these locations. Soil samples were collected from zones with the highest PID detections and/or capillary fringe, and the total depth of boring. Soil samples were submitted for laboratory analysis for BTEX and TPH-GRO/DRO. The results are presented in Table 1, illustrated on Figure 3 and the laboratory reports attached. Further soil investigation is not anticipated at this time.

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 approved Form 27's and most recently (#402403576 and 402431486). DCP installed two additional monitoring wells located upgradient of MW09 to establish the horizontal extent of impacts to groundwater. The new well locations (MW13 and MW14) are illustrated on Figure 2. Groundwater samples from these new wells were collected following well development activities and submitted for laboratory analysis of BTEX with the regularly scheduled quarterly monitoring event. Analytical results from 3Q20 sampling and MW06 and MW09 resampling event, are presented herein. Ongoing quarterly groundwater monitoring of the site wells will continue.

Proposed Surface Water Sampling

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

Previous surface water sampling activities were performed at SW01 in September 2019 and were further described in Form 27 (#402187024). The sample location is presented on Figure 2. Continued monitoring of this location is not currently scheduled, however, if site conditions change, the need for future monitoring at this surface water location will be evaluated.

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 0
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 800

NA / ND

ND Highest concentration of TPH (mg/kg)
NA Highest concentration of SAR
BTEX > 910-1 No
Vertical Extent > 910-1 (in feet) 0

Groundwater

Number of groundwater samples collected 16
Was extent of groundwater contaminated delineated? No
Depth to groundwater (below ground surface, in feet) 10'
Number of groundwater monitoring wells installed 14
Number of groundwater samples exceeding 910-1 3

-- Highest concentration of Benzene (µg/l) 243
-- Highest concentration of Toluene (µg/l) 25.8
-- Highest concentration of Ethylbenzene (µg/l) 170
-- Highest concentration of Xylene (µg/l) 533
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?

Ongoing quarterly monitoring of irregular groundwater gradients and groundwater quality trends will be conducted to evaluate site trends over time and whether additional investigation may be warranted.

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 initial 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. Following completion of the additional soil investigation activities, performed April 24 to 26, and September 4, 2019, remaining soil impacts were delineated to within a small area in close proximity to the original sump replacement location. Based on other Form 27S approvals by the COGCC, additional monitoring well locations have been installed to establish the horizontal extent of impacts to groundwater (14 total). Third Quarter 2020 groundwater monitoring activities are further described in the following Groundwater Monitoring Section. Additional source removal is not recommended at this time due to the limited area of impacted soils being located in close proximity to active gas plant operations, resulting in an unreasonable risk to human health and safety and the environment. However, available methods required to remediate remaining hydrocarbon impacts to soil in the vicinity of the Sump are currently being evaluated and will be presented in a subsequent Form 27S submittal.

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.

Previously completed remediation activities were described in the approved Form 27's and following completion of the soil delineation activities, it was determined that a limited volume of impacted soil remains in place in areas that are currently considered inaccessible to remediation, due to existing gas plant operations and infrastructure resulting in an unreasonable risk to human health and safety and the environment. DCP is currently evaluating available methods required to remediate remaining TPH impacts to soil in the vicinity of the Sump, which will be presented in a subsequent eForm 27S submittal. Groundwater conditions at the Site will continue to be monitored on a quarterly basis to evaluate current Site conditions and identify any change in conditions over time that may warrant additional subsurface investigations at the Site. Appropriate groundwater remediation activities will be evaluated for the Site and presented for COGCC approval in a supplemental eForm 27. In the interim, vacuum enhanced fluid recovery remediation may be performed at existing monitoring wells with elevated BTEX concentrations.

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
Yes ☐ Other Possible interim vacuum enhanced fluid recovery and additional monitoring well installation.

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.

Site-wide groundwater sampling is conducted on a quarterly basis at the 14 Site monitoring well locations MW01 through MW14, illustrated on the attached Figure 2. During the 3Q2020 monitoring event, performed August 19, 2020, groundwater levels and samples were collected from the 14 Site well locations using standard hand-bailing sampling methods, and were submitted to Origins Laboratory Inc. (Origins) for BTEX analysis using USEPA method 8260B. Following comments and discussion with COGCC, MW06 and MW09 were resampled on September 21, 2020 to confirm a potential field or laboratory transcription error. Groundwater elevations and flow trends are presented in Table 2 and illustrated on Figure 4. Third Quarter 2020 laboratory analytical data for BTEX constituents are summarized on Table 3 and presented on Figure 5. The laboratory analytical reports are also provided as an attachment. Benzene concentrations above the COGCC standards were reported at three of the 14 monitoring locations (MW01, MW04, MW06) during the third quarter event, however, MW06 was below the standards during the recent resample event. Based on the current monitoring well network and results, hydrocarbon impacts to groundwater have been delineated in all directions of the Site. Ongoing quarterly monitoring and groundwater data analysis will be conducted to evaluate site trends over time and whether additional investigation may be warranted.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: ☒ Quarterly ☐ Semi-Annually ☐ Annually ☐ Other _____

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

☒ Other 3Q20 progress report _____

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? No _____

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? No _____

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.

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

DCP will continue to adapt to the new and changing COVID-19 health and safety policies.

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: 12644

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

402489017	MONITORING REPORT
402503737	MONITORING REPORT

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)