

State of Colorado
Oil and Gas Conservation Commission

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Report taken by:
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 INFORMATON

Name of Operator: <u>DCP OPERATING COMPANY LP</u>	Operator No: <u>4680</u>	Phone Numbers
Address: <u>370 17TH STREET - SUITE 2500</u>		Phone: <u>(970) 378-6373</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>(970) 939-0329</u>
Contact Person: <u>Chandler Cole</u>	Email: <u>cecole@dcpmidstream.com</u>	

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 <u>Private residence sub-slab soil vapor, indoor air, and exterior soil vapor analytical results report</u>

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

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>463819</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>CR42 and CR13</u>	Latitude: <u>40.292285</u>	Longitude: <u>-104.941832</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SESE</u>	Sec: <u>24</u>	Twp: <u>4N</u>	Range: <u>68W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

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. Agriculture land adjacent to the northwest and southwest of release point.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste | <input type="checkbox"/> Other E&P Waste | <input type="checkbox"/> Non-E&P Waste |
| <input type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids | _____ |
| <input type="checkbox"/> Oil | <input type="checkbox"/> Tank Bottoms | |
| <input checked="" type="checkbox"/> Condensate | <input type="checkbox"/> Pigging Waste | |
| <input type="checkbox"/> Drilling Fluids | <input type="checkbox"/> Rig Wash | |
| <input type="checkbox"/> Drill Cuttings | <input type="checkbox"/> Spent Filters | |
| | <input type="checkbox"/> Pit Bottoms | |
| | <input type="checkbox"/> Other (as described by EPA) | _____ |

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	GROUNDWATER	Undetermined	Free phase condensate material observed at ~12' bgs in two groundwater monitoring wells.
Yes	SOILS	Undetermined	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, 2019, the property residents (two) elected to move to a temporary residence nearby in Johnstown, CO and they are presently in that temporary residential housing. In accordance with the April 16, 2019 Form 27 (Document #402004215) DCP performed interior sub-slab vapor intrusion and indoor ambient air investigation and sampling activities within the private residence. Sub-slab soil vapor points were installed in accordance with EPA guidelines and purging and sampling was performed using standard helium shroud leak detection practices. Subsequent to leak detection monitoring, the sub-slab soil vapor samples were collected over an approximate 30-minute duration. Indoor ambient air samples were collected from within the basement and main floors of the residence using evacuated stainless-steel summa canisters outfitted with 24-hour collection regulators. Subsequent to the respective collection periods, the samples were submitted to Origins Environmental Laboratory in Denver, CO for analysis of total VOC and TVPH using USEPA Method TO-15. Exterior subsurface soil vapor samples were attempted to be collected using a soil vapor probe but were unsuccessful due to tight soil lithology. Additionally, during exterior soil-vapor purging activities at the SVE-01 location, condensate material was observed within the sample tubing and soil vapor sampling was discontinued at that location. At the exterior soil-vapor sampling point SVE-02, positive air flow from the subsurface location was unsuccessful during purging activities and vapor sampling at that location was discontinued. Additionally, condensate material was observed on the tip of the vapor sample probe when it was retrieved. The sub-slab, ambient air, and exterior soil vapor locations are illustrated on the attached Figure 2. The laboratory analytical data are summarized on Table 1 and the analytical reports are provided as an attachment.

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):

Soil samples were not collected during this portion of the Site investigation. Additional Site investigation activities and results will be provided in a supplemental Form 27 Summary Report.

Proposed Groundwater Sampling

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

Groundwater samples were not collected during this portion of the Site investigation. Additional Site investigation activities will be provided in supplemental Form 27 Summary 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):

Based on the analytical data from the sub-slab soil vapor and ambient indoor air samples as well as observations during the exterior subsurface soil-vapor purging activities, the owners of the private residence have agreed to continue to remain living in another residence. Additional site investigations are ongoing including drilling and soil sampling using direct push and hollow stem auger drilling with continuous core sampling. To date, 12 groundwater monitoring wells have been installed at the Site. Results of the drilling, soil sampling, and monitoring well installation activities will be provided in a supplemental Form 27 Work Plan and Summary Report.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 96

Number of soil samples exceeding 910-1 23

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet) 19000

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 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 12'

Number of groundwater monitoring wells installed 12

Number of groundwater samples exceeding 910-1 0

NA Highest concentration of Benzene (µg/l)

NA Highest concentration of Toluene (µg/l)

NA Highest concentration of Ethylbenzene (µg/l)

NA 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 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?

DCP has located the release point in the pipeline, shut-in the line, and removed the section with the leak for forensic analysis to determine the cause of the leak. Impacted soil was encountered up to approximately 150 feet east of the DCP pipeline where the source originated and at 14 feet below ground surface. Free phase condensate material has been observed within two groundwater monitoring wells and one temporary peizometer that have been installed at the site. Additional monitoring wells are planned to be installed and well development and groundwater sampling will be performed. These work activities will be provided in a supplemental Form 27 Work Plan and Summary Report.

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 Site investigation is being performed to delineate soil and groundwater impacts. Additional groundwater monitoring wells will be installed and groundwater well development and sampling will be performed. Soil and groundwater investigation activities will be provided in a supplemental Form 27 Work Plan and Summary Report.

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. 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 soil and groundwater 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.

For purposes of this Form 27 submittal, remediation discussions are specific to the subsurface investigation that was conducted within and near the adjacent residence to assess the potential for intrusion of petroleum hydrocarbon impacted vapors into the building. A series of interior sub-slab soil vapor sampling points were installed inside the property to assess the potential for intrusion of petroleum hydrocarbon vapors into the residence. Additionally, interior ambient air samples were collected to compare to sub-slab soil vapor concentrations. Exterior subsurface soil vapor sampling points were also installed, however, due to the soil lithology and free phase condensate material observed within the vapor sample tubing, exterior sub-surface soil vapor samples were unable to be collected. The interior sub-slab soil vapor and ambient air sample laboratory analytical data are summarized on the attached Table 1 and the laboratory analytical reports are also provided. The locations of the sampling points are illustrated on Figure 2. At this time, ongoing subsurface investigation at the Site is required and supplemental Form 27 Remediation Work Plans and summary reports will be provided for review.

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.

Twelve groundwater monitoring wells have been installed at the Site. Additional monitoring wells are planned to be installed to delineate the lateral extents of petroleum hydrocarbon impacts near the residence. A supplemental Form 27 Work Plan and summary report will be provided detailing these activities for review.

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 Sub-slab soil vapor and indoor ambient air sampling results

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? _____

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 soil and groundwater are on-going. 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: Chandler Cole

Title: Compliance Coordinator

Submit Date: 05/30/2019

Email: cecole@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: 06/13/2019

Remediation Project Number: 13272

COA Type

Description

<u>COA Type</u>	<u>Description</u>

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.

<u>Att Doc Num</u>	<u>Name</u>
402051228	FORM 27-SUPPLEMENTAL-SUBMITTED
402059231	ANALYTICAL RESULTS
402059233	MAP
402059236	ANALYTICAL RESULTS
402059237	ANALYTICAL RESULTS
402059242	ANALYTICAL RESULTS

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)