

State of Colorado
Energy & Carbon Management Commission

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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 ECMC 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: <u>DCP OPERATING COMPANY LP</u>	Operator No: <u>4680</u>	Phone Numbers
Address: <u>2331 CITYWEST BLVD., S812-02</u>		Phone: <u>(303) 619-3042</u>
City: <u>HOUSTON</u> State: <u>TX</u> Zip: <u>77042</u>		Mobile: <u>(303) 619-3042</u>
Contact Person: <u>Steve Weathers</u>	Email: <u>stephen.weathers@p66.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 12393 Initial Form 27 Document #: 401905697

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: Second Half 2024 GW Summary & 2024 Soil Sampling Results

SITE INFORMATION

No Multiple Facilities

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>458322</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Knaub 9-13G Pipeline Release</u>	Latitude: <u>40.320118</u>	Longitude: <u>-104.673830</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWSW</u>	Sec: <u>9</u>	Twp: <u>4N</u>	Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Livestock and agricultural land

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

Behrens Reservoir, drainage ditch, crop land and occupied buildings.

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
No	GROUNDWATER	Unimpacted	Groundwater sampling
Yes	SOILS	Approx. 875 square feet or less	Soil 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 ECMC in the Form 19 Initial (Document #401806989) dated October 23, 2018 and Form 19 Supplemental (Document #401826051) dated November 5, 2018. A Form 27 Site Investigation and Remediation Work Plan (Document #401905697) approved January 29, 2019 was issued to the ECMC and detailed completed excavation activities and included proposed monitoring well installation locations to further delineate the extent of impacts to groundwater. A Form 27 Supplemental (Document #402024912) approved May 1, 2019 was issued to the ECMC and detailed activities to further delineate impacts to groundwater by installation of five groundwater monitoring wells. The ECMC issued Spill tracking facility ID# 458322 and remediation project #12393 for the Site. Two additional monitoring wells were installed in October 2019 and additional Site investigation activities and remediation alternatives have been provided to the ECMC via previously approved Form 27 Documents. In December 2020, DCP Operating Company (DCP) / Phillips 66 (P66) collected confirmation soil samples from the initial 2018 soil locations that exhibited results above the ECMC soil standards which indicated that minimal impacts remain in the soil around the infrastructure.

Following the initial 2018 & 2020 investigation, removal of additional soil was postponed until above ground infrastructure, owned by others, had been removed. The infrastructure was removed, and based on discussion with ECMC in April 2024, five (5) confirmation soil samples were collected in May 2024 near the former excavation and areas that were unable to be delineated due to safety concerns related to active above & below ground infrastructure. Additionally, tank battery decommissioning and investigation has been performed by the former tank battery operator for remediation project #30788.

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 Form 27 documents discussed in the Initial Action Summary. A total of seven monitoring wells have been installed and are illustrated on Figure 2. Once the October 23, 2018, investigation was complete, removal of additional soils was postponed until above ground infrastructure, owned by others, had been removed. With ECMC approval, DCP/P66 collected five (5) confirmation soil samples in May 2024 from the locations that exhibited elevated TPH concentrations from the December 2020 excavation. Samples were collected below the extent of the former excavation at a depth of 6 to 7 feet and analyzed for the full list of Table 915-1 analytes. Sample locations and analytical results are presented on Figure 2 and in Tables 1-3, respectively. Field soil boring logs and photos are also included as an attachment.

Proposed Groundwater Sampling

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

With ECMC approval, groundwater monitoring has been performed on a semi-annual basis while groundwater results remain below the standards. The first half 2024 monitoring event was conducted in March 2024 and the details were provided in the approved F27 document #403774330. Based on recent tank battery decommissioning activities as described herein, quarterly groundwater monitoring activities were performed during the second half 2024 (2H24) in September and December 2024. Groundwater elevations and flow trends are presented in Figures 3 and 4. Laboratory analytical data for Table 915-1 constituents are presented in Tables 5-7 and on Figure 5. Groundwater concentrations remained below ECMC standards through 2024 and have been below ECMC standards for four years indicating that there is not a pathway to groundwater for petroleum hydrocarbon impacts that may remain adhered to soil particles in the vadose or saturated zones.

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 10

Number of soil samples exceeding 915-1 9

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

Approximate areal extent (square feet) 875

NA / ND

-- Highest concentration of TPH (mg/kg) 1620

-- Highest concentration of SAR 4.2

BTEX > 915-1 Yes

Vertical Extent > 915-1 (in feet) 4

Groundwater

Number of groundwater samples collected 12

Was extent of groundwater contaminated delineated? Yes

Depth to groundwater (below ground surface, in feet) 5

Number of groundwater monitoring wells installed 7

Number of groundwater samples exceeding 915-1 0

ND Highest concentration of Benzene (µg/l)

ND Highest concentration of Toluene (µg/l)

-- Highest concentration of Ethylbenzene (µg/l) 1.01

-- Highest concentration of Xylene (µg/l) 9.9

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?

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?

DCP/P66 performed confirmation soil sampling in the area of the former excavation and areas that were unable to be delineated at five locations including from the previous base and extents of the former excavation to evaluate subsurface conditions. Based on the groundwater analytical results being below the ECMC groundwater standards since November 2019, an impacted soil to groundwater pathway is not present at the Site. However, the results from the May 2024 investigation performed by DCP/P66 as well as investigation activities performed by the former tank battery operator for remediation number 30788, indicate that soil impacts above the Table 915-1 standards remain in place, and additional remediation may be required. The results of the DCP/P66 May 2024 soil investigation are provided in this F27 report. DCP/P66 has made several attempts to contact the former operator of the tank battery to discuss the site but has not received a response.

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 (Document #402024912) initial source remediation efforts, performed on October 23, 2018, successfully removed approximately 200 cubic yards (CY) of impacted soils. DCP/P66 has advanced seven monitoring wells with drilling equipment and continuously sampled the borings to evaluate geology and verify the vertical extent of impacts at the Site. The borings were completed as 1-inch monitoring wells to evaluate groundwater conditions at the Site. Concentrations have been below the ECMC standards for fourteen consecutive monitoring events since November 2019, and groundwater impacts appear to have naturally attenuated below the Protection of Groundwater Standards in Table 915-1. Any impacted soils that remain onsite do not act as a residual source and or negatively affect human health or the environment. DCP/P66 has made several attempts to contact the operator of the former tank battery and remediation project number 30788 to coordinate a remediation plan and is awaiting response.

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.

As reported in the Form 27 Remediation Work Plan (Document #402024612), remediation efforts successfully removed impacted soils associated with the Site. Removal of additional soil was postponed until above ground infrastructure, owned by others, had been removed. Following initial soil excavation activities, DCP/P66 installed seven groundwater monitoring wells on May 17 and October 11, 2019, at the locations illustrated on Figure 2. Groundwater monitoring has been performed at the Site on a routine basis since May 2019 and the analytical results have demonstrated that the parameters have been below ECMC Table 915 standards since November 2019. An additional soil investigation was also completed on December 16, 2020, to determine if remaining impacts to soil were present in the areas that exhibited elevated TPH during the initial investigation. The December 2020 soil investigation results illustrated that limited impacted material remains around the current infrastructure approximately 4 feet below ground surface, and that the remaining material is not affecting groundwater concentrations. While semi-annual groundwater monitoring was approved by the ECMC, DCP/P66 performed quarterly activities during the second half of 2024 as described herein. Groundwater concentrations have been below the ECMC standards for fifteen consecutive monitoring events since November 2019, and groundwater impacts appear to have naturally attenuated below the Protection of Groundwater Standards in Table 915-1. With the recent removal of oil and gas infrastructure, DCP/P66 performed confirmation soil sampling onsite around the former excavation extents to evaluate any soil impacts that may have been left in place. The results of this investigation are provided in this Form 27-S report. DCP/P66 has made several attempts to contact the operator of the former tank battery and remediation project number 30788 to coordinate a remediation plan and is awaiting response.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Excavate and offsite disposal

_____ Chemical oxidation

_____ If Yes: Estimated Volume (Cubic Yards) _____

_____ Air sparge / Soil vapor extraction

_____ Name of Licensed Disposal Facility or ECMC Facility ID # _____

_____ Natural Attenuation

_____ Excavate and onsite remediation

_____ Other _____

_____ Land Treatment

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Other _____

Groundwater Remediation Summary

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Air sparge / Soil vapor extraction

Yes _____ 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.

The 2H24 monitoring event and results are presented in this report. During 2H24 groundwater monitoring events, performed on September 19 and December 9, 2024, groundwater levels and samples were collected from six of the seven site wide well locations using standard hand bailing methods, and were submitted to Origins Laboratory Inc. (Origins) for analyses using USEPA method 8260D (BTEX; 1,2,4 TMBs; 1,3,5 TMBs; and naphthalene). Well location MW07 could not be located during the events and is presumed destroyed by landowner activity. Analytical results indicated that the concentrations were below applicable ECMC standards and/or the laboratory detection limits at all groundwater monitoring well sample locations for both sampling events. Groundwater elevations and flow trends are presented in Table 5 and illustrated in Figures 3 and 4. Laboratory analytical data for Table 915-1 constituents during the 2H24 are summarized in Table 6 and illustrated in Figure 5. Historical analytical data is provided in Table 7. The groundwater laboratory analytical reports are provided as a separate attachments. Groundwater concentrations have been below ECMC standards for four years indicating the groundwater has not been affected by residual soil concentrations remaining at the site.

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 Second Half 2024 Form 27 Supplemental Report & Soil Investigation Results

Adequacy of Operator's General Liability Insurance and Financial Assurance

Describe the adequacy of the Operator's general liability insurance and Financial Assurance to fully address the anticipated costs of Remediation, including the estimated remaining cost for this project (below).

If this information has been provided on a Form 27 within the last 12 months, provide the Document Number of that form.

DCP/P66 has sufficient insurance to fully address the anticipated costs of Remediation, including the remaining estimated costs for this project. DCP/P66 currently has \$5,000,000 in general liability insurance. The cost provided below for remediation is a preliminary estimate only, costs may change upwards or downward based on site-specific information. DCP/P66 makes no representation or guarantees as to the accuracy of the preliminary estimate.

Operator anticipates the remaining cost for this project to be: \$ 50000

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 _____

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: _____

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

E&P waste (liquid) description _____

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: _____

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? No

Does the previous reply indicate consideration of background concentrations? _____

Does Groundwater meet Table 915-1 standards? Yes

Is additional groundwater monitoring to be conducted? _____

Operator shall comply with the ECMC 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.

Following successful completion of the soil sampling investigation described herein, the borings will be backfilled with a combination of fill and topsoil material and graded to match the existing surroundings. Ground surfaces will be completed to match existing conditions and re-seeding of the disturbed area will be performed if requested and needed by the landowner at that 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 provide the seed mix? No

If YES, does the seed mix comply with local soil conservation district recommendations? _____

Did the local soil conservation district provide the seed mix? No

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. _____

Actual Spill or Release date, or date of discovery. 10/22/2018

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/22/2018

Proposed site investigation commencement. 10/23/2018

Proposed completion of site investigation. 12/31/2023

REMEDIAL ACTION DATES

Proposed start date of Remediation. _____

Proposed date of completion of Remediation. 12/31/2025

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

DCP/P66 completed confirmation sampling at five soil locations (Figure 2) around the former excavation and other specific areas that could not be fully delineated due to site conditions at the time and or safety concerns around active above & below ground infrastructure. Groundwater has remained unimpacted since 2019 (15 events) and the soil samples collected as part of this investigation were collected to delineate vertically the areas that exhibited detections above ECMC standards previously. DCP/P66 has made several attempts to contact the tank battery operator and remediation project number 30788 to discuss potential coordination of remediation efforts but has not received a response. Based on the investigation performed for remediation project number 30788 and apparent soil impacts caused by multiple sources, DCP/P66 believes final remediation of the impacted soil at the site and subsequent reclamation activities should be coordinated between the companies. Additional attempts will be made to contact the former operator of the tank battery.

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: Steve Weathers

Title: Program Manager

Submit Date: _____

Email: ECMCnotification@p66.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with ECMC Rules and applicable orders and is hereby approved.

ECMC Approved: _____

Date: _____

Remediation Project Number: 12393

COA Type

Description

0 COA	

ATTACHMENT 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

404109329	ANALYTICAL RESULTS
404109330	ANALYTICAL RESULTS
404109333	ANALYTICAL RESULTS
404115875	OTHER

Total Attach: 4 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)