

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: PDC ENERGY INC	Operator No: 69175	Phone Numbers
Address: 1099 18TH STREET SUITE 1500		Phone: (303) 860-5800
City: DENVER State: CO Zip: 80202		Mobile: ()
Contact Person: Karen Olson	Email: karen.olson@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 36818 Initial Form 27 Document #: 403873678

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: WELL	Facility ID: _____	API #: 123-21347	County Name: WELD
Facility Name: D. L. PHILLIPS 24-31	Latitude: 40.383720	Longitude: -104.843140	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NESW	Sec: 24	Twp: 5N	Range: 67W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SW Most Sensitive Adjacent Land Use Grassland

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? No

Other Potential Receptors within 1/4 mile

Riverine 0.08mi E

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- X 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

Table with 4 columns: Impacted?, Impacted Media, Extent of Impact, How Determined. Rows include UNDETERMINED and Yes for GROUNDWATER and SOILS.

INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

Pursuant to ECMC Rule 911 a site investigation was conducted pertaining to the D. L. Phillips 24-31 wellhead cut and cap and flowline abandonment.

Approximately 2412' of flowline was abandoned-in-place on 10/18/24. This flowline lies in a common trench with Phillips 24-3-23 (REM #36816) and D.L. Phillips 24-34 (REM #36886).

The flowline is currently planned for future removal, at which time soil sampling and screening samples would be taken along the flowline at any points of material change and/or hammer unions, and directional changes.

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

X Will soil samples be collected as part of this investigation? (Number, type (grab/composite), analyses, and locations of samples):

Soil samples were collected as described in the Initial Action Summary of this Form 27, in accordance with the approved sampling plan in the Initial Form 27 (ECMC Document # 403873678).

The additional decommissioning samples collected during the SSI will be analyzed to the full extent of Table 915-1 as described above.

Proposed Groundwater Sampling

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

If groundwater is encountered during the site investigation a grab groundwater will be collected and analyzed for all organic and inorganic compounds per ECMC Table 915-1; this sample analysis includes, but is not limited to BTEX, naphthalene, 1,2,4-trimethylbenzene (TMB), and 1,3,5-TMB by EPA Method 8260, chloride and sulfate anions by EPA Method 300.0, and total dissolved solids (TDS) by Method SM 2540C.

Proposed Surface Water Sampling

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

Empty box for surface water sampling details.

Additional Investigative Actions

Additional alternative investigative actions described in attached Site Investigation Plan (summary):

Visual inspection of the wellhead and flowline risers occurred during abandonment activities. Field personnel screened all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling was required. Detailed summaries of the wellhead decommissioning and flowline abandonment activities, including field notes, site photos, figures, and laboratory analytical results, are attached to this Form 27.

A summary of the decommissioning samples along the flowline will be submitted in a subsequent Form 27.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 4
Number of soil samples exceeding 915-1 4
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 100

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 0.944
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 6

Groundwater

Number of groundwater samples collected 0
Was extent of groundwater contaminated delineated? Yes
Depth to groundwater (below ground surface, in feet) _____
Number of groundwater monitoring wells installed _____
Number of groundwater samples exceeding 915-1 _____

_____ Highest concentration of Benzene (µg/l) _____
_____ Highest concentration of Toluene (µg/l) _____
_____ Highest concentration of Ethylbenzene (µg/l) _____
_____ Highest concentration of Xylene (µg/l) _____
_____ Highest concentration of Methane (mg/l) _____

Surface Water

0 Number of surface water samples collected
_____ 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?

One background soil sample (BKG01@3') was collected on 10/18/2024 during decommissioning activities at the adjacent Phillips 24-31 Flowline (API#: 05-123-21347, REM# 36818). The background sample was analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. The sample was collected at a depth of 3 feet below ground surface (ft bgs) and the lithology was observed to be similar to that observed in site samples. The maximum background concentrations for pH was observed to be 8.66. The maximum background concentrations with a 1.25x multiplier applied for arsenic and barium were calculated to be 5.80 mg/kg and 148 mg/kg respectively.

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?

A supplemental site investigation (SSI) will be completed to horizontally and vertically delineate the arsenic exceedance at sample location WH01@6'. Additional background samples (BKG02-BKG06) will be collected to determine if elevated pH, arsenic, barium, lead and selenium concentrations can be attributed to native soil conditions at the site. Concurrently with the SSI, additional decommissioning samples will be collected along the flowline. Laboratory confirmation samples will be collected along the flowline at directional changes (FL01-01 - FL01-04, FL01-08, FL01-09, & FL01-13 - FL01-15). Screening samples will be collected along the line at a minimum of every 250' (FL01-05 - FL01-07 & FL01-10 - FL01-13). Visual inspection of disturbed areas along the flowline will occur in order to determine if any additional sampling is required. The SSI will be completed in accordance with the proposed implementation schedule, and the results of the SSI will be submitted on a subsequent Form 27.

REMEDIAL ACTION PLAN

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? Yes

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

No impacted material caused by oil and gas operations was identified at this time.

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.

A supplemental site investigation (SSI) will be completed to horizontally and vertically delineate the arsenic exceedance at sample location WH01@6'. Additional background samples (BKG02-BKG06) will be collected to determine if elevated pH, arsenic, barium, lead and selenium concentrations can be attributed to native soil conditions at the site. Concurrently with the SSI, additional decommissioning samples will be collected along the flowline. Laboratory confirmation samples will be collected along the flowline at directional changes (FL01-01 - FL01-04, FL01-08, FL01-09, & FL01-13 - FL01-15). Screening samples will be collected along the line at a minimum of every 250' (FL01-05 - FL01-07 & FL01-10 - FL01-13). Visual inspection of disturbed areas along the flowline will occur in order to determine if any additional sampling is required. The SSI will be completed in accordance with the attached proposed site investigation map and proposed sampling plan outlined in the Site Investigation Report section of this Form 27.

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

_____ 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.

Groundwater was not encountered during the flowline abandonment activities.

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 Decommissioning Sample Summary & Supplemental Site Investigation Proposal

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.

Operator does not have site-specific financial assurance for this project; however, Operator has inactive well, blanket, and surface bonding including Surety IDs 106077122, 106473808, and 106473820, as well as commercial general liability and/or umbrella/excess insurance meeting the requirements of Rule 705.b. Operator does not anticipate making an insurance claim for this project.

- Further soil investigation/delineation is required

Costs included herein are estimates only and may change over time based on numerous factors. Accordingly, Operator makes no guarantees as to the accuracy of such cost estimates, thus providing an estimate for the next year below.

Operator anticipates the remaining cost for this project to be: \$ 15000

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? _____

Does the previous reply indicate consideration of background concentrations? _____

Does Groundwater meet Table 915-1 standards? _____

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.

Reclamation will be in accordance with ECMC 1000 Series Rules.

Is the described reclamation complete? Yes

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. 09/04/2024

Proposed date of completion of Reclamation. 08/22/2026

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. 06/25/2024

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 09/04/2024

Proposed site investigation commencement. 11/22/2024

Proposed completion of site investigation. 08/22/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/22/2025

Proposed date of completion of Remediation. 02/22/2026

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:

The implementation schedule has been changed due to the decommissioning activities at the former Phillips 24-31 wellhead and flowline, as well as the necessity for a supplemental site investigation (SSI) and decommissioning sampling adjacent to the wellhead and flowline. SSI & decommissioning sampling is tentatively scheduled for the spring of 2025.

OPERATOR COMMENT

This Form 27 is being submitted to include the decommissioning results at the former Phillips 24-31 wellhead and flowline. A proposal to collect additional background samples and decommissioning samples is presented in the Site Investigation Report section of this Form 27.

The D. L. Phillips 24-31 wellhead was cut and capped per ECMC rules 09/04/34. A grab soil sample (WH01@6') was collected at the base of the excavation at the wellhead excavation. Additionally, soil samples were field screened at the N-E-S-W sides of the wellhead. A laboratory sample was collected from beneath the flowline riser at the wellhead (FLR01@4') during the wellhead decommissioning. Approximately 2412' of flowline was abandoned-in-place on 10/18/24. This flowline lies in a common trench with Phillips 24-3-23 (REM #36816) and D.L. Phillips 24-34 (REM #36886). So as to not disturb the other lines sharing the common trench, soil samples were collected from beneath the flowline risers at the wellhead (FL01R-W@3') and separator (FL01R-S@3'). Soil samples were submitted for laboratory analysis of the full Table 915-1 analytical suite by ECMC approved methods. All organic constituents were below Table 915-1 standards.

One background soil sample (BKG01@3') was collected on 10/18/2024 during decommissioning activities at the adjacent Phillips 24-31 Flowline (API#: 05-123-21347, REM# 36818). The background sample was analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. The sample was collected at a depth of 3 feet below ground surface (ft bgs) and the lithology was observed to be similar to that observed in site samples. The maximum background concentrations for pH was observed to be 8.66. The maximum background concentrations with a 1.25x multiplier applied for arsenic and barium were calculated to be 5.80 mg/kg and 148 mg/kg respectively.

A supplemental site investigation (SSI) will be completed to horizontally and vertically delineate the arsenic exceedance at sample location WH01@6'. Additional background samples (BKG02-BKG06) will be collected to determine if elevated pH, arsenic, barium, lead and selenium concentrations can be attributed to native soil conditions at the site. Concurrently with the SSI, additional decommissioning samples will be collected along the flowline. Laboratory confirmation samples will be collected along the flowline at directional changes (FL01-01 - FL01-04, FL01-08, FL01-09, & FL01-13 - FL01-15). Screening samples will be collected along the line at a minimum of every 250' (FL01-05 - FL01-07 & FL01-10 - FL013). Visual inspection of disturbed areas along the flowline will occur in order to determine if any additional sampling is required. The SSI will be completed in accordance with the proposed implementation schedule, and the results of the SSI will be submitted on a subsequent Form 27.

Additional SSI activities will be proposed (as applicable) on a future Form 27 if further investigation is required. Quarterly reporting will be conducted until closure criteria are achieved for the remediation project. The results of the supplemental site investigation will be submitted on a subsequent Form 27.

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

Signed: Jake Whritenour

Title: Environmental Consultant

Submit Date: _____

Email: tas-chevron-5@tasman-geo.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: 36818

COA Type

Description

0 COA	
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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

403999277	OTHER
403999281	ANALYTICAL RESULTS
403999324	OTHER
403999325	ANALYTICAL RESULTS
404004807	SITE INVESTIGATION PLAN

Total Attach: 5 Files

General Comments

User Group

Comment

Comment Date

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

Total: 0 comment(s)