FORM 27 Rev 5/22

State of Colorado
Energy & Carbon Management Commission

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Report taken by: RICK ALLISON

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 INFORMATON

Name of Operator: PDC ENERGY INC Operator No: 69175
Address: 1099 18TH STREET SUITE 1500
City: DENVER State: CO Zip: 80202
Contact Person: Karen Olson Email: karen.olson@chevron.com

Phone Numbers
Phone: (303) 860-5800
Mobile: ( )

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 27511 Initial Form 27 Document #: 403316448

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.
- [X] 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: SPILL OR RELEASE Facility ID: 483385 API #: County Name: WELD
Facility Name: Pierce - GW Walker 1 Latitude: 40.627487 Longitude: -104.774131
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: SESE Sec: 28 Twp: 8n Range: 66W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

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

Nearest Well: Domestic / Stock - 392' W; Surface Water: Irrigation Ditch - 238' E; Occupied Building: 469' SSE; Livestock: 429' SSW; FWS Wetlands: 1,141' WSW Freshwater Emergent Wetland (PEM1A); HPH Sensitive Wildlife Habitat: Rule 1202.d: Wellhead & Flowline Within Mule Deer Winter Concentration Area; Rule 1202.d: Wellhead & Flowline Within Mule Deer Severe Winter Range; Rule 1202.d: Wellhead & Flowline Within Pronghorn Winter Concentration.

Flowline Confict: Rule 1202.d: Wellhead & Flowline Within Mule Deer Winter Concentration Area; Rule 1202.d: Wellhead & Flowline Within Mule Deer Severe Winter Range; Rule 1202.d: Wellhead & Flowline Within Pronghorn Winter Concentration.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- [X] **E&P Waste**
- [X] Produced Water
- [X] Oil
- [X] Condensate
- [ ] Drilling Fluids
- [ ] Drill Cuttings
- [ ] **Other E&P Waste**
- [ ] Workover Fluids
- [ ] Tank Bottoms
- [ ] Pigging Waste
- [ ] Rig Wash
- [ ] Spent Filters
- [ ] Pit Bottoms
- [ ] Other (as described by EPA) _____
- [ ] **Non-E&P Waste** _____

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	GROUNDWATER	NA	Confirmation Soil Sampling, if encountered
Yes	SOILS	Refer to Document No. 403515800	Confirmation 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.

On December 1, 2022, PDC conducted a flowline pressure test and collected a confirmation soil sample. On December 2, 2022, following the return of confirmation soil sampling analytical results, a historic release was discovered at the Walker 1 Flowline. Following the discovery of the release, mitigation activities were initiated and to date, approximately 30 cubic yards of impacted material were removed and transported to the North Weld Waste Management Facility for disposal under PDC waste manifests.

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):

On December 1, 2022, one soil samples (FL-01) was collected from a depth of approximately 1 ft bgs from potentially impacted material where water from the flowline was daylighting on the surface during a pressure test of the abandoned flowline. The soil sample was submitted for laboratory analysis of BTEX, naphthalene, 1,2,4-TMB, 1,3,5-TMB and TPH. Analytical results indicated compound concentrations were in exceedance of applicable standards. On December 27, 2022, six soil samples (SS01-SS06) were collected adjacent to the flowline leak area from the base and sidewalls of the excavation at depths between 2.5 ft and 7 ft bgs and were submitted for laboratory analysis of the full ECMC Table 915-1 analytical suite. Analytical results indicated that compound concentrations were observed below the ECMC Table 915-1 standards in soil samples collected from the final excavation extent with the exception of pH, arsenic, barium, and/or selenium exceedances observed in soil samples SS01-SS06.

Proposed Groundwater Sampling

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

If groundwater it encountered during the site investigation, grab groundwater samples will be collected and analyzed for all organic and inorganic compounds per ECMC Table 915-1.

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):

One five-point composite soil sample (SP01) was collected from a spoil pile on-site and submitted for analysis of the full ECMC Table 915-1 analytical suite. Analytical results indicated that compound concentrations were observed below the ECMC Table 915-1 standards with the exception of selenium.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil **NA / ND**

Number of soil samples collected 12

Number of soil samples exceeeding 915-1 0

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

Approximate areal extent (square feet) 0

NA Highest concentration of TPH (mg/kg)

NA Highest concentration of SAR

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 0

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

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?

On October 3, 2024, two (2) background soil borings (BKG06 & BKG07) were advanced in native material up-gradient of the flowline and six soil samples were collected between depths of approximately 2 feet and 14 feet bgs and submitted for laboratory analysis of arsenic and pH. Analytical results indicated that arsenic and pH were observed in exceedance of the applicable regulatory standards in native soil.

Additional background samples collected on December 27, 2022 and June 20, 2023, are discussed in the previously submitted Supplemental Form 27, ECMC Document # 403515800.

☒ Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) 30

Volume of liquid waste (barrels) 0

☒ Is further site investigation required?

A supplemental site investigation (SSI) was completed to vertically and horizontally delineate the pH exceedance observed at sample location SS01 @ 7' on October 3, 2024. An additional SSI will be completed to collect vertical and lateral delineation soil samples, which will be analyzed for full ECMC Table 915-1. Proposed soil boring locations (SB15-SB19) are shown on the attached Site Investigation Plan. The SSI will be completed during the fourth quarter 2025, following the 2025 harvest.

Volatile organic compound (VOC) concentrations using a photoionization detector (PID) and lithologic descriptions will be recorded for each borehole.

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.

On December 27, 2022, approximately 30 cubic yards of impacted material were excavated adjacent to and below the flowline and transported to the North Weld Waste Management Facility for disposal under PDC waste manifests.

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.

On October 3, 2024, eight (8) soil borings (SB06-SB14) were advanced via hand auger to delineate the vertical & horizontal extents of arsenic and pH exceedances observed in the during the June 20, 2023 delineation event. Twelve (12) soil samples were collected between 2 feet and 14 feet bgs and submitted for laboratory analysis of pH and/or arsenic as applicable for delineation. Analytical results indicated that arsenic levels were in exceedance of the applicable ECMC Table 915-1 standards in soil samples SB12 @ 2-3'. SB13 @ 2-2.5', SB13 @ 6.5-7.5', and SB14 @ 2-3'; however, all site arsenic concentrations observed during the October 3, 2024 SSI and previous site investigation activities were below background levels. Analytical results indicated that pH levels were in exceedance of the applicable ECMC Table 915-1 standards in soil samples SB08 @ 10-11', SB09 @ 10-11', SB10 @ 10-11', SB12@7.5-8.5', SB12@10-10.5', SB13@10-10.5', and SB14@10-10.5'. All site pH concentrations during the October 3, 2024 SSI and previous site investigation activities were below background levels, with the exception of SS01 @7', collected on December 27, 2022, as a base sample of the remedial excavation.

A supplemental site investigation (SSI) was completed to vertically and horizontally delineate the pH exceedance observed at sample location SS01 @ 7' on October 3, 2024. An additional SSI will be completed to collect vertical and lateral delineation soil samples, which will be analyzed for full ECMC Table 915-1. Proposed soil boring locations (SB15-SB19) are shown on the attached Site Investigation Plan. 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.

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) 30
  - Name of Licensed Disposal Facility or ECMC 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.

Groundwater was not encountered during initial pressure testing, release response, source mass removal, or supplemental site investigation activities.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

[X] 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

[X] Other Second Quarter 2025 - Timeline Update

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.

- Source mass removal has been completed.
- Investigation and delineation has been completed for organics in soil. Assessment of Table 915-1 metals and pH conditions in native material is ongoing.

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? Yes

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

No beneficial use.

Volume of E&P Waste (solid) in cubic yards 30

E&P waste (solid) description Hydrocarbon impacted soils

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility: North Weld Waste Management Facility

Volume of E&P Waste (liquid) in barrels 0

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.

Following excavation activities, the location was backfilled, compacted, and re-contoured to match pre-existing conditions. The location will be reclaimed in accordance with the ECMC 1000 series.

Is the described reclamation complete? Yes

Does the reclamation described herein constitute interim or final reclamation of the Oil and Gas Location?

[X] 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. 12/01/2022

Proposed date of completion of Reclamation. 01/17/2028

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. 12/02/2022

Actual Spill or Release date, or date of discovery. 12/02/2022

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 12/01/2022

Proposed site investigation commencement. 06/20/2023

Proposed completion of site investigation. 12/31/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 12/31/2025

Proposed date of completion of Remediation. 01/18/2027

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.

[X] Change from approved implementation schedule per Rule 913.d.(2).

Basis for change in implementation schedule:

'Proposed completion of site investigation' date is being updated to reflect the schedule to complete the supplemental site investigation. The ECMC will be updated on a subsequent Form 27 with the results of the supplemental site investigation.

OPERATOR COMMENT

This Form 27 is being submitted as a timeline update to maintain quarterly reporting compliance during the Second Quarter 2025 for the completion of supplemental site investigation (SSI) activities at the former Walker 1 Flowline location. A proposal to delineate the pH exceedances identified during decommissioning (soil sample SS01 @ 7') is presented in the Site Investigation Report section of this Form 27 and the two previously submitted Form 27s (ECMC Document Nos. 403968612 and 404062729) which have not been approved as of the date of this submittal.

On October 3, 2024, eight (8) soil borings (SB06-SB14) were advanced via hand auger to delineate the vertical & horizontal extents of arsenic and pH exceedances observed in the during the June 20, 2023 delineation event. Twelve (12) soil samples were collected between 2 feet and 14 feet bgs and submitted for laboratory analysis of pH and/or arsenic as applicable for delineation. Analytical results indicated that arsenic levels were in exceedance of the applicable ECMC Table 915-1 standards in soil samples SB12 @ 2-3'. SB13 @ 2-2.5', SB13 @ 6.5-7.5', and SB14 @ 2-3'; however, all site arsenic concentrations observed during the October 3, 2024 SSI and previous site investigation activities were below background levels. Analytical results indicated that pH levels were in exceedance of the applicable ECMC Table 915-1 standards in soil samples SB08 @ 10-11', SB09 @ 10-11', SB10 @ 10-11', SB12@7.5-8.5', SB12@10-10.5', SB13@10-10.5', and SB14@10-10.5'. All site pH concentrations during the October 3, 2024 SSI and previous site investigation activities were below background levels, with the exception of SS01 @7', collected on December 27, 2022, as a base sample of the remedial excavation.

On October 3, 2024, two (2) background soil borings (BKG06 & BKG07) were advanced in native material up-gradient of the flowline and six soil samples were collected between depths of approximately 2 feet and 14 feet bgs and submitted for laboratory analysis of arsenic and pH. Analytical results indicated that arsenic and pH were observed in exceedance of the applicable regulatory standards in native soil. Additional background samples collected on December 27, 2022 and June 20, 2023, are discussed in the previously submitted Supplemental Form 27, ECMC Document # 403515800.

A supplemental site investigation (SSI) was completed to vertically and horizontally delineate the pH exceedance observed at sample location SS01 @ 7' on October 3, 2024. An additional SSI will be completed to collect vertical and lateral delineation soil samples, which will be analyzed for full ECMC Table 915-1. Proposed soil boring locations (SB15-SB19) are shown on the attached Site Investigation Plan. The SSI will be completed during the fourth quarter 2025, following the 2025 harvest. Quarterly reporting will be conducted until closure criteria are achieved for the remediation project.

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

Signed: Allan Engelhardt Title: Environmental Consultant

Submit Date: 04/17/2025 Email: tas-chevron-3@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: RICK ALLISON Date: 11/17/2025

Remediation Project Number: 27511

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
404168168	FORM 27-SUPPLEMENTAL-SUBMITTED
404168214	SITE INVESTIGATION PLAN

Total Attach: 2 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)