FORM 27 Rev 5/22

State of Colorado
Energy & Carbon Management Commission

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Document Number: 404517594
Receive Date: 01/30/2026
Report taken by: Taylor Robinson

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: Dan Peterson Email: RBUEUF27@chevron.com

Phone Numbers
Phone: (970) 304-5000
Mobile: ( )

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 37191 Initial Form 27 Document #: 403908161

PURPOSE INFORMATION

- [ ] Rule 913.c.(1): Pit or Cuttings Trench closure.
- [X] 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.
- [X] 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

Yes Multiple Facilities

Facility Type: LOCATION Facility ID: 467701 API #: County Name: WELD
Facility Name: LUNDVALL-65N66W 18NESW Latitude: 40.395366 Longitude: -104.829170
** correct Lat/Long if needed: Latitude: 40.395357 Longitude: -104.829183
QtrQtr: SWSW Sec: 18 Twp: 5N Range: 66W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE Facility ID: 490995 API #: County Name: WELD
Facility Name: LUNDVALL-65N66W 18NESW Latitude: 40.395479 Longitude: -104.829574
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: SWSW Sec: 18 Twp: 5N Range: 66W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SC

Most Sensitive Adjacent Land Use Grassland

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? No

Other Potential Receptors within 1/4 mile

Bald Eagle Active Nest Site - Half Mile Buffer HPH 0.08mi NW
Freshwater Pond 0.02mi E
Freshwater Forested/Shrub Wetland 0.04/0.05/0.09mi N
Riverine 0.01mi N
Freshwater Emergent Wetland 0.1mi NE, 0.04mi N, 0.04/0.13/0.23mi SE, 0.08mi E

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	Lab Analysis or Field Screening, if encountered
Yes	SOILS	Refer to Tables and Figures	Lab Analysis and Field Screening

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 site investigation was conducted pursuant to ECMC Rule 911 at the Lundvall 1; 18-6, 12 Facility and Tank Battery location on June 26, 2025.

The Field Qualitative Criteria Checklist was utilized during decommissioning activities and visual and olfactory observations indicated a potential historical release occurred and an initial Form 19 was submitted under Document Number 404258742, which received ECMC approval on July 28, 2025 under Spill ID 490995.

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):

Grab confirmation soil samples were collected from the produced water vessel excavation, beneath the ground oil tank, at the risers for the flowline(s) and dumpline(s) of any separator(s). In addition, the on-site dump line located between the separator and tank battery was removed by pulling from either end. Soil samples were analyzed by a certified laboratory for the full extent of Table 915-1, including but not limited to: TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons) organic compounds in soil per ECMC Table 915-1, and EC, SAR, pH, metals, and boron. All samples collected were analyzed by a certified laboratory using approved ECMC laboratory analysis methods.

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 sample will be collected and analyzed for all organic compounds and inorganic parameters 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):

Visual inspection at the tank battery area occurred during abandonment activities. Field personnel field screened all disturbed areas using visual and olfactory senses. Additionally, discrete soil samples were collected from the base of the excavation and excavation sidewall in areas most likely to be impacted and exhibiting the highest field screened VOC concentration. The ECMC Tank Battery and Produced Water Vessel Closure Checklists were utilized and filled out during the abandonment process. A detailed summary of decommissioning activities, including field notes, site photos, figures, and laboratory analytical results, was attached to previous Form 27 document number 404258378.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected: 4

Number of soil samples exceeeding 915-1: 4

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

Approximate areal extent (square feet): 400

NA / ND

-- Highest concentration of TPH (mg/kg): 627

-- Highest concentration of SAR: 0.326

BTEX > 915-1: Yes

Vertical Extent > 915-1 (in feet): 4

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?

[X] Were background samples collected as part of this site investigation?

Six background soil samples were collected from three locations near the tank battery on June 26, 2025 and analyzed for Table 915-1 metals in soil and Soil Suitability for Reclamation parameters per ECMC Table 915-1. The background soil samples were collected from a depth of 0.5 and 3.5 feet below ground surface (ft bgs). The lithology between the site and background locations was observed to be silty clays. The maximum background concentrations with a 1.25x multiplier applied for arsenic and barium were calculated to be 8.51 mg/kg at 0.5 ft bgs and 273.8 mg/kg at 0.5 ft bgs, respectively. All arsenic and barium concentrations observed during decommissioning were below background levels. As such, arsenic and barium should be considered resolved. Additional background samples will be collected to determine site specific background concentrations of pH and lead.

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

Volume of solid waste (cubic yards):

Volume of liquid waste (barrels):

[X] Is further site investigation required?

Concurrently with the remedial excavation that was proposed in the Remedial Action Plan section of previous Form 27 document number 404258378, background soil samples will be collected to determine if elevated levels of pH and lead are attributed to native soil conditions at the site. Background soil samples will be analyzed by a certified laboratory for analysis of metals per ECMC Table 915-1 and soil suitability parameters including pH, EC, SAR, and boron. Proposed background soil sample locations were shown on the attached proposed excavation map of previous Form 27 document number 404258378.

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.

The xylene, 1,2,4-TMB, 1,3,5-TMB, naphthalene, TPH, fluorene, 1-M, and 2-M exceedances observed at sample locations PWV01@4'and PWV01-N@3 on June 26, 2025 will be removed through a remedial excavation in accordance with the proposed excavation map attached to this Form 27. Soil samples will be collected from the base and sidewalls of the respective final excavation extents and will be submitted for analysis of the full ECMC Table 915-1 suite.

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.

Concurrently with the remedial excavation that was proposed in the Remedial Action Plan section of previous Form 27 document number 404258378, background soil samples will be collected to determine if elevated levels of pH and lead are attributed to native soil conditions at the site. Background soil samples will be analyzed by a certified laboratory for analysis of metals per ECMC Table 915-1 and soil suitability parameters including pH, EC, SAR, and boron. Proposed background soil sample locations were shown on the attached proposed excavation map of previous Form 27 document number 404258378.

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 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 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 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 11 requirements of Rule 705.b. Operator does not anticipate making an insurance claim for this project.

-Further soil investigation/delineation/supplemental source mass removal 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?

[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. 06/26/2025

Proposed date of completion of Reclamation. 10/31/2027

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. 08/20/2024

Actual Spill or Release date, or date of discovery. 06/26/2025

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/26/2025

Proposed site investigation commencement. 04/12/2026

Proposed completion of site investigation. 08/12/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/12/2026

Proposed date of completion of Remediation. 02/12/2027

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:

The implementation schedule has been changed due to the decommissioning of the LUNDVALL-65N66W 18NESW tank battery and necessity for supplemental site investigation activities adjacent to the tank battery.

OPERATOR COMMENT

This Form 27 is being submitted to include a 1Q 2026 update for the LUNDVALL-65N66W 18NESW tank battery (REM #37191) and decommissioning results and historic reportable release discovered at the former LUNDVALL-65N66W 18NESW Tank Battery location on June 26, 2025. A proposal to excavate the xylene, 1,2,4-TMB, 1,3,5-TMB, naphthalene, TPH, fluorene, 1-M, and 2-M exceedances identified during decommissioning in soil samples PWV01@4'and PWV01-N@3 is presented in the Remedial Action Plan section of this Form 27.

Based on visual and olfactory observations during tank battery decommissioning activities on June 26, 2025, a potential historical release occurred and an initial Form 19 was submitted under Document Number 404258742. Qualified excavation crew is not immediately available but is expected to commence the work in 2Q 2026.

Six background soil samples were collected from three locations near the tank battery on June 26, 2025 and analyzed for Table 915-1 metals in soil and Soil Suitability for Reclamation parameters per ECMC Table 915-1. The background soil samples were collected from a depth of 0.5 and 3.5 feet below ground surface (ft bgs). The lithology between the site and background locations was observed to be silty clays. The maximum background concentrations with a 1.25x multiplier applied for arsenic and barium were calculated to be 8.51 mg/kg at 0.5 ft bgs and 273.8 mg/kg at 0.5 ft bgs, respectively. All arsenic and barium concentrations observed during decommissioning were below background levels. As such, arsenic and barium should be considered resolved. Additional background samples will be collected to determine site specific background concentrations of pH and lead.

Pursuant to Rule 913.e, 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: Kayla White, P.E. Title: Environmental Consultant

Submit Date: 01/30/2026 Email: CVX-PM@cdhconsult.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: 37191

DENIED

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
404517594	FORM 27-SUPPLEMENTAL-SUBMITTED
404526545	SITE MAP

Total Attach: 2 Files

General Comments

User Group	Comment	Comment Date
Environmental	ECMC denied this form because neither the attachment nor the form supports a work delay. Operator and consultant shall stop requesting work delays without adequate documentation.	01/30/2026

Total: 1 comment(s)