

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404541315

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>PDC ENERGY INC</u> | Operator No: <u>69175</u> | Phone Numbers Phone: <u>(970) 304-5000</u> Mobile: <u>()</u> |
| Address: <u>1099 18TH STREET SUITE 1500</u> | | |
| City: <u>DENVER</u> | State: <u>CO</u> | Zip: <u>80202</u> |
| Contact Person: <u>Dan Peterson</u> | Email: <u>rbueuf27@chevron.com</u> | |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 39369 Initial Form 27 Document #: 404100460

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

Yes Multiple Facilities

| | | | |
|---|----------------------------|-------------------------------|---|
| Facility Type: <u>LOCATION</u> | Facility ID: <u>476590</u> | API #: _____ | County Name: <u>WELD</u> |
| Facility Name: <u>Edens Pad</u> | Latitude: <u>40.493399</u> | Longitude: <u>-104.486864</u> | |
| ** correct Lat/Long if needed: Latitude: <u>40.493394</u> | | Longitude: <u>-104.486862</u> | |
| QtrQtr: <u>NWNW</u> | Sec: <u>18</u> | Twp: <u>6N</u> | Range: <u>63W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |
| Facility Type: <u>SPILL OR RELEASE</u> | Facility ID: <u>491629</u> | API #: _____ | County Name: <u>WELD</u> |
| Facility Name: <u>Edens 11, 12, 18-52</u> | Latitude: <u>40.493413</u> | Longitude: <u>-104.486752</u> | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: <u>NWNW</u> | Sec: <u>18</u> | Twp: <u>6N</u> | Range: <u>63W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

SITE CONDITIONS

General soil type - USCS Classifications SW

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

Within Pronghorn Winter Concentration Area HPH
Within Mule Deer Severe Winter Range HPH
Freshwater Emergent Wetland 0.19mi W
Freshwater Pond 0.13mi NW, 0.21mi W
Residential 0.05mi N, 0.13mi NW, 0.1mi E, 0.2mi SE
Farm Structure 0.04mi N, 0.15/0.16/0.17mi NW, 0.11/0.12/0.13/0.15/0.2mi W, 0.13mi SW, 0.23mi SE

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 checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids | _____ |
| <input checked="" 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 | NA | Lab analysis and 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 Edens 11, 12, 18-52 Facility and Tank Battery location.

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):

Grab confirmation soil samples were collected from the produced water vessels (PWV01-B@5', PWV01-N@3', & PWV01-W@3'), beneath the ground oil tanks (AST01@0-6" & AST02@0-6") and beneath separator dump line/flowline riser (SEP01-FL@4' and SEP02-DL@4'). In addition, the on-site dump lines located between the separator and tank battery were 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

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.

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. A detailed summary of the tank battery decommissioning activities, including field notes, site photos, figures, and laboratory analytical results, was attached to a previous Form 27 (Doc #404228450).

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 9 -- Highest concentration of TPH (mg/kg) 844
 Number of soil samples exceeding 915-1 4 -- Highest concentration of SAR 2.21
 Was the areal and vertical extent of soil contamination delineated? No BTEX > 915-1 Yes
 Approximate areal extent (square feet) 400 Vertical Extent > 915-1 (in feet) 4

Groundwater

Number of groundwater samples collected 0 Highest concentration of Benzene (µg/l) _____
 Was extent of groundwater contaminated delineated? Yes Highest concentration of Toluene (µg/l) _____
 Depth to groundwater (below ground surface, in feet) _____ Highest concentration of Ethylbenzene (µg/l) _____
 Number of groundwater monitoring wells installed _____ Highest concentration of Xylene (µg/l) _____
 Number of groundwater samples exceeding 915-1 _____ NA 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 01/28/2026, twenty background soil samples were collected from five discrete location (BKG01-BKG05) adjacent to the tank battery and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. Background soil samples were collected from depths ranging between 0 to 6 feet below ground surface (ft bgs). The maximum background concentration for pH and SAR were observed to be 7.83 and 6.02, respectively. The maximum background concentration with a 1.25x multiplier applied for arsenic, barium, and chromium were calculated to be 7.5 mg/kg, 254 mg/kg, and 0.76 mg/kg. All arsenic, barium, and chromium concentrations collected were below 1.25x the maximum background level.

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?
 Based on the analytical results collected, a supplemental site investigation (SSI) will be completed to vertically and horizontally delineate the organic compound exceedances observed at sampling locations SB13@3-4', SB15@3-4', PWV01-N@3'. A proposed SSI map is attached to this Form 27. During the SSI, soil samples will be collected and analyzed for full ECMC Table 915-1 constituents. Concurrently with the SSI, additional background samples will be collected to determine if pH and SAR is attributed to native soil conditions at the site. 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? No

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.
 Refer to the Remediation Summary section below.

REMEDICATION 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.

Decommissioning analytical results indicated that organic compounds were in exceedance with the applicable ECMC regulatory standards. A supplemental site investigation (SSI) will be completed to vertically and horizontally delineate the organic compound exceedances observed at sample locations AST02@0-6", PWV01-N@3', SEP01-FL@4', and SEP01-DL@4' in accordance with the attached proposed site investigation map, and proposed sampling plan outlined in the Site Investigation Report section of this Form 27.

A supplemental site investigation was completed on 01/28/2026 to vertically and horizontally delineate the organic exceedances observed during decommissioning activities. SB09 and SB10 were advanced at the same location as SEP01-FL@4' and SEP01-DL@4' to vertically delineate impacts on those locations. SB11-SB16 were advanced surrounding SB09 and SB10 to vertically and laterally delineate impacts identified at sample locations SEP01-FL@4' and SEP01-DL@4'. SB02 was advanced north of PWV01-N@3' to vertically delineate impacts on that location. SB01 and SB03-SB08 were not sampled due to frost levels and difficult soil base. Groundwater was not encountered during this assessment.

Based on analytical results received an additional supplemental site investigation will be completed to confirm and further vertically and horizontally delineate the organic compound exceedances observed at sample locations SB13@3-4', SB15@3-4', and PWV01-N@3' during decommissioning and the January 2026 SSI, 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 decommissioning and site investigation 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 Confirmation 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 15 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: \$ 65000

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. 06/03/2025

Proposed date of completion of Reclamation. 10/06/2027

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. 01/14/2025

Actual Spill or Release date, or date of discovery. 06/03/2025

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/03/2025

Proposed site investigation commencement. 04/06/2026

Proposed completion of site investigation. 04/26/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/06/2026

Proposed date of completion of Remediation. 04/06/2027

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.

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

Basis for change in implementation schedule:

The implementation schedule has been changed due the completion of the January 2026 supplemental site investigation at the Edens 11, 12, 18-52 tank battery and necessity for additional supplemental site investigation activities adjacent to the tank battery. The proposed site investigation is tentatively scheduled to commence on 04/06/2026.

OPERATOR COMMENT

This Form 27 is being submitted to include the supplemental site investigation results and propose additional site investigation activities for the Edens 11, 12, 18-52 tank battery location.

A supplemental site investigation was completed on 01/28/2026 to vertically and horizontally delineate the organic exceedances observed during decommissioning activities. SB09 and SB10 were advanced at the same location as SEP01-FL@4' and SEP01-DL@4' to vertically delineate impacts on those locations. SB11-SB16 were advanced surrounding SB09 and SB10 to vertically and laterally delineate impacts identified at sample locations SEP01-FL@4' and SEP01-DL@4'. SB02 was advanced north of PWV01-N@3' to vertically delineate impacts on that location. SB01 and SB03-SB08 were not sampled due to frost levels and difficult soil base. Groundwater was not encountered during this assessment.

On 01/28/2026, twenty background soil samples were collected from five discrete location (BKG01-BKG05) adjacent to the tank battery and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. Background soil samples were collected from depths ranging between 0 to 6 feet below ground surface (ft bgs). The maximum background concentration for pH and SAR were observed to be 7.83 and 6.02, respectively. The maximum background concentration with a 1.25x multiplier applied for arsenic, barium, and chromium were calculated to be 7.5 mg/kg, 254 mg/kg, and 0.76 mg/kg. All arsenic, barium, and chromium concentrations collected were below 1.25x the maximum background level.

Further site investigation activities are required. Additional site assessment activities will be completed to further delineate the organic exceedances identified during decommissioning (soil sample PWV01-N@3') and the January 2026 SSI (soil samples SEP01-FL@4' and SEP01-DL@4'). The proposed soil sampling plan is presented in the Site Investigation Report section of this Form 27.

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: Trae Bruce

Title: Environmental Consultant

Submit Date: _____

Email: tas-chevron-4@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: 39369

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

| | |
|-----------|---------------------------|
| 404541818 | ANALYTICAL RESULTS |
| 404543825 | SITE INVESTIGATION REPORT |
| 404543831 | SITE INVESTIGATION PLAN |

Total Attach: 3 Files

General Comments

User Group

Comment

Comment Date

| | | |
|--|--|---------------------|
| | | Stamp Upon Approval |
|--|--|---------------------|

Total: 0 comment(s)