FORM 27 Rev 5/22

State of Colorado
Energy & Carbon Management Commission

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Document Number: 404451482
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 INFORMATON

Name of Operator: PDC ENERGY INC Operator No: 69175
Address: 1099 18TH STREET SUITE 1500
City: DENVER State: CO Zip: 80202
Contact Person: Michelle Bartoszek Email: michelle.bartoszek@chevron.com

Phone Numbers
Phone: (847) 254-8796
Mobile: ( )

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 36714 Initial Form 27 Document #: 403883475

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: 486891 API #: County Name: ADAMS
Facility Name: Gus LD Pad Latitude: 39.952212 Longitude: -104.885496
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: SENE Sec: 21 Twp: 1S Range: 67W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications: SM
Most Sensitive Adjacent Land Use: Agricultural, residential
Is domestic water well within 1/4 mile? Yes
Is surface water within 1/4 mile? No
Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

Domestic Water Wells within 1/4 mile - 857' SE - Permit #227657--A, Receipt #3649660; 1303' SE - Permit #184088, Receipt #0376420J
Occupied Buildings within 1/4 mile - Residential neighborhood present 860' SE
E-470 Highway within 1/4 mile - 1320' N
City of Brighton municipal boundary within 1/4 mile - 660' S

No other potential receptors are located within ¼ mile of the Site.
Above distances are approximations.

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- [X] **E&P Waste**
  - [X] Produced Water
  - [X] Oil
  - [ ] 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
No	GROUNDWATER	Not encountered	Not encountered
Yes	SOILS	45' x 60' x 2'	Laboratory analyses

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 May 29, 2024, a non-reportable release was discovered at the Gus LD Pad. Approximately 0.53 barrels of produced fluids were observed at the north end of a failed bulk separator fire tube. Upon discovery, hydrovac excavation activities were initiated to assess and remove impacted material.

On May 30, 2024, the release was determined to be reportable after it was confirmed that more than 10 cubic yards of impacted material had been removed from the location. The fluid was contained entirely on-site within a steel-walled containment area; however, the containment area was not lined.

Approximately 24 cubic yards of impacted soil material was excavated and properly disposed of in accordance with regulatory requirements.

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):

One waste characterization sample, Waste Char, was collected on 5/30/2024 and indicated organic exceedances were present after analytical data was received. 18 confirmation soil samples were collected between 6/03/2024 and 3/13/2025 following the removal of all visual and olfactory indications of contamination at depths ranging from 0.5' - 2' below ground surface (BGS). All soil samples were submitted to accredited laboratories and analyzed for ECMC Table 915-1 constituents. Laboratory results for confirmation samples indicated that all petroleum constituents were less than their respective Table 915-1 standards. However, elevated pH, SAR, EC, boron, arsenic, barium, cadmium, chromium IV, lead and selenium remain in exceedance of ECMC standards. Laboratory data is summarized in Tables 1 to 4 and illustrated on Figures 3 and 4.

Proposed Groundwater Sampling

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

Groundwater was not encountered during remedial excavation and investigation activities.

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: 3
Number of soil samples exceeeding 915-1: 3
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet): 2700

NA / ND

ND — Highest concentration of TPH (mg/kg)
-- — Highest concentration of SAR: 7.55
BTEX > 915-1: No
Vertical Extent > 915-1 (in feet): 2

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?

Between 8/22/2025 and 3/13/2025, 18 background soil samples were collected from outside of the area disturbed by Oil and Gas operations, of comparable, nearby, non-impacted, native soil as well as from imported, non-impacted pad material comparable to the soil where the release occurred.

Note that samples collected on 3/13/2025 at a depth of 1' are being utilized as delineation samples. Samples collected on 3/13/2025 at a depth of 2' are being utilized as background samples.

Analytical results for background samples show arsenic (As), cadmium (Ca) and selenium (Se) values greater than samples collected in the release area with a 1.25 multiplier applied and pH and EC background values greater than confirmation samples. Therefore indicating that As, Ca, Se, pH and EC are naturally occurring in the native soil and non-impacted imported fill material thus eliminating such constituents as contaminants of concern.

☐ 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?

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.

Excavation via hydrovac trucks was completed between May 30, 2024 and June 3, 2024. Approximately 24 cubic yards of impacted soil were transported to Republic Services Tower Road Landfill in Commerce City, CO and Waste Management Buffalo Ridge Landfill in Keenesburg, CO for disposal.

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 remedial excavation was conducted to remove impacted soils from the firetube release within the secondary containment. Confirmation samples collected between 6/03/2024 and 3/13/2025 indicate that the excavation adequately remediated Table 915-1 petroleum constituents.

Analytical results for background samples show arsenic (As), cadmium (Ca) and selenium (Se) values greater than samples collected in the release area with a 1.25 multiplier applied and pH and EC background values greater than confirmation samples. Therefore indicating that As, Ca, Se, pH and EC are naturally occurring in the native soil and non-impacted imported fill material thus eliminating such constituents as contaminants of concern.

Elevated levels of barium, chromium and lead were resolved via produced fluids analysis and approved in Form 27 document number 403883475.

The boron exceedance exhibited in soil sample SS-01 of 3.71 mg/L was resolved via confirmation sampling on 11/8/2025 in soil samples SS-01(2) 1 Ft and SS-01(2) 2 Ft and approved in Form 27 document numbers 403996864 and 404091668.

PDC prepared a Reclamation Plan to vertically and horizontally delineate remaining SAR exceedances exhibited in FS-01, FS-02 and SS-01 in order to leave such constituents in place. Vertical delineation for such samples was achieved through soil samples FS-01 2 FT, FS-02(2), and SS-01(2) 2 Ft, respectively. Horizontal delineation was completed via soil samples BG-N 1 FT (north), BG-E 1 FT (east), BG-S 1 FT (south) and BG-W 1 FT (west). Thus, All ECMC Table 915-1 inorganic constituents have been delineated and/or remediated below background soil sample values and the site can be considered adequately remediated.

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) 24
  - Name of Licensed Disposal Facility or ECMC Facility ID # ____
- No 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 remedial excavation and 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

[ ] Other

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.

-Remediation and investigation is complete

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: $

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 24

E&P waste (solid) description Petroleum impacted soil

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility: Waste Management - Buffalo Ridge Landfill, Republic Services - Tower Road Landfill

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? Yes

If YES:

[X] Compliant with Rule 913.h.(1).

[X] Compliant with Rule 913.h.(2).

[X] Compliant with Rule 913.h.(3).

Do all soils meet Table 915-1 standards? Yes

Does the previous reply indicate consideration of background concentrations? Yes

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.

The Gus LD Pad is an active facility and there are no current plans for decommissioning or reclamation activities.

PDC prepared a Reclamation Plan to vertically and horizontally delineate remaining SAR exceedances exhibited in FS-01, FS-02 and SS-01 in order to leave such constituents in place. Vertical delineation for such samples was achieved through soil samples FS-01 2 FT, FS-02(2), and SS-01(2) 2 Ft, respectively. Horizontal delineation was completed via soil samples BG-N 1 FT (north), BG-E 1 FT (east), BG-S 1 FT (south) and BG-W 1 FT (west). See attached Reclamation Plan for details. Operator proposes to leave elevated SAR in place as such exceedances do not pose a threat to nearby vegetation or soil suitability at present. Upon final reclamation of the Gus LD pad, all imported fill material will be removed and properly disposed of. The Gus LD pad will be reclaimed in accordance with ECMC 1000 Series rules upon final decommissioning. An adequate amount of background samples will be collected at that time to determine whether inorganic constituents in excess of Table 915 are attributable to native soil conditions.

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.

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. 05/30/2024

Actual Spill or Release date, or date of discovery. 05/30/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/29/2024

Proposed site investigation commencement. 05/30/2024

Proposed completion of site investigation. 03/13/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/30/2024

Proposed date of completion of Remediation. 03/13/2025

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

Per COA on Form 27 Supplemental, document number 404192845, Operator recognizes that soil sample FS02(3) was analyzed outside of proper holding times for various Table 915-1 constituents. Because not all analytes would be outside of holding times, the lab ran the samples for the full Table 915-1 suite. The full laboratory report (2501528) is being transmitted to ECMC for transparency. Operator will not be relying on any results associated with a constituent that was outside of the required holding time; moreover, Operator is considering all constituents associated with FS02(3) to be invalid. Soil sample FS02(3) does not support final closure and is not required for successful remediation, thus Operator will not be collecting a replacement sample.

A remedial excavation was conducted to remove impacted soils from the firetube release within the secondary containment. Confirmation samples collected between 6/03/2024 and 3/13/2025 indicate that the excavation adequately remediated Table 915-1 petroleum constituents.

PDC prepared a Reclamation Plan to vertically and horizontally delineate remaining SAR exceedances exhibited in FS-01, FS-02 and SS-01 in order to leave such constituents in place. Vertical delineation for such samples was achieved through soil samples FS-01 2 FT, FS-02(2), and SS-01(2) 2 Ft, respectively. Horizontal delineation was completed via soil samples BG-N 1 FT (north), BG-E 1 FT (east), BG-S 1 FT (south) and BG-W 1 FT (west). See attached Reclamation Plan for details.

Operator proposes to leave elevated SAR in place as such exceedances do not pose a threat to nearby vegetation, soil suitability, human health, property, groundwater, surface water, the environment, or wildlife at present. Upon final reclamation of the Gus LD pad, all imported fill material will be removed and properly disposed of. The Gus LD pad will be reclaimed in accordance with ECMC 1000 Series rules upon final decommissioning. An adequate amount of background samples will be collected at that time to determine whether inorganic constituents in excess of Table 915 are attributable to native soil conditions.

All ECMC Table 915-1 constituents have been remediated and/or delineated below background soil sample values or their respective reporting limits via source mass removal, site investigation and produced fluids analysis.

Based on information presented in the Site Investigation Report and Remedial Action Plan sections of this form and the attached Remediation Progress Report and Reclamation Plan, PDC asserts that the extent of impacts have been fully delineated and all contaminated material has been adequately remediated at this site.

PDC respectfully requests closure of Remediation Project Number: 36714.

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

Signed: Michelle Bartoszek Title: HSE Advisor

Submit Date: Email: michelle.bartoszek@chevron.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: 36714

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
404451642	LABORATORY ANALYTICAL REPORT
404451666	OTHER
404468023	RECLAMATION PLAN
404468024	REMEDIATION PROGRESS REPORT

Total Attach: 4 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)