

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404364928

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 ECOM 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
Address: <u>1099 18TH STREET SUITE 1500</u>		Phone: <u>(970) 304-5000</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>()</u>
Contact Person: <u>Lauren Hoff</u>	Email: <u>RBUEUF27@chevron.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 35168 Initial Form 27 Document #: 403772601

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>332945</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>KODAK-66N67W 34NESE</u>	Latitude: <u>40.441930</u>	Longitude: <u>-104.869610</u>	
	** correct Lat/Long if needed: Latitude: <u>40.442297</u>	Longitude: <u>-104.869729</u>	
QtrQtr: <u>NESE</u> Sec: <u>34</u> Twp: <u>6N</u> Range: <u>67W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>			
Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>488135</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Former Kodak 34-41,44,45</u>	Latitude: <u>40.442532</u>	Longitude: <u>-104.869870</u>	
	** correct Lat/Long if needed: Latitude: _____	Longitude: _____	
QtrQtr: <u>NWSW</u> Sec: <u>35</u> Twp: <u>6N</u> Range: <u>67W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>			

Facility Type: SPILL OR RELEASE Facility ID: 488141 API #: _____ County Name: WELD
 Facility Name: Former Kodak 34-41,44,45 Latitude: 40.442272 Longitude: -104.869662
 ** correct Lat/Long if needed: Latitude: _____ Longitude: _____
 QtrQtr: NWSW Sec: 35 Twp: 6N Range: 67W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE Facility ID: 488279 API #: _____ County Name: WELD
 Facility Name: Former Kodak 34-41,44,45 Latitude: 40.442272 Longitude: -104.869662
 ** correct Lat/Long if needed: Latitude: _____ Longitude: _____
 QtrQtr: NWSW Sec: 35 Twp: 6N 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

- Within Bald Eagle Active Nest Site - Half Mile Buffer HPH
- Within Aquatic Native Species Conservation Waters HPH
- Mule Deer Severe Winter Range HPH 0.03mi SW
- Aquatic Native Species Conservation Waters HPH 0.22mi W
- Bald Eagle Active Nest Site - Quarter Mile Buffer HPH 0.25mi W
- Riverine 0.08mi S, 0.09mi SW
- Freshwater Pond 0.07/0.08/0.12/0.15mi W, 0.22/0.24mi SW
- Forested/Shrub Riparian 0.02/0.08mi SW, 0.13mi SE, 0.14/0.19/0.2/0.23mi E, 0.18/0.21mi NE
- Freshwater Forested/Shrub Wetland 0.24mi SW
- Freshwater Emergent Wetland 0.03/0.09mi S, 0.14mi SE, 0.19mi SW
- Herbaceous Riparian 0.19mi NE
- Industrial Structure 0.21mi SW

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	Field Screening and Lab Analysis 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.

Pursuant to ECMC Rule 911, a site investigation was conducted at the former Kodak 34-41, 44, 45 tank battery location. The tank battery was decommissioned between 9/23/24 and 9/24/24. Grab confirmation soil samples were collected from the produced water vessels excavation (PWW01-B@3', PWW01-N@2.5'), beneath the above ground storage tanks (AST01@0-6", AST02@0-6"), at the risers for the flowlines and dumplines of any separators (SEP01-FL@3', SEP02-FL@3', SEP01-DL@3', SEP02-DL@3', SEP03-DL@3'). In addition, the on-site dump lines located between the separator and tank battery were removed by pulling from either end. Field screening samples were collected at the meter house (MH01@0-6"), elevated vessel (VRU01@0-6"), flare (FLARE01@0-6"), and solar powered automation unit (AUTO01@0-6").

Laboratory results indicated that organic constituents benzene, xylenes, 1,2,4-trimethylbenzene (TMB), 1,3,5-TMB, total petroleum hydrocarbons (TPH), 1-methylnaphthalene (M) and 2-M, were detected in exceedance of ECMC Table 915-1 regulation and were reported as historic releases: PWW01-B/-N (F19 # 403934521, Spill ID: 488135), SEP02-DL/SEP03-DL (F19 # 403942222, Spill ID: 488141) and SEP01-DL (F19 # 403949730, Spill ID: 488279).

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):

All sampling was conducted in accordance with the Initial Action Summary, per the Initial Form 27 (# 403772601). 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, 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 decommissioning activities, including field notes, site photos, figures, and laboratory analytical results, was attached to a previous Form 27 #403934083.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 14

Number of soil samples exceeding 915-1 14

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

Approximate areal extent (square feet) 1400

NA / ND

-- Highest concentration of TPH (mg/kg) 2500

-- Highest concentration of SAR 3.12

BTEX > 915-1 Yes

Vertical Extent > 915-1 (in feet) 3

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?

Six background soil samples were collected at two discrete locations (BKG01 and BKG02) near the facility 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 3 feet below ground surface. The maximum background concentration of pH was observed to be 8.08. The maximum background concentrations of arsenic and barium with a 1.25x multiplier applied were calculated to be 7.55 mg/kg and 248 mg/kg, respectively. All arsenic and barium concentrations observed during decommissioning were below background levels, and as such they should not be considered 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?

A supplemental site investigation (SSI) will be completed to vertically and horizontally delineate the benzene, xylene, naphthalene, 1,2,4-trimethylbenzene (TMB), 1,3,5-TMB, total petroleum hydrocarbons (TPH), 1-methylnaphthalene (M), and 2-M exceedances observed at SEP01-DL@3', SEP02-DL@3', SEP03-DL@3', PWV01-B@3' and PWV01-N@2.5'. Concurrently with the SSI, additional background samples will be collected to determine if pH levels are attributed to native soil conditions at the site. The proposed soil sampling locations are shown on the proposed site investigation map attached to Form 27 #403934083. 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.

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.

A supplemental site investigation (SSI) will be completed to vertically and horizontally delineate the BTEX, naphthalene, 1,2,4-TMB, 1,3,5-TMB, TPH, 1-M, and 2-M, exceedances observed at SEP01-DL@3', SEP02-DL@3', SEP03-DL@3', PWV01-B@3' and PWV01-N@2.5'. Concurrently with the SSI, additional background samples will be collected to determine if elevated pH concentrations can be attributed to native soil conditions at the site. Sampling will be conducted in accordance with the attached proposed site investigation map, and proposed sampling plan outlined in the Site Investigation Report and Operator Comments sections of this Form 27.

Soil Remediation Summary

In Situ

Ex Situ

- _____ Bioremediation (or enhanced bioremediation)
- _____ Chemical oxidation
- _____ Air sparge / Soil vapor extraction
- _____ Natural Attenuation
- _____ Other _____

- _____ 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 initial decommissioning 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 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.

- 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. 09/23/2024

Proposed date of completion of Reclamation. 04/02/2027

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. 09/19/2023

Actual Spill or Release date, or date of discovery. 10/01/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 09/23/2024

Proposed site investigation commencement. 11/07/2025

Proposed completion of site investigation. 11/07/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 11/10/2025

Proposed date of completion of Remediation. 11/10/2026

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 was updated for the proposed supplemental site investigation (SSI) at the Kodak 34-41,44,45 Tank Battery to reflect a change in start work dates. The tentative start date for the proposed SSI has been updated from 09/09/25 to 11/10/25. The ECMC will be notified of any updates to the implementation schedule in a subsequent Form 27.

OPERATOR COMMENT

This Form 27 is being submitted as a 4Q25 timeline update for the proposed supplemental site investigation (SSI) at the Kodak 34-41,44,45 Tank Battery.

The implementation schedule was updated for the proposed SSI at the Kodak 34-41,44,45 Tank Battery to reflect a change in start work dates. The tentative start date for the proposed SSI has been updated from 09/09/25 to 11/07/25. The ECMC will be notified of any updates to the implementation schedule in a subsequent Form 27.

The results of the proposed SSI will be submitted on a subsequent Form 27. Per ECMC Rule 913.e., 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: Eric Vonde

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: 35168

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

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Total Attach: 0 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)