

State of Colorado
Energy & Carbon Management Commission

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Document Number:
403626812
Receive Date:
12/19/2023

Report taken by:
Nick Cholas

Site Investigation and Remediation Workplan (Initial 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 COGCC 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>(303) 860-5800</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>Karen Olson</u> | Email: <u>taspillremediationcontractor@pdce.com</u> | |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 33447 Initial Form 27 Document #: 403626812

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>WELL</u> | Facility ID: _____ | API #: <u>123-37692</u> | County Name: <u>WELD</u> |
| Facility Name: <u>Merritt 6-66-9-0560CH</u> | Latitude: <u>40.509320</u> | Longitude: <u>-104.781140</u> | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: <u>NWNE</u> | Sec: <u>9</u> | Twp: <u>6N</u> | Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

| | | | |
|--|----------------------------|-------------------------------|---|
| Facility Type: <u>WELL</u> | Facility ID: _____ | API #: <u>123-37694</u> | County Name: <u>WELD</u> |
| Facility Name: <u>Merritt 6-66-9-0758BH</u> | Latitude: <u>40.509320</u> | Longitude: <u>-104.780700</u> | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: <u>NWNE</u> | Sec: <u>9</u> | Twp: <u>6N</u> | Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

| | | | |
|--|---------------------|------------------------|--|
| Facility Type: WELL | Facility ID: _____ | API #: 123-37706 | County Name: WELD |
| Facility Name: Merritt 6-66-9-0857CH | Latitude: 40.509330 | Longitude: -104.780480 | |
| ** correct Lat/Long if needed: Latitude: 40.509328 | | Longitude: -104.780489 | |
| QtrQtr: NWNE | Sec: 9 | Twp: 6N | Range: 66W Meridian: 6 Sensitive Area? Yes |
| Facility Type: WELL | Facility ID: _____ | API #: 123-37710 | County Name: WELD |
| Facility Name: Merritt 6-66-9-0659BH | Latitude: 40.509320 | Longitude: -104.781030 | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: NWNE | Sec: 9 | Twp: 6N | Range: 66W Meridian: 6 Sensitive Area? Yes |
| Facility Type: WELL | Facility ID: _____ | API #: 123-37713 | County Name: WELD |
| Facility Name: Merritt 6-66-9-0659CH | Latitude: 40.509320 | Longitude: -104.780980 | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: NWNE | Sec: 9 | Twp: 6N | Range: 66W Meridian: 6 Sensitive Area? Yes |
| Facility Type: WELL | Facility ID: _____ | API #: 123-37722 | County Name: WELD |
| Facility Name: Merritt 6-66-9-0560BH | Latitude: 40.509320 | Longitude: -104.781200 | |
| ** correct Lat/Long if needed: Latitude: 40.509324 | | Longitude: -104.781206 | |
| QtrQtr: NWNE | Sec: 9 | Twp: 6N | Range: 66W Meridian: 6 Sensitive Area? Yes |
| Facility Type: WELL | Facility ID: _____ | API #: 123-37729 | County Name: WELD |
| Facility Name: Merritt 6-66-9-0758CDH | Latitude: 40.509330 | Longitude: -104.780580 | |
| ** correct Lat/Long if needed: Latitude: 40.509328 | | Longitude: -104.780595 | |
| QtrQtr: NWNE | Sec: 9 | Twp: 6N | Range: 66W Meridian: 6 Sensitive Area? Yes |
| Facility Type: WELL | Facility ID: _____ | API #: 123-37734 | County Name: WELD |
| Facility Name: Merritt 6-66-9-0857BH | Latitude: 40.509330 | Longitude: -104.780530 | |
| ** correct Lat/Long if needed: Latitude: 40.509327 | | Longitude: -104.780544 | |
| QtrQtr: NWNE | Sec: 9 | Twp: 6N | Range: 66W Meridian: 6 Sensitive Area? Yes |
| Facility Type: WELL | Facility ID: _____ | API #: 123-37740 | County Name: WELD |
| Facility Name: Merritt 6-66-9-0758CH | Latitude: 40.509320 | Longitude: -104.780640 | |
| ** correct Lat/Long if needed: Latitude: 40.509328 | | Longitude: -104.780646 | |
| QtrQtr: NWNE | Sec: 9 | Twp: 6N | 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

Wellheads (0560BH, CH; 0659BH, CH; 0758BH, CDH, CH; 0857BH, CH): Nearest Well: Temporary Dewatering Well - Between 439' and 618' NW; Surface Water: Intermittent Creek - Between 457' and 600' NW; Occupied Building: Between 362' and 478' SW; Livestock: Between 293' and 297' N; FWS Wetlands: Between 440' and 568' NW Riverine (R5UBFx); 100-Year Floodplain Between 206' and 548' SW of Wellheads.

Flowline Conflict: Flowlines Cross into 100-Year Floodplain Between Approximately 406' and 587' SW of Wellheads and Traverses Approximately 761' SW Through Floodplain. Flowlines Cross Intermittent Stream Between Approximately 790' and 982' SW of Wellheads.

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 | SOILS | TBD | 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.

In accordance with ECMC Rule 911, this form serves as notification for the abandonment of the Merritt 6-66-9-0560BH wellhead, Merritt 6-66-9-0560CH wellhead, Merritt 6-66-9-0659BH wellhead, Merritt 6-66-9-0659CH wellhead, Merritt 6-66-9-0758BH wellhead, Merritt 6-66-9-0758CDH wellhead, Merritt 6-66-9-0758CH wellhead, Merritt 6-66-9-0857BH wellhead, Merritt 6-66-9-0857CH wellhead, and removal of the associated flowlines. The ground and sub-surfaces will be visually inspected for hydrocarbon impacts during abandonment activities. Field observations and photo documentation will be recorded in a field inspection form for submittal to the ECMC.

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):

Soil samples will be collected from the surface in cardinal directions of the wellheads, as defined in Rule 911.a.(4) guidance document (9/20/21), for field screening purposes. Discrete soil samples will be collected for laboratory analysis either in any area of observed hydrocarbon impacts, or adjacent to the cut and capped wellheads from native material and below the flowline riser. Soil samples will be submitted for laboratory analysis of the full Table 915-1 analytical suite by ECMC approved methods. See the attached Figure 1 for an illustration of the wellheads and proposed soil sample locations.

Proposed Groundwater Sampling

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

If groundwater is encountered during decommissioning and/or abandonment activities, a grab sample will be collected as soon as practical. If contaminated soil is in contact with groundwater or if free product/hydrocarbon sheen are observed, the release will be reported in accordance with Rule 912.b. Groundwater samples will be submitted for laboratory analysis of BTEX, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene by EPA Method 8260, chloride and sulfate anions by EPA Method 300.0, and total dissolved solids (TDS) by Method SM 2540C.

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):

Assessments will be conducted during the removal of the off-location flowlines (between approximately 1,210 feet and 1,411 feet in length) approximately every 250 feet. Laboratory soil samples will be collected below the flowline risers, at the halfway point, in close proximity to sensitive habitats, such as floodplains and surface water crossings, and at the changes in direction (S-W) & (W-SW). The flowlines and adjacent sub-surface will be inspected for any visual and olfactory indicators of potential failure and hydrocarbon impacts. Soils will be field screened below the flowlines and if suspected impacts are observed, a soil sample will be collected for an initial assessment and submitted for laboratory analysis of the full Table 915-1 analytical suite by ECMC approved methods. See the attached Figure 1 for an illustration of the flowline alignments and proposed soil sample locations.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 0

Highest concentration of TPH (mg/kg) _____

Number of soil samples exceeding 915-1 _____

Highest concentration of SAR _____

Was the areal and vertical extent of soil contamination delineated? _____

BTEX > 915-1 _____

Approximate areal extent (square feet) _____

Vertical Extent > 915-1 (in feet) _____

Groundwater

Number of groundwater samples collected 0

Highest concentration of Benzene (µg/l) _____

Was extent of groundwater contaminated delineated? No

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 _____

Highest concentration of Methane (mg/l) _____

Surface Water

0 Number of surface water samples collected

0 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?

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

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Any hydrocarbon impacted material will be transported off-site to a licensed disposal facility in accordance with Rules 905 and 906.

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.

If reportable hydrocarbon impacts, as defined in Rule 912.b., are discovered, a site-specific remediation plan will be developed and submitted via a Supplemental Form 27. If reportable impacts are not encountered, a Supplemental Form 27 closure request will be submitted within 90 days of abandonment and/or decommissioning activities.

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 COGCC 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.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

Quarterly Semi-Annually Annually Other 90 Days Post Completion

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.

- Assessment activities as outlined herein are proposed.

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: \$ 5000 _____

WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? _____

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 _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

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

E&P waste (liquid) description _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

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 conducted in accordance with ECMC 1004 Series Rules.

Is the described reclamation complete? _____

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. _____

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. 10/26/2023

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/08/2024

Proposed site investigation commencement. 01/08/2024

Proposed completion of site investigation. _____

REMEDIAL ACTION DATES

Proposed start date of Remediation. _____

Proposed date of completion of Remediation. _____

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

This Form 27 serves as notification for the abandonment of the Merritt 6-66-9-0560BH wellhead, Merritt 6-66-9-0560CH wellhead, Merritt 6-66-9-0659BH wellhead, Merritt 6-66-9-0659CH wellhead, Merritt 6-66-9-0758BH wellhead, Merritt 6-66-9-0758CDH wellhead, Merritt 6-66-9-0758CH wellhead, Merritt 6-66-9-0857BH wellhead, Merritt 6-66-9-0857CH wellhead, and removal of the associated flowlines. Abandonment activities are planned to begin the week of January 8, 2024. This schedule may be adjusted due to unforeseen circumstances, delays, and/or changes in weather.

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

Signed: Karen Olson

Title: Senior Program Manager

Submit Date: 12/19/2023

Email: taspillremediationcontractor@pdce.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: Nick Cholas

Date: 01/03/2024

Remediation Project Number: 33447

COA Type**Description**

| | |
|-------|--|
| | One soil sample within the equipment manifold may not be sufficient for soil analysis. |
| 1 COA | |

Attachment Check 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**

| | |
|-----------|---|
| 403626812 | INVESTIGATION/REMEDATION WORKPLAN (INITIAL) |
| 403627703 | SITE INVESTIGATION PLAN |
| 403642900 | FORM 27-INITIAL-SUBMITTED |

Total Attach: 3 Files

General Comments**User Group****Comment****Comment Date**

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

Total: 0 comment(s)