

State of Colorado
Energy & Carbon Management Commission

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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: NOBLE ENERGY INC Operator No: 100322 Phone Numbers
Address: 1099 18TH STREET SUITE 1500 Phone: (970) 730-7281
City: DENVER State: CO Zip: 80202 Mobile: ()
Contact Person: Dan Peterson Email: RBUEUF27@chevron.com

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 33825 Initial Form 27 Document #: 403649825

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

No Multiple Facilities

Facility Type: WELL Facility ID: API #: 123-26531 County Name: WELD
Facility Name: ERICKSON A 4-12 Latitude: 40.513385 Longitude: -104.562116
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: NWSW Sec: 4 Twp: 6N Range: 64W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SW Most Sensitive Adjacent Land Use Cropland
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

Well Within Mule Deer Severe Winter Range HPH
Riverine 0.05mi W
Apparent Pond 0.07mi W, 0.15mi SW, 0.16/0.21mi NW
Residential 0.14/0.25mi SW
Farm Structure 0.14/0.15mi 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 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
No	GROUNDWATER	Not Impacted	Not Encountered
No	SOILS	Not Impacted	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.

Pursuant to ECMC Rule 911 a site investigation was conducted pertaining to the ERICKSON A04-12 wellhead cut and cap and was conducted pertaining to flowline removal. Approximately 954' of flowline was removed, however, a portion of the flowline was abandoned-in-place due to field constraints. The ECMC will be updated in a supplemental Form 27. The wellhead was cut and capped per ECMC rules. Additionally, soil samples were field screened at the N-E-S-W sides of the wellhead. So as to not disturb the area of field constraint, soil samples were taken at the start and endpoint of the flowline where the area exists. Soil samples were also taken along the flowline any points of material change and/or hammer unions, directional changes, as well as at the bell holes on either side of a waterway.

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):

A grab soil sample was collected at the base of the excavation or the area showing the highest degree of impact during field screening activities at the wellhead excavation. Additionally, soil samples were field screened at the N-E-S-W sides of the wellhead. Soil samples were taken along the flowline at any points of material change and/or hammer unions, directional changes, as well as at the bell holes on either side of a waterway. Soil samples will be 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 will be 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; this sample analysis includes, but is not limited to BTEX, naphthalene, 1,2,4-trimethylbenzene (TMB), and 1,3,5-TMB 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):

Visual inspection of the flowline areas will occur during abandonment activities. Field personnel will field screen all disturbed areas using visual and olfactory senses to determine if additional laboratory confirmation sampling is required. The ECMC Flowline Closure and Wellhead Closure Checklists will be utilized and filled out during the abandonment process. Another photolog will be submitted on the Subsequent Form 27.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 2
Number of soil samples exceeding 915-1 2
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 0

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 0.646
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 0

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
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?

Noble is currently in the process of evaluating residual pH, arsenic, barium, and selenium concentrations at the wellhead. Flowline decommissioning activities have not yet commenced and will be summarized in a separate supplemental form 27 submittal.

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.

No impacted soils were discovered during wellhead cut and cap activities. Based on site investigation activities and laboratory analytical results of confirmation soil samples collected from the wellhead excavation floor, and wellhead flowline riser, removal of soil is not needed. The material excavated during the cut and cap operations was used as backfill for the excavations.

REMEDATION 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.

Based on site investigation activities and laboratory analytical results for confirmation soil samples collected from the wellhead excavation floor, and wellhead flowline riser, a remediation plan is not needed.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Excavate and offsite disposal

_____ Chemical oxidation
_____ Air sparge / Soil vapor extraction
_____ Natural Attenuation
_____ Other _____

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 excavation of the wellheads for cut and cap 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 Supplemental Form 27

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.

Noble intends to directly address the costs of remediation at the locations as part of our asset retirement obligation process and operations. Noble has general liability insurance (policies MWZZ316714 and MWZX316724) and financial assurance in compliance with ECMC rules. Records are available on the ECMC's website.

- Facility closure activities and confirmation soil sampling were conducted at the Erickson A04-12 wellhead on April 24, 2024.

- Noble is currently in the process of evaluating residual pH, arsenic, barium, and selenium concentrations at the wellhead. Flowline decommissioning activities have not yet commenced and will be summarized in a separate supplemental form 27 submittal.

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.

Following facility closure activities at the wellhead, the location was backfilled, compacted, and re-contoured to match pre-existing conditions. The location will be reclaimed in accordance with the ECMC 1000 series.

Is the described reclamation complete? No _____

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. 10/31/2024

Proposed date of completion of Reclamation. 10/31/2026

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. 01/04/2024

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

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/24/2024

Proposed site investigation commencement. 04/24/2024

Proposed completion of site investigation. 10/31/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 11/01/2024

Proposed date of completion of Remediation. 05/31/2025

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:

Site investigation dates have been updated based on the dates most recent field activities were completed.

OPERATOR COMMENT

Facility closure activities and confirmation soil sampling were conducted at the Erickson A04-12 wellhead on April 24, 2024. Four discrete soil samples were collected from the sidewalls of the wellhead excavation in each cardinal direction from the wellhead and field screened using a photo-ionization detector (PID) calibrated with 100 parts per million (ppm) isobutylene gas. All soil samples screened with a PID at the wellhead resulted in readings equal to 0.0 ppm.

A total of 2 facility closure confirmation soil samples were submitted for analysis. Soil Samples were collected from the floor of the wellhead excavation (WH01@6), and from beneath the flowline riser adjacent to the wellhead (FLR01@4). All soil samples were submitted to Origins Laboratory, Inc. in Denver, Colorado for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, gasoline range organics (GRO) [C6-C10] by EPA Method 8260D, diesel range organics (DRO) [C10-C28] and residual range organics (ORO) [C28-C40] by EPA Method 8015D, polycyclic aromatic hydrocarbons (PAHs) (Table 915-1 list) and naphthalene by EPA Method 8270E, Total Metals by EPA Method 6020B, Hexavalent Chromium by Total Metals by 7196A Method, electrical conductivity (EC) by Mod. Method 9050A, sodium adsorption ratio (SAR) by 20B Saturated Paste Method, and pH by 9045D Method, and boron by DTPA Sorbitol Method.

All analytical results for soil samples submitted for analysis are compliant with their respective Table 915-1 Protection of Groundwater Soil Screening Levels except for pH in soil samples WH01@6 (8.35) and FLR01@4 (8.45), arsenic in soil samples WH01@6 (5.03 mg/kg) and FLR01@4 (4.05 mg/kg), barium in soil samples WH01@6 (95.4 mg/kg) and FLR01@4 (102 mg/kg), and selenium in soil samples WH01@6 (0.293 mg/kg) and FLR01@4 (0.390 mg/kg). All organics were reported as below their respective Table 915-1 Protection of Groundwater Soil Screening Levels. Groundwater was not encountered during wellhead cut and cap activities.

Noble is currently in the process of evaluating residual pH, arsenic, barium, and selenium concentrations at the wellhead. A detailed work plan will be proposed in a subsequent quarterly supplemental Form 27 submission. Flowline removal/abandonment activities will be summarized in a separate supplemental form 27 submittal.

Please refer to the attached Wellhead Checklist for a detailed description of site investigation activities. A general location map is provided as Figure 1. Sample location information is provided in Table 1. Soil sample and field screening locations are presented on Figure 2, and analytical results are summarized in Table 2, Table 3, Table 4, and Table 5. A photo log and the laboratory analytical reports are also attached.

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

Signed: Lindsey Blankenship

Title: Associate Geologist

Submit Date: 04/25/2024

Email: chevronfr@entradainc.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: 33825

COA Type

Description

0 COA	
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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
403823334	ANALYTICAL RESULTS
403823335	REMEDIATION PROGRESS REPORT
403823336	SITE MAP
403823337	SOIL SAMPLE LOCATION MAP
403823338	PHOTO DOCUMENTATION
403823340	ANALYTICAL RESULTS

Total Attach: 6 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)