

State of Colorado  
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:  
404458585

Receive Date:

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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: <u>NOBLE ENERGY INC</u>              | Operator No: <u>100322</u>         | <b>Phone Numbers</b>         |
| 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>Kristofer Shepherd</u>              | Email: <u>RBUEUF27@chevron.com</u> |                              |

**PROJECT, PURPOSE & SITE INFORMATION**

**PROJECT INFORMATION**

Remediation Project #: 29994 Initial Form 27 Document #: 403417095

**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>123-30775</u>       | County Name: <u>WELD</u> |
| Facility Name: <u>DERR 21-4</u>  | Latitude: <u>40.431342</u> | Longitude: <u>-104.663468</u> |                          |
| ** correct Lat/Long if needed: Latitude: _____   |                            | Longitude: _____              |                          |
| QtrQtr: <u>SENE</u> Sec: <u>4</u> Twp: <u>5N</u> Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |                            |                               |                          |
| Facility Type: <u>SPILL OR RELEASE</u>   | Facility ID: <u>492583</u> | API #: _____                  | County Name: <u>WELD</u> |
| Facility Name: <u>DERR #21-04</u>  | Latitude: <u>40.431549</u> | Longitude: <u>-104.664482</u> |                          |
| ** correct Lat/Long if needed: Latitude: _____   |                            | Longitude: _____              |                          |
| QtrQtr: <u>SENE</u> Sec: <u>4</u> Twp: <u>5N</u> Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |                            |                               |                          |

## **SITE CONDITIONS**

General soil type - USCS Classifications SW

Most Sensitive Adjacent Land Use Rangeland

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**

A Bald Eagle Roost High Priority Habitat (HPH) is 0.10 miles south of the Location. An apparent freshwater pond and a gravel pit are located 0.34 miles southwest. Residential structures are present approximately 0.08 miles north and 0.18 miles southeast of the Location.

A network of 15 groundwater monitoring wells has been installed in the immediate vicinity of the Location. The wells are associated with the mining activities at the site. Division of Water Resources (DWR) well permits 311488-, 311493-, 311489-, 311492-, and 311490- represent the wells closest to the Location, located less than 200 feet south.

# 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 Laboratory Analysis, if Encountered |
| Yes          | SOILS          | Refer to Tables and Figures | Field-Screening and Laboratory Analysis                 |

## 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 Colorado Energy & Carbon Management Commission (ECMC) Rule 911, site investigations were conducted pertaining to the DERR #21-04 wellhead cut and cap and flowline removal. On September 6, 2023, initial characterization sampling was completed by a previous consultant at the wellhead following cut and cap operations. Soil samples were collected for field-screening from all four sidewalls and the base of the wellhead excavation and at surface locations in each cardinal direction. The excavation samples were submitted for laboratory analysis of all ECMC Table 915-1 constituents, with the exception of metals. These samples have been included in Chevron's data integrity review and have been recharacterized in accordance with the approved Form 27 investigation plan. The September 6, 2023, wellhead sample result will not be used for site compliance. See Document 404137149 for details.

On November 10, 2023, initial flowline characterization sampling was completed by a previous consultant during the removal of approximately 1,264 feet of flowline. Soil samples were collected along the flowline at points of material change and/or hammer unions and directional changes. Seven samples were collected for field-screening from 4 feet below ground surface (bgs), and five were submitted for analysis of all Table 915-1 constituents. Laboratory results indicated compliance with the applicable standards except for pH, arsenic, barium, and selenium. Two background samples were collected and submitted for analysis of all Table 915-1 inorganics (Soil Suitability for Reclamation [SSR] and metal constituents). Only one sample was collected from an area outside of historical oil and gas development; laboratory results for that sample indicated elevated pH and arsenic levels. See Document 404123076 (In Process) for details.

Continued in Remediation Summary Section...

## 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 ):

Additional soil samples will be collected as needed to delineate the extent of organic impacts at FL01-01. Soil samples will be submitted for analysis of all Table 915-1 soil constituents of concern. A proposed supplemental site investigation plan (SSIP) is attached.

### Proposed Groundwater Sampling

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

No groundwater has been encountered during site investigation activities. If groundwater is encountered, a grab groundwater sample will be collected and analyzed for full 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 wellhead area occurred during site investigation activities. Field personnel assessed all disturbed areas for indications of past spills, such as staining or salt accumulation, with direction to collect samples and report any areas of concern.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 6  
Number of soil samples exceeding 915-1 1  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square feet) 100

### NA / ND

ND Highest concentration of TPH (mg/kg) \_\_\_\_\_  
-- Highest concentration of SAR 0.984  
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 7

### 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?

On September 6 and November 10, 2023, three background soil samples were collected. Two of the samples appear to have been collected within areas previously disturbed by oil and gas operations and have been disallowed. BKG01 was submitted for analysis of Table 915-1 inorganics. See Document 404123076 (In Process) for details.

On August 7, 2025, and November 10, 2025, five background soil samples were collected and analyzed for Table 915-1 inorganics. See Document 404347557 (In Process) and the attached laboratory data summary for details.

The overall maximum pH value was 8.77. The overall maximum background concentration for arsenic is 33.2 milligrams per kilogram (mg/kg), barium is 134 mg/kg, hexavalent chromium is 0.203 mg/kg, lead is 37.8 mg/kg, and selenium is 0.391 mg/kg.

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 conducted to delineate the extent of organic impacts at FL01-01. Soil samples will be submitted for analysis of all Table 915-1 soil constituents of concern. A SSIP with the proposed delineation locations is attached.

## 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.

Site investigation and delineation efforts are still underway for this project. When investigation efforts have concluded, if source removal is deemed to be necessary, a removal summary will be provided.

### REMIATION 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.

Site investigation and delineation efforts are still underway for this project. When investigation efforts have concluded, if remediation is deemed to be necessary, a remedial approach will be proposed, and subsequent efforts and results will be reported here.

....Continued from Initial Action Summary.

On August 7, 2025, Confluence Compliance Companies, LLC (Confluence) provided sampling support to recharacterize locations sampled by a previous consultant at the wellhead and along the flowline. Upon arriving at the Location, unexpected utility markings by a private locator were encountered at the wellhead sampling location. As a result, no samples around the former wellhead were collected due to safety concerns. Three flowline recharacterization samples (SEP01-FL, SEP02-FL, and FL01-04) were collected and analysed for all Table 915-1 constituents. Laboratory results indicate compliance with applicable standards except for arsenic, barium, lead, and selenium. Two background samples were also collected in nearby undisturbed areas; background samples were submitted for analysis of all Table 915-1 inorganics. See Document 404347557 (In Process) for details.

On November 10, 2025, Confluence returned to the Location to recharacterize locations sampled by a previous consultant at the wellhead and along the flowline. Using a hydro vac, six recharacterization samples were collected; five from the locations of the wellhead excavation samples and one from the flowline directional change point location (FL01-01). The samples were submitted for analysis of Table 915-1 soil constituents. Laboratory results indicate exceedances of naphthalene, benzo(a)anthracene, benzo(a)pyrene, 1-methyl-naphthalene, 2-methyl-naphthalene, pH, arsenic, barium, hexavalent chromium, and selenium. Additionally, three background samples were collected and submitted for analysis of Table 915-1 inorganics. See the attached laboratory data summary tables for details.

### **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 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 Quarterly Update, SSI Results, and SSIP

## 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. The cost for remediation is an estimate only, costs may change upwards or downward based on site-specific information. Noble makes no representation or guarantees as to the accuracy of the estimate.

Operator anticipates the remaining cost for this project to be: \$ 50000

## 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 reseeded program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing.

Reclamation will be completed 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. 10/31/2026

Proposed date of completion of Reclamation. 10/31/2028

## 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. 05/16/2023

Actual Spill or Release date, or date of discovery. 12/15/2025

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 09/06/2023

Proposed site investigation commencement. 07/01/2023

Proposed completion of site investigation. 03/31/2026

### 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:

The implementation schedule has been adjusted to reflect the status of site investigation efforts and anticipated dates for completion. Additional site investigation to delineate organic exceedances in the flowline investigation area is tentatively scheduled to be completed by the end of the first quarter of 2026, and results will be reported in a subsequent Form 27. Remediation dates have been removed from this submittal as no active remediation is planned at this time. Should the supplemental site investigation (SSI) activities indicate the need for remedial activities, a schedule will be provided.

**OPERATOR COMMENT**

This form has been submitted to satisfy the quarterly reporting requirement for the DERR #21-4 (Remediation Project 29994), to provide details on SSI activities conducted on November 10, 2025, and to propose a SSIP. Laboratory results for recharacterization samples indicate exceedances of naphthalene, benzo(a)anthracene, benzo(a)pyrene, 1-methyl-naphthalene, 2-methyl-naphthalene, pH, arsenic, barium, hexavalent chromium, and selenium.

Due to the detection of organic exceedances in FL01-01@5', Form 19 Document 404476768 was submitted to ECMC on December 17, 2025. The Form 19 was approved and assigned Spill ID 492583 on December 19, 2025; the form is attached for reference.

Confluence plans to conduct the proposed SSI by the end of the first quarter of 2026, in accordance with the proposed implementation schedule and the Site Investigation Plan attached to this form submittal. The results will be submitted in a subsequent Form 27. Pursuant to 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: Holly Tignac

Title: Project Scientist

Submit Date: \_\_\_\_\_

Email: CVX-REMS@confluence-cc.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: 29994

**COA Type****Description**

| <u>COA Type</u> | <u>Description</u> |
|-----------------|--------------------|
| 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**

|           |                                  |
|-----------|----------------------------------|
| 404459108 | LABORATORY ANALYTICAL REPORT     |
| 404474121 | LOGS                             |
| 404474123 | PHOTO DOCUMENTATION              |
| 404475009 | SITE INVESTIGATION PLAN          |
| 404484266 | OTHER                            |
| 404484274 | ANALYTICAL DATA SUMMARY TABLE(S) |

Total Attach: 6 Files

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

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|----------------|---------------------|
|                   |                | Stamp Upon Approval |

Total: 0 comment(s)