

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
404114705

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: NOBLE ENERGY INC   | Operator No: 100322               | Phone Numbers<br>Phone: (970) 313-5582<br>Mobile: ( ) |
| Address: 1099 18TH STREET SUITE 1500 |                                   |   |
| City: DENVER                         | State: CO                         | Zip: 80202  |
| Contact Person: Jason Davidson       | Email: jason.davidson@chevron.com |   |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 30474 Initial Form 27 Document #: 403462830

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 #: 123-34394       | County Name: WELD                          |
| Facility Name: NEI C18-32D                     | Latitude: 40.311880 | Longitude: -104.594850 |  |
| ** correct Lat/Long if needed: Latitude: _____ |                     | Longitude: _____       |  |
| QtrQtr: NESW                                   | Sec: 18             | Twp: 4N                | Range: 64W 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**

Riverine 0.11mi SW, 0.11mi E  
NA

**SITE INVESTIGATION PLAN**

**TYPE OF WASTE:**

- E&P Waste       Other E&P Waste       Non-E&P Waste
- Produced Water       Workover Fluids
- Oil       Tank Bottoms
- Condensate       Pigging Waste
- Drilling Fluids       Rig Wash
- Drill Cuttings       Spent Filters
- Pit Bottoms
- 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 | Field Screening and Lab 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 ECMC Rule 911, a supplemental site investigation was conducted during the NEI C18-32D flowline removal and wellhead decommissioning. The entire length of the flowline (approximately 246') was removed on 9/15/2023 per ECMC Form 44 # 403617507. A sample was collected at the midpoint of the flowline (FL01-C@3'). A sample was collected from beneath the flowline riser at the separator (SEP01-FL@2') during the decommissioning of the NEI 18-32D tank battery (FAC# 435450 / REM # 30380) under Form 27 # 403626643.

The wellhead was cut and capped per ECMC rules on 8/15/24. Screening samples were collected at the base of the wellhead excavation (WH01-B@6) and the sidewalls in each cardinal direction (WH01-N - WH01-W). The sample with the highest screening level (WH01-W@4) was collected for laboratory analysis.

Analytical results from the wellhead and flowline decommissioning indicated no ECMC Table 915-1 organic compounds exceeded regulatory standards.

**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 sampling was conducted as described in the Initial Action Summary. Sampling deviated from the approved sampling plan because a sample was not collected at the wellhead flowline riser or the directional change east of the tank battery. 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.

**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 sample 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. Sodium, potassium, bicarbonate, and carbonate (as CaCO3)) will be sampled in addition to Table 915-1 analytes per the COA on Initial Form 27 # 403462830.

**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 & wellhead occurred during decommissioning activities. Field personnel screened all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling was required. A detailed summary of the flowline removal, including an ECMC Flowline Closure Checklist, site photos, figures, and laboratory analytical results, was submitted as an attachment to Form 27 # 403706748. A detailed summary of the wellhead decommissioning, including an ECMC Wellhead Closure Checklist, site photos, figures, and laboratory analytical results, is attached to this Form 27.

Additional decommissioning samples will be collected to address the deviations from the approved sampling plan. Sampling will be conducted as a part of the site investigation proposed in the Site Investigation Report section of this Form 27 and results will be submitted on a 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) 200

### NA / ND

ND Highest concentration of TPH (mg/kg) \_\_\_\_\_

-- Highest concentration of SAR 1.14

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 4

### 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

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?

A total of 20 background soil samples were collected from 5 discrete locations (BG01-BG05) during a site investigation at the adjacent NEI 18-32D tank battery (FAC# 435450 / REM # 30380). The background data was reported in Form 27 # 403739771. After reviewing the data from the site investigation, it was determined that the samples were not collected at a sufficient distance from the impacted area and are not/will not be considered in the background analysis for this site.

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 collect additional decommissioning samples and background samples. Analytical soil samples will be collected at the direction change shown on the flowline site map (FL01-01) and at the wellhead flowline riser (FL01R-W). Decommissioning samples will be analyzed for the full Table 915-1 list of contaminants. Background samples (BG06-BG10) will be collected to determine if elevated concentrations of pH, arsenic, and barium can be attributed to native soil conditions. Backgrounds will be analyzed for Table 915-1 metals, pH, SAR, EC, and boron. A proposed site investigation map is attached to this Form 27. 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.

No impacted material caused by oil and gas operations was identified at this time.

### 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 supplemental site investigation (SSI) will be conducted to collect additional decommissioning samples and background samples. The SSI will be conducted per the attached proposed site investigation map, and the proposed sampling plan outlined in the Site Investigation Report section of this Form 27. The proposed SSI has been tentatively scheduled to be completed October 9th, 2025.

### **Soil Remediation Summary**

**In Situ**

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

**Ex Situ**

- \_\_\_\_\_ 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 Wellhead Decommissioning Sampling Summary and Updated Site Investigation Proposal \_\_\_\_\_

## 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 (policy MWZZ 316714) 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 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. 09/14/2023

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

## 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. 05/11/2023

Actual Spill or Release date, or date of discovery. \_\_\_\_\_

### **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). 09/14/2023

Proposed site investigation commencement. 10/09/2025

Proposed completion of site investigation. 10/10/2025

### **REMEDIAL ACTION DATES**

Proposed start date of Remediation. 10/10/2025

Proposed date of completion of Remediation. 04/10/2026

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 "proposed completion of remediation" date is being updated to reflect the schedule for the supplemental site investigation (SSI). The proposed SSI has been tentatively scheduled to be completed October 9th, 2025. The ECMC will be updated on a subsequent Form 27 with the results of the SSI, or if the schedule is changed due to site access constraints.

## OPERATOR COMMENT

This Form 27 is being submitted to report the wellhead decommissioning results and propose an updated supplemental site investigation (SSI) for the NEI C18-32D project. A detailed summary of the wellhead decommissioning is attached to this Form 27. A detailed summary of the flowline removal was submitted as an attachment to Form 27 # 403706748.

The wellhead was cut and capped per ECMC rules on 8/15/24. Screening samples were collected at the base of the wellhead excavation (WH01-B@6) and the sidewalls in each cardinal direction (WH01-N - WH01-W). The sample with the highest screening level (WH01-W@4) was collected for laboratory analysis. Analytical results from the wellhead and flowline decommissioning indicated no ECMC Table 915-1 organic compounds exceeded regulatory standards.

In response to ECMC Form 27 Comment dated February 17th, 2025 (Document Number 403930258), Operator is submitting a replacement Form 27. Based on currently available data, this project is not affected by data integrity irregularities and is not associated with Operator's data integrity review process and its Rule 525.e. Voluntary Disclosure. As part of its data integrity review process, Operator requested the lab protect the laboratory analytical report from subsequent unauthorized modification by anyone outside the lab, which resulted in the lab reissuing the original report with additional protections (Reissued Report). The Reissued Report was received directly from the lab on February 13th, 2025, which includes a watermark confirming both the laboratory representative who reissued the report and the date and time of the reissuance. The metadata associated with this Reissued Report also includes the lab representative's name, the date and time the laboratory reissued the report, and an explanation for the report reissuance. The Reissued Report is attached to this submission.

In the event additional responsive information is received or discovered that would suggest this project should be incorporated into the ongoing data integrity review process associated with Operator's Rule 525.e. Voluntary Disclosure, Operator will update and/or amend the statements in this submission and provide any new or revised data or other information responsive to ECMC's general comments responding to Operator's Form 27 submission found in Document Number 403930258.

An SSI will be conducted to collect additional decommissioning samples and background samples. Sampling deviated from the approved sampling plan because a sample was not collected at the wellhead flowline riser or the directional change east of the tank battery. Analytical soil samples will be collected at the direction change shown on the flowline site map (FL01-01) and at the wellhead flowline riser (FL01R-W). Decommissioning samples will be analyzed for the full Table 915-1 list of contaminants. Background samples (BKG06-BKG10) will be collected to determine if elevated concentrations of pH, arsenic, and barium can be attributed to native soil conditions. Backgrounds will be analyzed for Table 915-1 metals, pH, SAR, EC, and boron. A proposed site investigation map is attached to this Form 27.

Quarterly reporting will be conducted until closure criteria are achieved for the project. 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.

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

Signed: Brock Nelson

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: 30474

### COA Type

### Description

| 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

|           |                           |
|-----------|---------------------------|
| 404115319 | ANALYTICAL RESULTS        |
| 404115358 | SITE INVESTIGATION REPORT |
| 404115497 | SITE INVESTIGATION PLAN   |

Total Attach: 3 Files

### General Comments

#### User Group

#### Comment

#### Comment Date

| User Group | Comment | Comment Date        |
|------------|---------|---------------------|
|            |         | Stamp Upon Approval |

Total: 0 comment(s)

Date Run: 3/5/2025 Doc [#404114705]