

State of Colorado  
Energy & Carbon Management Commission

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Document Number:

404087371

Receive Date:

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.

Report taken by:

OPERATOR INFORMATION

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

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 24600 Initial Form 27 Document #: 403091614

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: WELL	Facility ID: _____	API #: 123-24009	County Name: WELD
Facility Name: FRENZEL B 15-25	Latitude: 40.395921	Longitude: -104.540770	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWSW	Sec: 15	Twp: 5N	Range: 64W Meridian: 6 Sensitive Area? No
Facility Type: SPILL OR RELEASE	Facility ID: 483179	API #: _____	County Name: WELD
Facility Name: Frenzel B 15-25	Latitude: 40.395921	Longitude: -104.540770	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWSW	Sec: 15	Twp: 5N	Range: 64W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE Facility ID: 483475 API #: \_\_\_\_\_ County Name: WELD  
Facility Name: Frenzel B 15-25 Latitude: 40.395961 Longitude: -104.540858  
\*\* correct Lat/Long if needed: Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_  
QtrQtr: NWSW Sec: 15 Twp: 5N 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? Yes 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**

HPH N  
Freshwater Emergent Wetlands 0.04/0.1mi NW, 0.05/0.17mi W, 0.05mi S  
Freshwater Pond 0.05/0.23mi NW  
Riverine 0.13mi NW  
Structure 0.19mi NW  
Above distances are approximations.

# 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	See attached figures	Laboratory analysis
Yes	SOILS	25'x25'x3' deep	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 COGCC Rule 911 a site investigation will be conducted pertaining to the FRENZEL B15-25 wellhead cut and cap and flowline removal. Approximately 742' of flowline will be removed. The wellhead was cut and capped per COGCC rules. Additionally, soil samples were collected 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, AS APPLICABLE to abandonment type. The Flowline Pre-Abandonment Notice Document number was previously included under Related Forms.

## **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 collected 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, AS APPLICABLE to abandonment type. A grab confirmation soil sample was collected at the wellhead excavation. Soil samples were analyzed by a certified laboratory for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons) organic compounds in soil per ECMC Table 915-1, and EC, SAR, pH, 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 ):

Groundwater was encountered during the site investigation. See attached for details

### **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 along the flowline and at the wellhead and separator areas occurred during abandonment activities. Field personnel field screened all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling was required. The applicable ECMC Closure Checklists were utilized and filled out during the abandonment process. A photolog is attached.

# SITE INVESTIGATION REPORT

## **SAMPLE SUMMARY**

**Soil**

Number of soil samples collected 25  
Number of soil samples exceeding 915-1 21  
Was the areal and vertical extent of soil contamination delineated? Yes  
Approximate areal extent (square feet) 625

**NA / ND**

-- Highest concentration of TPH (mg/kg) 96  
-- Highest concentration of SAR 9.57  
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 3

**Groundwater**

Number of groundwater samples collected 6  
Was extent of groundwater contaminated delineated? Yes  
Depth to groundwater (below ground surface, in feet) 2  
Number of groundwater monitoring wells installed 6  
Number of groundwater samples exceeding 915-1 0

ND Highest concentration of Benzene (µg/l) \_\_\_\_\_  
ND Highest concentration of Toluene (µg/l) \_\_\_\_\_  
ND Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_  
ND Highest concentration of Xylene (µg/l) \_\_\_\_\_  
NA 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?

Five background soil samples will be collected during the excavation of impacted soil from similar depths and lithologies as the excavation confirmation soil samples. The background samples will be used to characterize the native soil and potentially attribute elevated metals and inorganic concentrations to native soil conditions.

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**

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.

Impacted soil was removed from the release area at the Frenzel wellhead and along the flowline by excavation and was completed on February 5, 2025. The impacted soil will be disposed of at an approved landfill as non-hazardous waste in accordance with Rules 905 and 906. Copies of the waste manifests will be available upon request.

**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 was completed at the former Frenzel B15-25 flowline and wellhead on 1/4/2024. The results of the site investigation were previously detailed in the attached of Doc. # 403794604. Groundwater was encountered and six PVC monitoring wells were installed and sampled for Table 915 constituents in groundwater.

The source material was excavated on February 5, 2025, and confirmation soil samples were collected and analyzed for the full Table 915 suite. Analytical results are pending and additional data will be provided in a subsequent Form 27 update.

Impacted groundwater, encountered during the flowline decommissioning activities, will be monitored quarterly in accordance with the previously attached groundwater sampling methods and procedures plan. Soil and/or groundwater remediation plans will be updated, as needed, and submitted to ECMC in a supplemental Form 27. Monitoring wells destroyed during excavation will be reinstalled within 45 days of excavation completion.

This quarter represents the fourth consecutive ECMC-compliant quarter of groundwater sampling at the location, however, it is the first quarter reported with additional PAH groundwater analytes. A no further action (NFA) designation will be requested following source removal and/or in situ remediation of impacted soil at the location, and completion of four consecutive quarters of groundwater reported at the location with concentrations of Table 915 constituents below regulatory limits. Should no additional active remediation be required a no further action (NFA) determination following laboratory confirmation.

### **Soil Remediation Summary**

In Situ

Ex Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

Yes \_\_\_\_\_ Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 1

\_\_\_\_\_ Air sparge / Soil vapor extraction

Name of Licensed Disposal Facility or ECMC Facility ID # \_\_\_\_\_

\_\_\_\_\_ Natural Attenuation

No \_\_\_\_\_ 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

Yes \_\_\_\_\_ 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.

Six groundwater monitoring wells were installed to delineate the magnitude and extent of groundwater impacts (MW-1 to MW-6). The samples will be analyzed by a certified laboratory for the full suite of ECMC Table 915-1 organics and inorganics, along with PAH: acenaphthene, benz(a)anthracene, benzo(a)pyrene, dibenzo(a,h)anthracene, fluorene, pyrene, 1-methylnaphthalene, 2-methylnaphthalene. The wells will be monitored quarterly until four consecutive quarters of ECMC Table 915-1 compliant groundwater concentrations are achieved. Groundwater was sampled before excavation at the location, which destroyed the site monitoring wells. Monitoring wells are scheduled to be reinstalled within 45 days.

# 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 (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: \$ 25000

## WASTE DISPOSAL INFORMATION

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

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

No beneficial use

Volume of E&P Waste (solid) in cubic yards 1

E&P waste (solid) description Impacted soil

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-ECMC Disposal Facility: TBD

Volume of E&P Waste (liquid) in barrels 0

E&P waste (liquid) description NA

ECMC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-ECMC Disposal Facility: NA

## 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? No

Does the previous reply indicate consideration of background concentrations? \_\_\_\_\_

Does Groundwater meet Table 915-1 standards? Yes

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? 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. 10/21/2022

Proposed date of completion of Reclamation. 06/30/2026

## 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. 06/07/2022

Actual Spill or Release date, or date of discovery. 11/08/2022

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/21/2022

Proposed site investigation commencement. 07/15/2022

Proposed completion of site investigation. 12/07/2022

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 12/07/2022

Proposed date of completion of Remediation. 06/30/2025

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:

The proposed completion date for remediation has been updated to allow time for installing post-excavation monitoring wells and monitoring groundwater.

**OPERATOR COMMENT**

This form updates the ECMC with data collected during the Q4 2024 QM at the location. Remedial excavation was completed at the location on February 5, 2025 however data is not available yet. Excavation data will be provided in a subsequent Form 27 update. Site monitoring wells were sampled before excavation at the location, which destroyed the monitoring wells. The monitoring wells will be reinstalled within 45 days. A timeline update has also been provided in the Implementation Schedule section.

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

Signed: Chris Lattes

Title: Consultant

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

Email: chrisl@fremontenv.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: 24600

**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**

404087490	MONITORING REPORT
404087491	ANALYTICAL RESULTS
404087492	ANALYTICAL RESULTS

Total Attach: 3 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)