

# 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 Phone: (970) 313-5582 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 #: 32014 Initial Form 27 Document #: 403544697

#### 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 #: 123-30614	County Name: WELD
Facility Name: BARTON C 15-29		Latitude: 40.320466	Longitude: -104.541502
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: SWSW	Sec: 10	Twp: 4N	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? 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

Freshwater Pond 0.06mi SW  
Riverine 0.22mi NE, 0.21mi E, 0.13mi SE, 0.04miS, 0.13/0.19mi SW  
Apparent pond 0.03mi S, 0.09mi SW  
Residential 0.22mi SW  
Farm Structure 0.21mi E, 0.22/0.23mi SW, 0.18/0.19/0.20/0.21/0.22mi W  
No other potential receptors are located within ¼ mile of the Site.  
Above distances are approximations.

## 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
No	GROUNDWATER	Not Impacted	Confirmation Groundwater Sampling
Yes	SOILS	See Attached 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 site investigation was conducted pertaining to the BARTON C15-29 wellhead cut and cap and flowline removal. Approximately 832' of flowline was abandoned-in-place due to field constraints. The ECMC was 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 will be 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 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, and EC, SAR, pH, metals, 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 ):

A grab groundwater sample was collected during wellhead cut and cap decommissioning activities on 3/19/2024 and was analyzed for all organic compounds in addition to inorganic parameters (TDS, chloride, sulfate, sodium, potassium, bicarbonate, and carbonate (as CaCO3)) per ECMC Table 915-1.

If any further groundwater is encountered during site investigation activities a grab groundwater sample will be collected and analyzed for all organic compounds and inorganic parameters per ECMC 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 of the wellhead area occurred during abandonment activities. Field personnel field screened all disturbed areas using visual and olfactory senses to determine if additional laboratory confirmation sampling is required. The ECMC Wellhead 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 8

Number of soil samples exceeding 915-1 7

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

Approximate areal extent (square feet) 700

### NA / ND

ND Highest concentration of TPH (mg/kg)

-- Highest concentration of SAR 11.9

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 6

### Groundwater

Number of groundwater samples collected 1

Was extent of groundwater contaminated delineated? Yes

Depth to groundwater (below ground surface, in feet) 5

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 915-1 1

ND Highest concentration of Benzene (µg/l)

ND Highest concentration of Toluene (µg/l)

-- Highest concentration of Ethylbenzene (µg/l) 1.06

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?

Fifteen background soil samples were collected from an area not impacted by oil and gas development and at similar depths and lithologies as confirmation soil samples collected at the location and analyzed for Table 915-1 metals and SSR constituents. Background soil sample analytical results were reported with elevated levels of pH, SAR, Arsenic (As), Barium (Ba), Cadmium (Ca), Lead (Pb), and Selenium (Se).

BKG Soil Sample Analysis (mg/kg):

pH @ 3ft: Max = 8.82

SAR @ 3ft: Max = 11.2

As @ 3ft: Max\*1.25 = 6.06

Ba @ 3ft: Max\*1.25 = 138

Se @ 3ft: Max\*1.25 = 0.384

☐ 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?

Confirmation samples FL01 2FT, S SEP RISER 3FT and WH01 @6' at the former Barton C 15-29 wellhead and flowline were submitted out of temperature preservation range. Soil will be re-sampled and analyzed for the full Table 915-1 analyte suite at the FL01 2FT, S SEP RISER 3FT and WH01 @6' sample locations at the same depth where the initial confirmation samples were collected in order to confirm initial analytical results. Noble will request a No Further Action (NFA) be granted if the reanalyzed samples comply with the Table 915-1 concentration standard. Background samples will be used to justify elevated concentrations.

Elevated inorganics and metals were observed in multiple locations at the former Barton C 15-29 flowline. Soil will be resampled and analyzed for the full Table 915-1 analyte suite at the FL02 3FT, FL03 3FT, FL04 3FT, FL06 3FT and FL07 3FT sample locations at the same depth where the initial elevated concentrations were observed. Noble will request an NFA be granted if the reanalyzed samples comply with the Table 915-1 concentration standard. Background samples will be used to justify elevated concentrations.

Alternatively, if the sample results exceed the Table 915-1 standards and cannot be attributed to native soil conditions via background soil characterization a minimum of five additional samples will be collected to delineate the magnitude and extent of elevated constituents.

In addition to previously collected background samples, additional local samples will be collected to further characterize native soils.

Refer to the attached site investigation plan for re-sample and additional background sample locations

## 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 not discovered during the wellhead cut and cap activities or during removal of the flowlines. Based on site investigation activities and laboratory analytical results of confirmation soil samples collected from the wellhead excavation floors and flowline risers, along the flowlines, and from the separator flowline riser, removal of soil is not needed. The material excavated during cut and cap and flowline removal activities was used as backfill for the excavations.

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.

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

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 Sample Evaluation and Monitoring Plan Determination

Based on the results of site investigation activities and laboratory analytical data obtained from confirmation groundwater samples collected on March 19, 2024, at a depth of approximately five feet below ground surface (ft bgs), implementation of a groundwater monitoring plan is not warranted at this time.

It is noted, however, that the original sample was submitted outside of the required temperature preservation range. As a result, resampling will be conducted at the same location to ensure data validity. The replacement sample will be analyzed for the full suite of organic compounds, as well as the following inorganic parameters in accordance with ECMC Table 915-1: total dissolved solids (TDS), chloride, sulfate, sodium, potassium, bicarbonate, and carbonate (as CaCO3).

Pending confirmation that the reanalyzed sample results comply with the concentration standards outlined in Table 915-1, Noble intends to submit a request for a No Further Action (NFA) determination.

## 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 Timeline Update & Supplemental 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? No

Does the previous reply indicate consideration of background concentrations?

Does Groundwater meet Table 915-1 standards? No

Is additional groundwater monitoring to be conducted? No

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. 12/01/2023

Proposed date of completion of Reclamation. 04/30/2027

## 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. 07/20/2023

Actual Spill or Release date, or date of discovery.           

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/14/2023

Proposed site investigation commencement. 12/01/2023

Proposed completion of site investigation. 12/31/2025

### 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 changed due to the necessity for supplemental site investigation activities adjacent to the former Barton C 15-29 wellhead and flowline. The proposed site investigation will be completed following the approval of this form.

## OPERATOR COMMENT

This Form 27 is being submitted as a Q2 2025 timeline update for the former Barton C 15-29 wellhead and flowline location, which includes updated decommissioning results and proposes a supplemental site investigation.

In regards to the COAs issued via document numbers 403671781 and 403717283, please refer to the previously submitted document number 404063496. The review status of this supplemental Form 27 is currently "In Process" on Web Forms, and the operator is still awaiting feedback regarding the resolution of the outstanding COAs.

### Supplemental Site Investigation Activities:

The Operator will conduct a supplemental site investigation in accordance with Environmental Compliance Monitoring and Control (ECMC) requirements. Re-sampling will be performed at previously submitted confirmation sample locations where the original samples were submitted outside the required temperature preservation range. These locations include: FL01 2FT, S SEP RISER 3FT, WH01@6'

The purpose of this re-sampling is to confirm the initial analytical results, ensuring compliance with ECMC data quality and accuracy standards.

Additionally, re-sampling will be conducted at the following locations to further assess the presence or absence of elevated inorganic and metal concentrations identified in the initial sampling event: FL02 3FT, FL03 3FT, FL04 3FT, FL06 3FT, FL07 3FT

Local background samples will also be collected to support the characterization of native soil conditions and provide further context for evaluating site-specific data.

Please refer to the proposed Site Investigation Report Workplan and the attached Site Investigation Plan for detailed sample locations and methodologies. The Operator will initiate the supplemental site investigation activities upon approval of this form.

### Supplemental Groundwater Investigation:

In addition to the soil investigation, the operator will conduct a supplemental groundwater investigation. A re-sample will be collected from the previously submitted confirmation groundwater sample location—GW01 at the wellhead—due to preservation temperature exceedance. The purpose of this re-sampling is to confirm the initial groundwater analytical results, ensuring compliance with ECMC standards.

Please refer to the proposed Groundwater Monitoring Workplan and the attached Site Investigation Plan for details regarding the groundwater sample location and procedures. The Operator will proceed with this investigation upon approval of this form.

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, the operator requested the lab protect the laboratory analytical reports from subsequent unauthorized modification by anyone outside the lab, which resulted in the lab reissuing the original reports with additional protections (Reissued Reports). The Reissued Reports were received directly from the lab on March 29, 2025 and April 4, 2025, which the application of a Digital ID/Verified Certification (lock) to support reissuance. The metadata associated with this Reissued Reports also includes the lab representative's name, the date and time the laboratory reissued the report, and an explanation for the reports reissuance. The Reissued Reports are 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.

Quarterly reporting will be conducted until closure criteria are achieved for the remediation project. The results of the supplemental site investigation 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: Ethan Black

Title: Consultant

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

Email: ethanb@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: 32014

## 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.



<u>Att Doc Num</u>	<u>Name</u>
404161380	ANALYTICAL RESULTS
404161381	ANALYTICAL RESULTS
404161382	ANALYTICAL RESULTS
404161392	SITE INVESTIGATION REPORT
404161394	SITE INVESTIGATION PLAN

Total Attach: 5 Files

**General Comments**

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

Total: 0 comment(s)