

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
404301730

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            | <b>Phone Numbers</b>  |
| Address: 1099 18TH STREET SUITE 1500 |                                | Phone: (832) 349-0757 |
| City: DENVER State: CO Zip: 80202    |                                | Mobile: ( )           |
| Contact Person: Lauren Hoff          | Email: lauren.hoff@chevron.com |                       |

**PROJECT, PURPOSE & SITE INFORMATION**

**PROJECT INFORMATION**

Remediation Project #: 33461 Initial Form 27 Document #: 403638204

**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 #: 123-33909       | County Name: WELD                          |
| Facility Name: LOWER LATHAM PC G 01-32D        | Latitude: 40.343190 | Longitude: -104.623060 |  |
| ** correct Lat/Long if needed: Latitude: _____ |                     | Longitude: _____       |  |
| QtrQtr: SENE                                   | Sec: 2              | Twps: 4N               | Range: 65W Meridian: 6 Sensitive Area? Yes |

**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

within Bald Eagle Active Nest Site - Half Mile Buffer  
Riverine (Gilmore Ditch) 0.17mi E, Lower Latham Reservoir 0.25mi W  
Feedlot Structures 0.17mi/0.2/0.21/0.22mi SSE  
Farming Structures 0.13/0.14/0.15/0.18/0.19mi NNE, 0.07/0.09  
Residential Structures 0.06mi NE, 0.15mi NNE  
No other potential receptors are located within ¼ mile of the Site.  
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 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                          | 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 site investigation was conducted pertaining to the LOWER LATHAM PC G01-32D flowline removal. Approximately 732' of flowline was removed. 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. The ECMC was updated in a supplemental Form 27 if a portion of the flowline is abandoned-in-place due to field constraints.

## **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 were collected at the base of the excavation or the area showing the highest degree of impact during field screening activities. 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. 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 ):

If groundwater is encountered during the site investigation 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 along the flowline and at the wellhead and separator areas occurred during abandonment activities. Field personnel field screened all disturbed areas using a PID, 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 was attached.

# SITE INVESTIGATION REPORT

## **SAMPLE SUMMARY**

Soil

NA / ND

Number of soil samples collected 5  
 Number of soil samples exceeding 915-1 3  
 Was the areal and vertical extent of soil contamination delineated? No  
 Approximate areal extent (square feet) 300

ND Highest concentration of TPH (mg/kg) \_\_\_\_\_  
 -- Highest concentration of SAR 0.877  
 BTEX > 915-1 No  
 Vertical Extent > 915-1 (in feet) 3

**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?

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, Arsenic (As), Barium (Ba), Cadmium (Cd) and Lead (Pb).

Background Soil Sample Analysis (mg/kg)  
 pH @ 1ft: Max = 8.63  
 pH @ 3ft: Max = 8.39  
 pH @ 4ft: Max = 8.99  
 As @ 1ft: Max\*1.25 = 7.08  
 As @ 3ft: Max\*1.25 = 5.76  
 As @ 4ft: Max\*1.25 = 7.55  
 Ba @ 1ft: Max\*1.25 = 139  
 Ba @ 3ft: Max\*1.25 = 140  
 Ba @ 4ft: Max\*1.25 = 215  
 Cd @ 1ft: Max\*1.25 = 0.535  
 Cd @ 3ft: Max\*1.25 = 0.435  
 Cd @ 4ft: Max\*1.25 = 0.590  
 Pb @ 1ft: Max\*1.25 = 14.8  
 Pb @ 3ft: Max\*1.25 = 17.4  
 Pb @ 4ft: Max\*1.25 = 19.8

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?

Per the note provided by the ECOMC regarding Document No. 403987452, Noble has re-sampled all previously collected soil samples that were outside of the appropriate temperature preservation range. The re-samples were collected from the same depths and locations as the original confirmation samples submitted from the March 19, 2024, flowline decommissioning event. Re-sampling was conducted on January 14, 2025, and included the following locations: FL01 3FT, 2-8G 1-32D 2-22D FL02 3FT, 2-8G 1-32D 2-22D FL05 3FT, 02-01G Combi Trench 3FT and W FL Riser Combi Trench 3FT. All resamples were analyzed for the full Table 915-1 analyte suite.

Based on the results of the re-sampling, elevated concentrations of inorganics and metals were observed in multiple locations along the former LOWER LATHAM PC G01-32D flowline. To further evaluate these findings, soil will be re-sampled and analyzed for the full Table 915-1 analyte suite at the 02-01G Combi Trench 3FT, and W FL Riser Combi Trench 3FT sample locations, at the same depths where the elevated concentrations were observed. In addition, background samples will be collected to characterize native soil conditions.

If the re-sampled results meet Table 915-1 concentration standards, Noble will request that a No Further Action (NFA) determination be granted. Background samples will be used to support justification for elevated concentrations where applicable.

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

Please refer to Figure 4 of the attached for re-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.

No source was generated.

## 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.

NA

## 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.

If groundwater is encountered during additional site assessment activities, a grab groundwater sample will be collected and analyzed for all organic compounds and inorganic parameters per Table 915-1.

# 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

## 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 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? 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? 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. 10/20/2025

Proposed date of completion of Reclamation. 06/30/2027

## 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. 12/21/2023

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

### **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). 03/18/2024

Proposed site investigation commencement. 12/12/2024

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 decommissioning of the LOWER LATHAM PC G01-32D flowline and necessity for supplemental site investigation activities adjacent to the flowline. The proposed site investigation will be completed following the approval of document number 404182484.

**OPERATOR COMMENT**

This form serves to comply with the Rule 913.e. reporting schedule. The review status of the previously proposed workplan (Doc. # 404182484) is "In Process" on Web Forms. Pending ECMC EPS form review/approval, the Operator will complete the additional site investigation and remediation as outlined on Doc. # 404182484 and this F27. Supplemental Form 27s will be prepared and submitted on a quarterly schedule to provide updates and progress of the remediation until closure criteria has been achieved.

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

Signed: Jeff Griggs

Title: Consultant

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

Email: jeffg@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: 33461

**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**

|  |  |
|--|--|
|  |  |
|--|--|

Total Attach: 0 Files

**General Comments**

**User Group**

**Comment**

**Comment Date**

|  |  |                     |
|--|--|---------------------|
|  |  | Stamp Upon Approval |
|--|--|---------------------|

Total: 0 comment(s)