

State of Colorado  
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
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Document Number:

403905807

Receive Date:

08/29/2024

Report taken by:

Chris Sanchez

## 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         |
| Address: 1099 18TH STREET SUITE 1500 |                             | Phone: (970) 730-7281 |
| City: DENVER                         | State: CO                   | Zip: 80202            |
| Contact Person: Dan Peterson         | Email: rbueuf27@chevron.com | Mobile: ( )           |

## PROJECT, PURPOSE &amp; SITE INFORMATION

## PROJECT INFORMATION

Remediation Project #: 23694 Initial Form 27 Document #: 403079894

## 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 #: 123-07147       | County Name: WELD                          |
| Facility Name: SPIKE STATE CC 30-13            | Latitude: 40.277830 | Longitude: -104.487520 |  |
| ** correct Lat/Long if needed: Latitude: _____ |                     | Longitude: _____       |  |
| QtrQtr: SWSW                                   | Sec: 30             | Twp: 4N                | Range: 63W Meridian: 6 Sensitive Area? Yes |

|  |                     |                        |  |
|--|---------------------|------------------------|--|
| Facility Type: SPILL OR RELEASE                | Facility ID: 483357 | API #: _____           | County Name: WELD                          |
| Facility Name: Spike State CC30-13             | Latitude: 40.280576 | Longitude: -104.483843 |  |
| ** correct Lat/Long if needed: Latitude: _____ |                     | Longitude: _____       |  |
| QtrQtr: NESW                                   | Sec: 30             | Twp: 4N                | Range: 63W Meridian: 6 Sensitive Area? Yes |

## SITE CONDITIONS

General soil type - USCS Classifications SW \_\_\_\_\_

Most Sensitive Adjacent Land Use prairie \_\_\_\_\_

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**

HPH Y - Pronghorn Winter Concentration  
Freshwater Pond 0.19mi E

## 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               | laboratory analysis if encountered |
| Yes          | SOILS          | 10'x10'x3' BGS   | 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 was conducted pertaining to the SPIKE STATE CC30-13 wellhead cut and cap and flowline removal. Approximately 80' of flowline was abandoned in place due to a DCP Midstream line crossing, and 2,738' of flowline was 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 included under Related Forms on the initial Form 27.

### 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 ):

One (1) 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, twelve (12) soil samples were collected from the bellholes opened during the flowline removal and abandonment. Soil samples were analyzed by a certified laboratory for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons) organic compounds in soil per COGCC Table 915-1, and EC, SAR, pH, and boron. Additionally, one (1) soil sample was analyzed by a certified laboratory for metals in soil per COGCC Table 915-1. All samples collected were analyzed by a certified laboratory using approved COGCC 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 will be collected and analyzed for all organic compounds per COGCC 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 and flowline areas occurred during abandonment activities. Field personnel field screened all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling is required. The COGCC Flowline Closure and Wellhead Closure Checklists were utilized and filled out during the abandonment process. A photolog was submitted on the Subsequent Form 27.

## SITE INVESTIGATION REPORT

### SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 72

Number of soil samples exceeding 915-1 72

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

Approximate areal extent (square feet) 700

-- Highest concentration of TPH (mg/kg) 260

-- Highest concentration of SAR 1.96

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 3

#### Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

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?

A total of ten background samples were collected and analyzed for COGCC Table 915-1 metals and pH.

☐ 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.

The compounds exceeding ECMC Table 915-1 Residential Soil Screening Levels (RSSLs) at FL01-I@3', FL01-T@3', and BH31@6' were successfully removed through a remedial excavation. Remedial excavation confirmatory soil samples were collected for ECMC Table 915-1 organic compounds in soil and TPH C6-36, and compared to ECMC Table 915-1 Residential Soil Screening Levels based on the approval granted under ECMC Document Number 403519662.

Based on the previous approval to apply ECMC Table 915-1 RSSLs (refer to ECMC document number 403519662) and lack of a pathway for contaminant migration to groundwater, the fully delineated impacts identified at FL01-H@3', FL01-O@3', FL01-P@2.5', and FL01-R@3' will be left in place.

All remedial excavation confirmatory soil sampling results were in compliance with ECMC Table 915-1 RSSLs. As such, Noble is requesting a No Further Action (NFA) designation for the site.

#### 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 total of 181-cubic yards (CY) of impacted soil was transported off-site for disposal at the Waste Management Buffalo Ridge Landfill in Keenesburg, CO.

#### Soil Remediation Summary

☐ In Situ

☒ Ex Situ

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

☐ Yes    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.

## 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 Remedial Excavation Report

### 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 COGCC rules. Records are available on the COGCC's website.

Operator anticipates the remaining cost for this project to be: \$ 0

### 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? Yes

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? Yes

Does the previous reply indicate consideration of background concentrations? Yes

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 COGCC 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? No \_\_\_\_\_

If YES, does the seed mix comply with local soil conservation district recommendations? \_\_\_\_\_

Did the local soil conservation district provide the seed mix? No \_\_\_\_\_

### SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 11/08/2022

Proposed date of completion of Reclamation. 03/01/2025

## 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. 05/18/2022

Actual Spill or Release date, or date of discovery. 11/29/2022

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/08/2022

Proposed site investigation commencement. 11/08/2022

Proposed completion of site investigation. 12/05/2023

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 12/05/2023

Proposed date of completion of Remediation. 08/29/2024

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:

## OPERATOR COMMENT

This Form 27 is being submitted to include the remedial excavation results for the Spike State CC30-13 Flowline. All remedial excavation confirmatory soil samples were collected in accordance with the previously approved soil sampling plans.

Based on the previous approval to apply ECMC Table 915-1 RSSLs (refer to ECMC document number 403519662) and lack of a pathway for contaminant migration to groundwater, the fully delineated impacts identified at FL01-H@3', FL01-O@3', FL01-P@2.5', and FL01-R@3' will be left in place.

All remedial excavation confirmatory soil sampling results were in compliance with ECMC Table 915-1 RSSLs. As such, Noble is requesting a No Further Action (NFA) designation for the site.

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

Signed: Allan Engelhardt

Title: Environmental Consultant

Submit Date: 08/29/2024

Email: chevroneform@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: Chris Sanchez

Date: 12/03/2024

Remediation Project Number: 23694

## COA Type

## Description

|       |  |
|-------|--|
|       | The surface area disturbed by the remediation activity shall be reclaimed in accordance with the 1000 Series Reclamation Rules. For locations with active ongoing oil and gas operations, comply with Rule 1003 interim reclamation requirements and for locations that will no longer have active oil and gas operations, comply with Rule 1004 Final Reclamation requirements. |
| 1 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

|           |  |
|-----------|--|
| 403905807 | INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL) |
| 403905938 | REMEDATION PROGRESS REPORT                       |
| 404013789 | FORM 27-SUPPLEMENTAL-SUBMITTED                   |

Total Attach: 3 Files

## General Comments

| <u>User Group</u> | <u>Comment</u>   | <u>Comment Date</u> |
|-------------------|--|---------------------|
| Environmental     | Soil Data for wellhead provided in Form 27 Document # 403356616  | 12/03/2024          |
| Environmental     | Based on the information presented, it appears that no further remedial action is necessary at this time and the ECMC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding ECMC standards or if groundwater is found to be impacted, then further investigation and/or remediation activities may be required. | 12/03/2024          |

Total: 2 comment(s)