

State of Colorado  
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:  
403918792

Receive Date:

---

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: (970) 730-7281 |
| City: DENVER State: CO Zip: 80202    |                             | Mobile: ( )           |
| Contact Person: Dan Peterson         | Email: rbueuf27@chevron.com |                       |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 25588 Initial Form 27 Document #: 403196275

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 #: 123-13356       | County Name: WELD                          |
| Facility Name: OCOMA G 25-16                   | Latitude: 40.277780 | Longitude: -104.604080 |  |
| ** correct Lat/Long if needed: Latitude: _____ |                     | Longitude: _____       |  |
| QtrQtr: SESE                                   | Sec: 25             | Twp: 4N                | Range: 65W Meridian: 6 Sensitive Area? No  |
| Facility Type: SPILL OR RELEASE                | Facility ID: 483780 | API #: _____           | County Name: WELD                          |
| Facility Name: Ocoma G 25-16                   | Latitude: 40.277780 | Longitude: -104.604080 |  |
| ** correct Lat/Long if needed: Latitude: _____ |                     | Longitude: _____       |  |
| QtrQtr: SESE                                   | Sec: 25             | Twp: 4N                | Range: 65W 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? No \_\_\_\_\_

Is groundwater less than 20 feet below ground surface? No \_\_\_\_\_

**Other Potential Receptors within 1/4 mile**

NA

# 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          | 10' X 10' X 6' BGS | 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 COGCC Rule 911 a site investigation was conducted pertaining to the OCOMA G25-16 wellhead cut and cap and flowline removal. Approximately 954' of flowline was abandoned-in-place due to field constraints in accordance with Form 44 document #403487308. The wellhead was cut and capped per COGCC rules. Since the flowline is abandoned in place, soil samples will 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 using a hand auger in accordance with the proposed site investigation map attached to this 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 ):

Five (5) grab soil sample was collected at the base of the excavation and the area showing the highest degree of impact during field screening activities at the wellhead excavation. Additionally, soil samples will be collected at the directional changes of the abandoned in place flowline per the COA on COGCC document number 403196275. Two (2) soil samples were collected at the A and B points of the flowline during 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, three (3) soil samples collected from the wellhead excavation were analyzed 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 was 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**

Number of soil samples collected 16  
Number of soil samples exceeding 915-1 12  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square feet) 200

**NA / ND**

-- Highest concentration of TPH (mg/kg) 1446  
-- Highest concentration of SAR 1.24  
BTEX > 915-1 Yes  
Vertical Extent > 915-1 (in feet) 6

**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?

One background sample was collected adjacent to the wellhead and analyzed for metals in soil per COGCC Table 915-1 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?

Since the flowline is abandoned in place, soil samples will be 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 using a hand auger in accordance with the proposed site investigation map attached to this Form 27. Soil samples from the flowline investigation will be collected and analyzed for full ECMC Table 915-1 contaminants of concern. Concurrently with the hand auger flowline sampling, background soil samples will be collected and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron.

**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.

A remedial excavation was completed between May 17, 2024 and May 20, 2024 to remove soil impacted with hydrocarbon compounds identified during the wellhead decommissioning in samples WH-SS-01 @ 5', WH-SS-02 @ 5', and WH-FS-01 @ 6'. Excavation confirmatory soil samples were collected and analyzed for Organic Compounds in Soil per ECMC Table 915-1, arsenic, barium, and lead, in accordance with the approved amended sampling plan (ECMC Document #403609905. Based on the results of the remedial excavation, all soil impacted with hydrocarbon compounds above ECMC Table 915-1 protection of groundwater soil screening levels was successfully removed.

**REMIEDIATION 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.

The final remedial excavation extent measured 30-ft by 30-ft by 9-ft bgs. A total of 300 cubic yards of 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) \_\_\_\_\_ 300  
\_\_\_\_\_ 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. 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? Yes

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

NA

Volume of E&P Waste (solid) in cubic yards 300

E&P waste (solid) description Soil

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

Non-ECMC Disposal Facility: Waste Management Buffalo Ridge Landfill

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

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 COGCC 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. \_\_\_\_\_

Proposed date of completion of Reclamation. \_\_\_\_\_

## 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. 10/06/2022

Actual Spill or Release date, or date of discovery. 01/25/2023

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/16/2023

Proposed site investigation commencement. 09/12/2024

Proposed completion of site investigation. 03/12/2025

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/17/2024

Proposed date of completion of Remediation. 06/12/2025

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 implementation schedule is being updated to accommodate the flowline direction change and background sampling proposed in the site investigation report section of this Form 27.

**OPERATOR COMMENT**

This Form 27 is being submitted to include the remedial excavation results for the Ocoma G25-16 wellhead, and to include a proposal to collect soil samples along the flowline path.

The remedial excavation was completed between May 17, 2024 and May 20, 2024 to remove soil impacted with hydrocarbon compounds identified during the wellhead decommissioning in samples WH-SS-01 @ 5', WH-SS-02 @ 5', and WH-FS-01 @ 6'. Excavation confirmatory soil samples were collected and analyzed for Organic Compounds in Soil per ECMC Table 915-1, arsenic, barium, and lead, in accordance with the approved amended sampling plan (ECMC Document #403609905. Based on the results of the remedial excavation, all soil impacted with hydrocarbon compounds above ECMC Table 915-1 protection of groundwater soil screening levels was successfully removed.

Since the flowline is abandoned in place, soil samples will be 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 using a hand auger in accordance with the proposed site investigation map attached to this Form 27. Soil samples from the flowline investigation will be collected and analyzed for full ECMC Table 915-1 contaminants of concern. Concurrently with the hand auger flowline sampling, background soil samples will be collected and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron.

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: Allan Engelhardt \_\_\_\_\_

Title: Environmental Consultant \_\_\_\_\_

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

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: \_\_\_\_\_

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

Remediation Project Number: 25588

**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**

|           |                            |
|-----------|----------------------------|
| 403918811 | REMEDATION PROGRESS REPORT |
| 403919027 | SITE INVESTIGATION PLAN    |

Total Attach: 2 Files

**General Comments**

**User Group**

**Comment**

**Comment Date**

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

Total: 0 comment(s)