

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
404461344

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 ECOM 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: <u>NOBLE ENERGY INC</u>	Operator No: <u>100322</u>	<b>Phone Numbers</b>
Address: <u>1099 18TH STREET SUITE 1500</u>		Phone: <u>(970) 304-5000</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>( )</u>
Contact Person: <u>Lauren Hoff</u>	Email: <u>RBUEUF27@chevron.com</u>	

**PROJECT, PURPOSE & SITE INFORMATION**

**PROJECT INFORMATION**

Remediation Project #: 25964 Initial Form 27 Document #: 403225919

**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: <u>WELL</u>	Facility ID: _____	API #: <u>123-12105</u>	County Name: <u>WELD</u>
Facility Name: <u>VOLKENS 2</u>	Latitude: <u>40.303360</u>	Longitude: <u>-104.520270</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NENW</u>	Sec: <u>23</u>	Twps: <u>4N</u>	Range: <u>64W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

**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**

HPH N  
Holding Pond 0.20 E  
Farm Structures 0.06/0.10/0.11/0.15 NW, 0.06 E, 0.15/0.16 ENE, 0.19/0.19/0.22/0.23 SE  
Residential 0.18 SE, 0.13 NW, 0.12 NE

**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	Lab Analysis and Field Screening if Encountered
Yes	SOILS	Refer to Tables and Figures	Lab Analysis and Field Screening

**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 VOLKENS 02 wellhead cut and cap and flowline removal. Approximately 805' of flowline was removed. ECMC was notified on Form 44 Doc. #403421509.

In March 2023, one grab confirmation soil sample was collected at the flowline connection to the separator. The soil sample was field screened with a PID prior to sample collection. The soil sample was submitted to a certified laboratory and analyzed for the ECMC Table 915-1 VOCs, TPHs and PAHs. ECMC metals and SSR were not analyzed for this soil sample. Analytical results from soil sample FL Riser 2ft showed no petroleum hydrocarbon impacts above the ECMC Table 915-1 limits (SF27 Doc. # 403629133). Additional sampling near the separator for the associated tank battery occurred under REM# 23460, VOLKENS 2 , COLEMAN 23-614. Analytical results were all below regulatory limits and REM# 23460, VOLKENS 2 , COLEMAN 23-614 was granted an NFA (SF27 Doc. # 403549959).

In May 2023, one grab confirmation soil sample was collected at the wellhead excavation during cut and cap activities (one floor sample). The soil sample was field screened with a PID prior to collection, as were the N-E-S-W sidewalls of the excavation. Samples were submitted to a certified laboratory and analyzed for ECMC Table 915-1 VOCs, TPHs, PAHs and SSR. ECMC metals were not analyzed. Analytical results from the soil sample reported elevated pH above the ECMC regulatory limits, but not above the background concentration. No petroleum hydrocarbons were detected.

An additional site assessment was completed on 10/28/2025 with 5 samples near the wellhead and 2 along the flowline. Analytical results showed no organic exceedances of ECMC Table 915-1, but three samples had exceedances of SSR or metals.

**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 site assessment will be scheduled to collect delineation samples at the wellhead and flowline, as well as additional background samples. Seventeen additional soil boring locations will be completed. Delineation samples will be collected to delineate Chromium (VI) exceedances at 25964-WH-01-N-SO-5-20251028, Selenium exceedances at 25964-FL-01-SO-3-20251028, and metals and EC exceedances at 25964-FL-02-SO-3-20251028. Three additional background boring locations will be collected with samples at 1, 2, 3, 5, 6, and 7 feet bgs. Confirmation and delineation soil samples will be analyzed for the full ECMC Table 915-1 analytical suite, while background samples will be analyzed for SSR compounds and metals. Additional site investigation is estimated to begin Q1 2026 - Q2 2026, pending site access. Sample locations are provided on the attached site investigation plan.

**Proposed Groundwater Sampling**

Will groundwater samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

If encountered, groundwater will be sampled for the full Table 915-1 list of constituents.

**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 ECMC Flowline Closure and Wellhead Closure Checklists were utilized and filled out during the initial abandonment process.

**SITE INVESTIGATION REPORT**

**SAMPLE SUMMARY**

**Soil**

**NA / ND**

Number of soil samples collected 7

-- Highest concentration of TPH (mg/kg) 30.34

Number of soil samples exceeding 915-1 3

-- Highest concentration of SAR 7.93

Was the areal and vertical extent of soil contamination delineated? No

BTEX > 915-1 No

Approximate areal extent (square feet) 300

Vertical Extent > 915-1 (in feet) 5

**Groundwater**

Number of groundwater samples collected 0

Highest concentration of Benzene (µg/l) \_\_\_\_\_

Was extent of groundwater contaminated delineated? Yes

Highest concentration of Toluene (µg/l) \_\_\_\_\_

Depth to groundwater (below ground surface, in feet) \_\_\_\_\_

Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_

Number of groundwater monitoring wells installed \_\_\_\_\_

Highest concentration of Xylene (µg/l) \_\_\_\_\_

Number of groundwater samples exceeding 915-1 \_\_\_\_\_

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?

BACKGROUND-01@2' was collected by a previous consultant within an area subject to historical oil and gas activities. This sample data is not being relied upon to establish site specific background values.

Six additional background samples were collected from outside of historical oil and gas operations with analytical results indicating maximum background concentrations for compounds that exceed ECMC Table 915-1 in soil samples collected for closure assessment that include: pH (8.36, 6 ft bgs), EC (4.78 mmhos/cm, 3 ft bgs), SAR (8.76, 6 ft bgs), arsenic max X 1.25 (3.48 mg/kg, 3 ft bgs), barium max X 1.25 (181 mg/kg, 3 ft bgs), and selenium max X 1.25 (0.466 mg/kg, 3 ft bgs).

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?

A SSI will be scheduled to delineate the Chromium (VI) exceedance detected at 25964-WH-01-N-SO-5-20251028 (25964-WH-01-N-R, 25964-WH-02-N/E/W), selenium exceedances at 25964-FL-01-SO-3-20251028 (25964-FL-01-R, 25964-FL-01-N/S/E/W), and metals and EC exceedances at 25964-FL-02-SO-3-20251028 (25964-FL-02-R, 25964-FL-02-N/S/E/W). Three additional background boring locations will be advanced with samples collected at 1, 2, 3, 5, 6, and 7 feet bgs intervals (26827-BG-06, 26827-BG-07, 26827-BG-08). Delineation soil samples will be analyzed for the full ECMC Table 915-1 analytical suite, while background samples will be analyzed for SSR compounds and metals. The SSI is estimated to begin Q1 2026 - Q2 2026. Sample locations are provided in the attached site investigation plan.

**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 impacted material caused by oil and gas operations was identified at this time.

### **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**

**Ex Situ**

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

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

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

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

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

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

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

\_\_\_\_\_ 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

\_\_\_\_\_ 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 was not encountered during the initial decommissioning events or subsequent supplemental site investigation activity.

# 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 Quarterly Update, Site Investigation Reporting, Site Investigation Plan

## 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 (policies 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 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? \_\_\_\_\_

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. 03/03/2023

Proposed date of completion of Reclamation. 12/31/2028

## 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. 10/12/2022

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

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/03/2023

Proposed site investigation commencement. 11/10/2022

Proposed completion of site investigation. 06/30/2026

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 06/30/2026

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

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:

Implementation schedule updated to reflect the schedule to complete additional site investigation. Additional site investigation is estimated to begin Q1 2026 - Q2 2026, pending site access. The ECMC will be updated on a subsequent Form 27 with the results of the additional site investigation, or if the schedule is changed.

**OPERATOR COMMENT**

This 4Q2025 Supplemental Form 27 for VOLKENS 2 (REM# 25964) summarizes the 10/28/2025 site investigation and proposes an additional supplemental site investigation (SSI).

The VOLKENS 2 wellhead cut and cap was completed on 5/23/2023 and flowline removed on 3/7/2023, F44 Doc # 403421509. Analytical soil samples were collected at the wellhead and were analyzed for all ECMC Table 915-1 analytes except for metals. WH-FS-01@6' was below regulatory limits except for a pH exceedance. During flowline removal an analytical soil sample was collected at the flowline connection to the separator. The sample was analyzed for ECMC Table 915-1 organic compounds and was below all regulatory limits (SF27 Doc. # 403629133). Additional sampling near the separator for the associated tank battery occurred under REM# 23460, VOLKENS 2, COLEMAN 23-614. Analytical results were all below regulatory limits and REM# 23460, VOLKENS 2, COLEMAN 23-614 was granted an NFA (SF27 Doc. # 403549959). Based on this, additional confirmation sampling at the flowline connection to the separator is not warranted.

A site investigation was completed on 10/28/2025. Twelve grab soil samples were collected to investigate residual pH exceedances near the former wellhead, collect samples along the flowline, and to establish local background concentrations. Analytical results showed no organic exceedances of ECMC Table 915-1, but three samples had exceedances of SSR or metals. Further details are included in the attached site investigation report.

A SSI will be scheduled to delineate the Chromium (VI) exceedance detected at 25964-WH-01-N-SO-5-20251028 (25964-WH-01-N-R, 25964-WH-02-N/E/W), selenium exceedances at 25964-FL-01-SO-3-20251028 (25964-FL-01-R, 25964-FL-01-N/S/E/W), and metals and EC exceedances at 25964-FL-02-SO-3-20251028 (25964-FL-02-R, 25964-FL-02-N/S/E/W). Three additional background boring locations will be advanced with samples collected at 1, 2, 3, 5, 6, and 7 feet bgs intervals (26827-BG-06, 26827-BG-07, 26827-BG-08). Delineation soil samples will be analyzed for the full ECMC Table 915-1 analytical suite, while background samples will be analyzed for SSR compounds and metals. The SSI is estimated to begin Q1 2026 - Q2 2026. Sample locations are provided in the attached site investigation plan.

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, Operator requested the lab protect the laboratory analytical report from subsequent unauthorized modification by anyone outside the lab, which resulted in the lab reissuing the original report with additional protections (Reissued Report). The Reissued Report was received directly from the lab on 04/04/2025 which includes the application of a Digital ID/Verified Certification (lock) to support reissuance. The metadata associated with this Reissued Report also includes the lab representative's name, the date and time the laboratory reissued the report, and an explanation for the report reissuance. The Reissued Report is 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.

Pursuant to Rule 913.e, quarterly reporting will continue for the location until data indicates no further action is warranted.

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

Signed: William Schoff

Title: Environmental Consultant

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

Email: cvxform27@erm.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: 25964

**COA Type**

**Description**

0 COA	
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**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**

404467013	LABORATORY ANALYTICAL REPORT
404467022	LABORATORY ANALYTICAL REPORT
404467024	LABORATORY ANALYTICAL REPORT
404467027	LABORATORY ANALYTICAL REPORT
404470001	SITE INVESTIGATION REPORT
404471652	SITE INVESTIGATION PLAN

Total Attach: 6 Files

**General Comments**

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

Total: 0 comment(s)