

State of Colorado
Energy & Carbon Management Commission

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



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Report taken by:
Kilian Collins

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) 304-5000
City: DENVER State: CO Zip: 80202		Mobile: ()
Contact Person: Dan Peterson	Email: rbueuf27@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 30386 Initial Form 27 Document #: 403460475

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: LOCATION	Facility ID: 414380	API #: _____	County Name: WELD
Facility Name: COLEMAN C (Multi-Well) 23-04	Latitude: 40.303410	Longitude: -104.525010	
	** correct Lat/Long if needed: Latitude: 40.298432	Longitude: -104.527048	
QtrQtr: NWNW Sec: 23 Twp: 4N Range: 64W Meridian: 6 Sensitive Area? Yes			
Facility Type: SPILL OR RELEASE	Facility ID: 485476	API #: _____	County Name: WELD
Facility Name: Volkens Coleman Tank Battery	Latitude: 40.298549	Longitude: -104.527065	
	** correct Lat/Long if needed: Latitude: _____	Longitude: _____	
QtrQtr: NWNW Sec: 23 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? No

Is surface water within 1/4 mile? Yes

Is groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

Facility within Aquatic Native Species Conservation Waters
Riverine 60ft W
Farm structures 0.02/0.05/0.05/0.08mi S, 0.03mi SE, 0.18/0.19/0.19/0.22/0.24/0.24mi SW
Residential structures 0.04mi S, 0.20mi SW
No other potential receptors are located within 1/4 mile of the site.
Above distances are approximations.

DENIED

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
Yes	GROUNDWATER	Refer to Tables and Figures	Lab analysis and field screening
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.

A site investigation was conducted pursuant to ECMC Rule 911 at the VOLKENS COLEMAN T4N-R64W-S23 L01 Facility and Tank Battery location.

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):

Grab confirmation soil samples were collected from the produced water vessel(s) excavation, beneath the ground oil tank(s), and at the separator(s). Soil samples were analyzed by a certified laboratory for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons) organic compounds in soil per ECMC Table 915-1, and EC, SAR, pH, 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):

Encountered groundwater was sampled for Table 915-1 organic compounds in groundwater.

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 at the tank battery area 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 ECMC Tank Battery and Produced Water Vessel Closure Checklists were utilized and filled out during the abandonment process.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 30

Number of soil samples exceeding 915-1 26

NA / ND

ND Highest concentration of TPH (mg/kg) _____

-- Highest concentration of SAR 6.17

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

BTEX > 915-1 No

Approximate areal extent (square feet) 2600

Vertical Extent > 915-1 (in feet) 8

Groundwater

Number of groundwater samples collected 6

-- Highest concentration of Benzene (µg/l) 0.912

Was extent of groundwater contaminated delineated? Yes

ND Highest concentration of Toluene (µg/l) _____

Depth to groundwater (below ground surface, in feet) 7

-- Highest concentration of Ethylbenzene (µg/l) 2.42

Number of groundwater monitoring wells installed 5

-- Highest concentration of Xylene (µg/l) 49.1

Number of groundwater samples exceeding 915-1 1

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 ECOM Table 915-1 metals and soil suitability for reclamation standards (pH, EC, SAR, and Boron).

Calculated Background Values:

Arsenic (Max*1.25): 1.88 mg/kg
Barium (Max*1.25): 206 mg/kg
pH (Max): 8.44 standard units

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? Yes

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Impacted soil was removed from the Volkens Coleman release areas by excavation. The impacted soil was disposed of at an approved landfill as nonhazardous waste in accordance with Rules 905 and 906.

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.

As demonstrated by soil sampling, petroleum-impacted soil was removed from the Volkens Coleman location by excavation. However, samples collected within the PWV/AST and separator excavations exceeded the ECMC Table 915-1 maximum background SSR constituents for pH and the 125% maximum background concentration RSSLs for arsenic. The Operator proposes additional background sampling to be conducted to characterize native soil in an effort to attribute elevated concentrations of Table 915-1 metals and inorganics (arsenic, pH) present within the PWV/AST (arsenic, pH) and separator (arsenic) excavations to native soil conditions. One additional base sample within the PWV/AST excavation will be collected at eight feet bgs during monitoring well installation. Groundwater, collected from the floor of the PWV/AST excavation, achieved the ECMC Table 915-1 standards.

Five groundwater monitoring wells (MW-1 through MW-5) were installed to evaluate groundwater.

Monitoring wells destroyed during excavation (MW-1 through MW-5) were reinstalled on 12/17/2025. Quarterly groundwater monitoring will be conducted until four consecutive quarters of groundwater sampling have been completed and reported at the location with concentrations of Table 915-1 constituents below regulatory limits. Groundwater MWs will be sampled and submitted to a laboratory for analysis of Full Table 915-1 organics and inorganics.

NFA is estimated to be attained by December 31, 2026.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes Excavate and offsite disposal

_____ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) 734

_____ Air sparge / Soil vapor extraction

Name of Licensed Disposal Facility or ECMC Facility ID # _____

_____ Natural Attenuation

No 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

Yes _____ 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.

Five groundwater monitoring wells (MW-1 through MW-5) were installed to evaluate groundwater conditions. The monitoring wells will be sampled quarterly to monitor the natural attenuation of dissolved phase impacts.

Second quarter 2025 groundwater sampling was completed at the location on April 9, 2025. Five monitoring wells (MW-1 to MW-5) were sampled and submitted to PACE Analytical Laboratory for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, 1,2,4-trimethylbenzene (TMB), and 1,3,5-TMB by EPA Method 8260B, chloride ion & sulfate ion by EPA Method 9056A, and total dissolved solids (TDS) by EPA Method 2540 C-2011. Monitoring well MW-3 was damaged, and the casing had to be shortened for repair. The well needs to be resurveyed to calculate the relative groundwater elevation.

The laboratory analytical results indicate that Table 915-1 dissolved phase organic constituents were compliant with their respective standards in 5 of 5 wells sampled. Further, the laboratory analytical results indicate that Table 915-1 inorganic constituents were compliant with their respective standards and/or calculated background concentrations in 4 of 5 wells sampled. One monitoring well was reported with a concentration of an inorganic compound that exceeded the ECMC Table 915-1 standard; one well exceeded the standard of 250 mg/L for chloride.

Remedial excavation was completed in June 2025, and one groundwater sample (PWV/AST GWS1) was collected from the groundwater at the base of the excavation. Groundwater collected from the base of the excavation was compliant with ECMC Table 915-1 standards. Monitoring wells destroyed during excavation (MW-1 through MW-5) were reinstalled on 12/17/2025.

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 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? Yes

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

No beneficial use

Volume of E&P Waste (solid) in cubic yards 734

E&P waste (solid) description hydrocarbon impacted soil

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: North Weld Landfill, Ault, CO

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? 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? Yes

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. 10/24/2023

Proposed date of completion of Reclamation. 12/31/2027

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. 06/21/2022

Actual Spill or Release date, or date of discovery. 11/10/2023

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/24/2023

Proposed site investigation commencement. 08/24/2023

Proposed completion of site investigation. 05/31/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/31/2025

Proposed date of completion of Remediation. 12/31/2026

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 provide an update for the Volkens Coleman T4N-R64W-S23 L01 (Rem # 30386) location.

The review status of the Q2 2025 quarterly groundwater monitoring results and the Tank Battery excavation sample results (Doc. # 404328486) is "In Process" on Web Forms. Monitoring wells destroyed during excavation (MW-1 through MW-5) were reinstalled on 12/17/2025. Once received, lab data will be reviewed and compiled into a report which will be submitted on the next form submittal. Quarterly groundwater monitoring will be conducted until four consecutive quarters of groundwater sampling have been completed and reported at the location with concentrations of Table 915-1 constituents below regulatory limits.

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: Ethan Black

Title: Consultant

Submit Date: 12/23/2025

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: 30386

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**

404485211	FORM 27-SUPPLEMENTAL-SUBMITTED
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Total Attach: 1 Files

General Comments

User Group	Comment	Comment Date
Environmental	<p>ECMC has denied this form without technical review as Operator has provided no analytical or site investigation data showing progress of remediation of impacts documented at this location.</p> <p>Per Rule 912.a.(1-2): Operators will investigate, clean up, and document impacts resulting from Spills and Releases as soon as the impacts are discovered. Operator shall not delay execution of remedial or investigative actions while waiting for ECMC approval and may request expedited review if necessary.</p> <p>Operator shall conduct work in compliance with approved workplans and the 900 Series Rules. Operator shall provide a replacement form documenting investigation and clean up of these impacts; if a form providing this information is in process no replacement Form is due. If Operator is requesting a schedule change under Rule 913.d.(2) Operator shall attach adequate justification for the request. All ongoing/unaddressed comments/COAs from previous Forms remain applicable.</p>	12/30/2025

Total: 1 comment(s)