

State of Colorado
Energy & Carbon Management Commission

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404556523
Receive Date:
02/26/2026

Report taken by:
Nikki Graber

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 Phone: (970) 304-5000 Mobile: ()
Address: 1099 18TH STREET SUITE 1500		
City: DENVER	State: CO	Zip: 80202
Contact Person: Dan Peterson	Email: RBUEUF27@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 34514 Initial Form 27 Document #: 403669165

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: 323016	API #: _____	County Name: WELD
Facility Name: CPC-HARLESS-64N64W 17NENE	Latitude: 40.318085	Longitude: -104.567884	
** correct Lat/Long if needed: Latitude: 40.318075		Longitude: -104.568181	
QtrQtr: NENE	Sec: 17	Twp: 4N	Range: 64W Meridian: 6 Sensitive Area? Yes
Facility Type: SPILL OR RELEASE	Facility ID: 487528	API #: _____	County Name: WELD
Facility Name: CPC-HARLESS-64N64W	Latitude: 40.318405	Longitude: -104.568200	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NENE	Sec: 17	Twp: 4N	Range: 64W Meridian: 6 Sensitive Area? Yes

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>487529</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>CPC-HARLESS-64N64W</u>	Latitude: <u>40.318369</u>	Longitude: <u>-104.568190</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NENE</u>	Sec: <u>17</u>	Twp: <u>4N</u>	Range: <u>64W</u>
Meridian: <u>6</u>		Sensitive Area? <u>Yes</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

Gilmore Ditch 57ft W, Holding pond 0.05/0.05/0.06mi W, 0.14mi NW
 Farming Structures 0.18/0.23mi W, 0.18 E, 0.21/0.22 ESE, 0.13 SE, 0.24/0.25 SSE
 Feedlot 0.11mi W
 Commercial Structure 0.14mi NE
 No other potential receptors are located within 1/4 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
No	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 will be conducted pursuant to ECMC Rule 911 at the HARLESS T4N-R64W-S17 L02 Facility and Tank Battery location. The Field Qualitative Criteria Checklist was utilized during tank battery decommissioning activities and no visual and olfactory impacts were observed. Based on laboratory analytical data, a historical release was discovered on July 1, 2024, under F19 Document Numbers 403860883 and 403861169, for elevated 1,2,4 & 1,3,5 Trimethylbenzene, TPHs (GRO, DRO, ORO), Benzo(a)anthracene, 1&2-Methylnaphthalene at sample locations AST@0.5FT, PWV-N@3FT, and PWV-B@5FT.

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), at the risers for the flowline (s) and dumpline(s) of any separator(s). In addition, the on-site dump lines located between the separator and tank battery were removed by pulling from either end. 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):

Two grab groundwater sample were collected during tank battery decommissioning activities on 7/1/2024 and were analyzed for all organic compounds per ECMC Table 915-1; this sample analysis included BTEX, naphthalene, 1,2,4-trimethylbenzene (TMB), and 1,3,5-TMB by EPA Method 8260.

If any further groundwater is encountered during supplemental site investigation or remedial excavation activities a grab groundwater sample will be collected and analyzed for all organic and inorganic compounds per ECMC Table 915-1; this sample analysis includes, but is not limited to BTEX, naphthalene, 1,2,4-trimethylbenzene (TMB), and 1,3,5-TMB by EPA Method 8260, chloride and sulfate anions by EPA Method 300.0, and total dissolved solids (TDS) by Method SM 2540C as approved under the initial form 27 document number 403669165.

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

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 28

Number of soil samples exceeding 915-1 27

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

Approximate areal extent (square feet) 2700

NA / ND

-- Highest concentration of TPH (mg/kg) 1236.048

-- Highest concentration of SAR 15.9

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 5

Groundwater

Number of groundwater samples collected 2

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 3

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 915-1 0

ND Highest concentration of Benzene (µg/l)

ND Highest concentration of Toluene (µg/l)

ND Highest concentration of Ethylbenzene (µg/l)

ND Highest concentration of Xylene (µg/l)

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 investigation?

Fifteen background soil samples were collected on 7/1/2024 from an area not impacted by oil and gas development and at depths and lithologies (sandy clay – SC) comparable to those of the confirmation soil samples collected at the location. The samples were analyzed by a certified laboratory for Table 915-1 metals and SSR parameters using ECMC approved Methods. Based on the background analytical results summarized below, the following Table 915-1 metals and SSR parameters were within the maximum observed background values (metals listed in mg/kg):

Total pH: Max = 8.62
Total EC: Max = 4.20
Total SAR: Max = 14.1
Total As: Max*1.25 = 6.41
Total Ba: Max*1.25 = 131
Total Cd: Max*1.25 = 0.550

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 organic and inorganic compound exceedances observed at sample location AST@0.5FT, SEP-DL01@3FT, PWV-N@3FT, and PWV-B@5FT will be removed through a remedial excavation. Remedial excavation confirmation soil samples will be collected and analyzed for full ECMC Table 915-1 constituents. The impacted soil will be disposed of at an approved landfill as non-hazardous waste in accordance with Rules 905 and 906. Copies of the waste manifests will be available upon request.

REMEDICATION 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.

Laboratory analytical results confirmed an organic historical release at soil sample locations AST@0.5FT, PWV-N@3FT, and PWV-B@5FT. These releases were reported in Form 19 document numbers 403860883 and 403861169.

On March 25, 2025, a supplemental site investigation was completed, during which 11 soil borings and 22 samples were collected to delineate the extent of organic and inorganic impacts on site. Based on the findings, excavation is proposed at two areas: approximately 40 feet by 50 feet by 6 feet deep at the AST/PWV location to address the historic organic impacts, and 15 feet by 30 feet by 5 feet deep at the dumpline location to address inorganic impacts. Groundwater was not encountered during the investigation. Refer to the attached Site Investigation Report and Remedial Action Plan under supplemental form 27 document number 404332947 for additional details.

The sources will be excavated, and confirmation soil samples will be collected and analyzed for the full Table 915-1 suite of analytes.

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.

Based on the results of site investigation activities and laboratory analytical data obtained from confirmation groundwater samples collected on July 1, 2024, at a depth of approximately three feet below ground surface (ft bgs), implementation of a groundwater monitoring plan is not warranted at this time. However, during the July 1, 2024 analyses, chloride and sulfate anions by EPA Method 300.0 and total dissolved solids (TDS) by Method SM 2540C were not performed as approved under the initial Form 27 (Document #403669165).

In light of this, the Operator will return to the site and resample groundwater at the same locations as the original grab samples collected on July 1, 2024. The sample locations include GWS and GWS02. Groundwater will be resampled and analyzed for all organic and inorganic compounds per ECMC Table 915-1. This analysis includes, but is not limited to, BTEX, naphthalene, 1,2,4-trimethylbenzene (TMB), and 1,3,5-TMB by EPA Method 8260, as well as chloride and sulfate anions by EPA Method 300.0, and TDS by Method SM 2540C, as approved under Document #403669165.

Furthermore, if additional groundwater is encountered during supplemental site investigation or remedial excavation activities, a grab groundwater sample will be collected and analyzed for all organic and inorganic compounds per ECMC Table 915-1, including, but not limited to, BTEX, naphthalene, 1,2,4-TMB, and 1,3,5-TMB by EPA Method 8260, chloride and sulfate anions by EPA Method 300.0, and TDS by Method SM 2540C, as approved under the initial Form 27 (Document #403669165).

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 Supplemental Form 27

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. 10/31/2025

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. 01/12/2024

Actual Spill or Release date, or date of discovery. 07/18/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 07/01/2024

Proposed site investigation commencement. 03/15/2024

Proposed completion of site investigation. 03/25/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 03/25/2025

Proposed date of completion of Remediation. 06/30/2026

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:

The 'Proposed Completion of Site Investigation' section has been updated to reflect the actual date on which the supplemental site investigation activities were completed. Additionally, the 'Proposed Date of Completion of Remediation' section has been revised based on a qualified excavation crew not being immediately available but is expected to commence the work in Q2 2026.

OPERATOR COMMENT

This Form 27 is being submitted to include a 1Q 2026 timeline update for the HARLESS T4N-R64W-S17 L02 tank battery (REM #34514). The review status of the previously proposed workplan (Doc. #404332947) is currently "In Process" on Web Forms. Supplemental site investigation results, delineating all onsite impacts, were submitted within the in-process form.

The Operator intends to complete the excavation as outlined in the proposed Remedial Action Workplan within the date range specified in the Remedial Action Dates section of the Implementation Schedule. A qualified excavation crew is not immediately available; however, work is expected to commence in Q2 2026.

Pursuant to Rule 913.e, 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: Jordan Suttles

Title: Environmental Consultant

Submit Date: 02/26/2026

Email: jordans@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: Nikki Graber

Date: 03/04/2026

Remediation Project Number: 34514

COA Type**Description**

	Pursuant to Rule 913.d, Operator will adhere to the proposed schedule. Any deviation from the schedule must be approved by the Director in writing on a Form 27 Supplemental Report.
	In accordance with 913.d.(1), Operator will investigate impacts to soil, Groundwater, and surface water as soon as the impacts are discovered.
	ECMC has processed this form as an update; no analytical was attached thus approval of this form does not imply any agreement with comments on completion of site investigation. All ongoing/unaddressed comments/COAs from previous Forms remain applicable.
3 COAs	

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**

404556523	INVESTIGATION/REMEDIAL ACTION WORKPLAN (SUPPLEMENTAL)
404556703	REMEDIAL ACTION PLAN
404566291	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 3 Files

General Comments**User Group****Comment****Comment Date**

		Stamp Upon Approval
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Total: 0 comment(s)