

State of Colorado
Energy & Carbon Management Commission

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404437191
Receive Date:
11/26/2025

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 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: 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 #: 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

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.

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
UNDETERMINED	GROUNDWATER	NA	Field Screening and Lab analysis if encountered
Yes	SOILS	Refer to Tables and Figures	Field Screening and 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.

A site investigation was conducted pursuant to ECMC Rule 911 at the HARLESS T4N-R64W-S17 L02 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), 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):

If groundwater is encountered during the site investigation a grab groundwater 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.

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

NA / ND

Number of soil samples collected 28

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

Number of soil samples exceeding 915-1 27 -- Highest concentration of SAR 15.9

Was the areal and vertical extent of soil contamination delineated? No BTEX > 915-1 No

Approximate areal extent (square feet) 2700 Vertical Extent > 915-1 (in feet) 5

Groundwater

Number of groundwater samples collected 2 ND Highest concentration of Benzene (µg/l) _____

Was extent of groundwater contaminated delineated? No ND Highest concentration of Toluene (µg/l) _____

Depth to groundwater (below ground surface, in feet) 3 ND Highest concentration of Ethylbenzene (µg/l) _____

Number of groundwater monitoring wells installed 0 ND Highest concentration of Xylene (µg/l) _____

Number of groundwater samples exceeding 915-1 0 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, at similar depths and within comparable lithologies to the confirmation soil samples collected at the site. These samples were analyzed for Table 915-1 metals and SSR constituents. Analytical results indicated elevated levels of pH, electrical conductivity (EC), sodium adsorption ratio (SAR), and the metals arsenic (As), barium (Ba), and cadmium (Cd).

Background Soil Sample Analysis (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 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.

If groundwater is encountered during excavation, a sample will be collected and analyzed for Table 915-1 organic and inorganic groundwater constituents, including BTEX, naphthalene, 1,2,4- and 1,3,5-trimethylbenzene, chloride, sulfate, and total dissolved solids (TDS). If no further active remediation is required, a No Further Action (NFA) request will be submitted within 90 days of laboratory confirmation that impacted soils have been removed in accordance with applicable screening levels.

If groundwater impacts are identified, an NFA will be requested following four consecutive quarters of sampling showing constituent concentrations below regulatory limits. If needed, additional soil and/or groundwater remediation plans will be submitted to ECMC in a supplemental Form 27.

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.

If groundwater is encountered during remedial excavation activities a grab groundwater will be collected and analyzed for full Table 915-1 organic and inorganic constituents in groundwater (Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX), naphthalene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Chloride ion, Sulfate ion and Total Dissolved Solids (TDS).

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 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 reseeded 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. _____

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 to provide a feasible timeframe for completing the proposed remedial excavation activities. Remedial excavation activities will be conducted following approval of document number 404332947.

OPERATOR COMMENT

This form serves to comply with the Rule 913.e. reporting schedule. The review status of the previously proposed workplan (Doc. # 404332947) is "In Process" on Web Forms. Pending ECMC EPS form review/approval, the Operator will complete the additional site investigation and remediation as outlined on Doc. # 404332947 and this F27. 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: Jeff Griggs

Title: Consultant

Submit Date: 11/26/2025

Email: jeffg@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: 34514

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**

404437191	FORM 27 DENIED
404437261	REMEDIAL ACTION PLAN
404452773	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 3 Files

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

Environmental	<p>Rule 912.a.(2) and Rule 913.d.(1) requires that Operators will investigate, clean up, and document impacts resulting from Spills and Releases as soon as the impacts are discovered. Rule 913.b.(2) is clear on the requirements for Operators to determine the horizontal and vertical extent of any contamination in excess of the cleanup concentrations in Table 915-1.</p> <p>This form is denied. Operator's argument for delay in the implementation of the proposed site investigation is not accepted. Operator shall ensure all attachments are directly relevant to the remediation plan and refrain from providing extraneous attachments.</p>	11/26/2025
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Total: 1 comment(s)