

State of Colorado
Energy & Carbon Management Commission

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404341169
Receive Date:
09/08/2025

Report taken by:
Candice (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 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>	Phone Numbers
Address: <u>1099 18TH STREET SUITE 1500</u>		Phone: <u>(832) 349-0757</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>()</u>
Contact Person: <u>Lauren Hoff</u>	Email: <u>lauren.hoff@chevron.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 34446 Initial Form 27 Document #: 403714536

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: <u>WELL</u>	Facility ID: _____	API #: <u>123-27331</u>	County Name: <u>WELD</u>
Facility Name: <u>FRICO 36-15</u>	Latitude: <u>40.219420</u>	Longitude: <u>-104.655230</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWSW</u>	Sec: <u>15</u>	Twp: <u>3N</u>	Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>488719</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Frico 36-15</u>	Latitude: <u>40.219410</u>	Longitude: <u>-104.655253</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWSW</u>	Sec: <u>15</u>	Twp: <u>3N</u>	Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications SW _____

Most Sensitive Adjacent Land Use Grassland _____

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? No _____

Other Potential Receptors within 1/4 mile

Well Within Bald Eagle Roost or Communal Roost HPH
Well Within Mule Deer Severe Winter Range HPH
Lake 0.19mi SE
Freshwater Forested/Shrub Wetland 0.09mi E
Farm Structure 0.17mi N

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	See tables and figures	Lab Analysis and Field Screening
Yes	SOILS	See 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 Frico 36-15 wellhead cut and cap on 09/16/2024 and flowline decommissioning on 09/23/2024. The wellhead was cut and capped per ECMC rules. Laboratory analytical results indicated a historical release occurred at the decommissioned wellhead and reported under spill ID #488719.

Approximately 1914' of flowline was removed. Soil samples were taken along the flowline 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.

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 grab soil sample was collected from the area showing the highest degree of impact during field screening activities at the wellhead excavation (WH01@6'). Additionally, soil samples were field screened at the N-E-S-W sides of the wellhead (WH01-E@4', WH01-W@4', WH01-N@4', WH01-S@4'). Following source mass removal of hydrocarbon impacted soil, confirmation soil samples will be collected from the final extents of the excavation. Soil samples were taken along the flowline at points of material change and/or hammer unions, directional changes, as well as at the bell holes on either side of a waterway (FL01R-S@4'). 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):

Groundwater was encountered at two locations during the 05/13/2025 site investigation (GW01 & GW01-BKG01@3-4') and grab groundwater samples were collected and analyzed for all organic and inorganic compounds per ECMC Table 915-1. Groundwater was in compliance

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 area occurred during decommissioning activities. Field personnel field screened all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling was required. The ECMC Wellhead Closure Checklist was utilized and filled out during the abandonment process. A photolog is attached to ECMC Form 27 documents #403971144 and #404072725.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 10
Number of soil samples exceeding 915-1 2
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) 54
-- Highest concentration of SAR 5.19
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 9

Groundwater

Number of groundwater samples collected 2
Was extent of groundwater contaminated delineated? Yes
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) _____
ND Highest concentration of Methane (mg/l) _____

Surface Water

0 Number of surface water samples collected
0 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?

On 09/23/2024, one background sample was taken from one discrete location at Frico 23-15 (REM #34444). On 04/09/2025 & 05/13/2025, 50 background samples were collected from 25 discrete locations (BKG06-BKG30) adjacent to the HSR Frico 63N65W 15NWSW Tank Battery (REM #34185). All background samples were analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. Background soil samples were collected from depths ranging between 3 to 6 feet below ground surface (ft bgs) and the lithology between the site and background locations were observed to be well graded sand. The maximum background concentrations for pH was observed to be 8.91. The maximum background concentrations with a 1.25x multiplier applied for arsenic and barium were calculated to be 4.59 mg/kg, and 229 mg/kg, respectively. All pH concentrations observed were below background levels. All arsenic and barium concentrations observed were below 1.25x the maximum background level.

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?

During the supplemental site investigation (SSI) on 05/14/2025, 1-methyl-naphthalene (1M) exceedances were observed at sample locations SS05-WH01@5' and SS08-WH01@5'. A remedial excavation is proposed in the Remedial Action Plan section of this Form 27.

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 1-M exceedances observed at sample locations SS05-WH01@5' and SS08-WH01@5' during the 05/14/2025 remedial excavation will be removed through a remedial excavation.

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.

Wellhead decommissioning activities and confirmation soil sampling at the Frico 36-15 wellhead occurred on October 31, 2024. Laboratory analytical results indicated a historical release occurred at the Frico 36-15 decommissioned wellhead and was reported as a historic release in Form 19 document number 404024486. Impacted material at the wellhead was removed during remedial excavation on 05/14/2025, where 1-M exceedances were observed at sample locations SS05-WH01@5' and SS08-WH01@5'. Remedial excavation confirmation soil samples will be collected and analyzed for full ECMC Table 915-1 constituents. The results of the remedial excavation will be submitted on a subsequent Form 27.

Soil Remediation Summary

In Situ

_____ Bioremediation (or enhanced bioremediation)
_____ Chemical oxidation
_____ Air sparge / Soil vapor extraction
_____ Natural Attenuation
_____ Other _____

Ex Situ

_____ Excavate and offsite disposal
_____ If Yes: Estimated Volume (Cubic Yards) _____
_____ 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.

Groundwater was encountered at two locations during the 05/13/2025 site investigation (GW01 & GW01-BKG01@3-4') and grab groundwater samples were collected and analyzed for all organic and inorganic compounds per ECMC Table 915-1. No exceedances were observed.

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 Site Investigation Summary and Supplemental Source Mass Removal Proposal _____

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.

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? 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. 10/22/2025

Proposed date of completion of Reclamation. 02/25/2026

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. 12/11/2024

Actual Spill or Release date, or date of discovery. 12/11/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/31/2024

Proposed site investigation commencement. 09/04/2025

Proposed completion of site investigation. 03/04/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 09/04/2025

Proposed date of completion of Remediation. 09/04/2026

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:

Based on the discovery of historic hydrocarbon impacts at the wellhead, source mass removal activities will be initiated as soon as possible. The implementation schedule has been updated to reflect these changes.

OPERATOR COMMENT

This Form 27 is being submitted to include the Supplemental Site Investigation (SSI) results at the former Frico 37-15 wellhead location. A proposal to excavate the 1-methyl-naphthalene (1-M) exceedances identified during the SSI (soil samples SS05-WH01@5' & SS08-WH01@5') is presented in the Remedial Action Plan section of this Form 27. A comprehensive data packet summarizing SSI activities is attached to this Form 27, & a detailed summary of the previously completed SSI activities is presented in the Remedial Action Plan sections & below.

A Site Assessment was conducted on 05/14/2025 to delineate impacted media. FS02-WH01@8' & FS03-WH01@9' were advanced at the same location as FL01R-W@4' to vertically delineate impacts at that location. SS01, SS02, SS03, SS04, SS05, SS06, SS07, & SS08 were advanced surrounding FS03-WH01 to vertically & laterally delineate impacts identified at FL01R-W@4'. During the SSI, 1-M impacts were identified in soil borings BH04R@5-6' & BH05R@5-6'. A remedial excavation to remove the organic exceedance is proposed in the Remedial Action Plan section of this Form 27.

Groundwater was encountered at two locations during the 05/13/2025 site investigation (GW01 & GW01-BKG01@3-4') and grab groundwater samples were collected and analyzed for all organic and inorganic compounds per ECMC Table 915-1. No exceedances were observed.

On 09/23/2024, one background sample was taken from one discrete location at Frico 23-15 (REM #34444). On 04/09/2025 & 05/13/2025, 50 background samples were collected from 25 discrete locations (BKG06-BKG30) adjacent to the HSR Frico 63N65W 15NWSW Tank Battery (REM #34185). All background samples were analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. Background soil samples were collected from depths ranging between 3 to 6 feet below ground surface (ft bgs) and the lithology between the site and background locations were observed to be well graded sand. The maximum background concentrations for pH was observed to be 8.91. The maximum background concentrations with a 1.25x multiplier applied for arsenic and barium were calculated to be 4.59 mg/kg, and 229 mg/kg, respectively. All pH concentrations observed were below background levels. All arsenic and barium concentrations observed were below 1.25x the maximum background level.

Quarterly reporting will be conducted until closure criteria are achieved for the remediation project. The results of the remedial excavation will be submitted.

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

Signed: Andy Sagen

Title: Environmental Consultant

Submit Date: 09/08/2025

Email: asagen@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: Candice (Nikki) Graber

Date: 11/18/2025

Remediation Project Number: 34446

COA Type

Description

	Operator shall provide all waste disposal manifests on the next Supplemental Form 27. Additionally, Operator shall include the Name of Licensed Disposal Facility or ECMC Facility ID # in the relevant sections and provide future waste manifests for all activities performed during the respective Quarterly Update.
	Operator shall not delay execution of remedial or investigative actions for ECMC approval. Per Rule 912.a.(1-2): Immediately upon discovering any Spills or Releases of E&P Waste, produced Fluids, or unauthorized Releases of natural gas that meet the criteria of Rules 912.b.(1).H, I, or J, regardless of size or volume, Operators will control and contain the Spill or Release to protect and minimize adverse impacts to public health, safety, welfare, the environment, and wildlife resources. Operators will investigate, clean up, and document impacts resulting from Spills and Releases as soon as the impacts are discovered.
2 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

404341169	FORM 27-SUPPLEMENTAL-SUBMITTED
404342019	ANALYTICAL RESULTS
404342021	ANALYTICAL RESULTS
404342024	ANALYTICAL RESULTS
404343141	SITE INVESTIGATION REPORT

Total Attach: 5 Files

General Comments

User Group

Comment

Comment Date

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

Total: 0 comment(s)