FORM 27 Rev 5/22

State of Colorado
Energy & Carbon Management Commission

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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 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 INFORMATON

Name of Operator: NOBLE ENERGY INC Operator No: 100322
Address: 1099 18TH STREET SUITE 1500
City: DENVER State: CO Zip: 80202
Contact Person: Dan Peterson Email: danpeterson@chevron.com

Phone Numbers
Phone: (970) 730-7281
Mobile: ( )

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 20520 Initial Form 27 Document #: 402622809

PURPOSE INFORMATION

- [ ] Rule 913.c.(1): Pit or Cuttings Trench closure.
- [X] 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.
- [X] 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: LOCATION Facility ID: 414237 API #: County Name: WELD
Facility Name: HERBSTER F 35-27 Latitude: 40.364130 Longitude: -104.626340
** correct Lat/Long if needed: Latitude: 40.366384 Longitude: -104.630278
QtrQtr: SWSE Sec: 26 Twp: 5N Range: 65W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SW
Most Sensitive Adjacent Land Use crop
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

Residential area; Riverine > 1/4 mile E

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- [X] **E&P Waste**
  - [X] Produced Water
  - [X] Oil
  - [X] Condensate
  - [ ] Drilling Fluids
  - [ ] Drill Cuttings
- [ ] **Other E&P Waste**
  - [ ] Workover Fluids
  - [ ] Tank Bottoms
  - [ ] Pigging Waste
  - [ ] Rig Wash
  - [ ] Spent Filters
  - [ ] Pit Bottoms
  - [ ] Other (as described by EPA) _____
- [ ] **Non-E&P Waste** _____

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	GROUNDWATER	NA	Laboratory Analysis or Field Screening, if encountered.
Yes	SOILS	Refer to ECMC Document #403639107	Laboratory 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 Herbster F35-27 Tank Battery location.

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

[X] 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 excavation, beneath the above ground oil tank, and at any separators. 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

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

If groundwater is encountered during the site investigation, grab groundwater samples will be collected and analyzed for all organic and inorganic compounds per ECMC Table 915-1.

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. A detailed summary of decommissioning activities, including field notes, site photos, figures, and laboratory analytical results, was attached to ECMC Document No.403639107.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected: 21

Number of soil samples exceeeding 915-1: 1

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

Approximate areal extent (square feet): 100

NA / ND

-- Highest concentration of TPH (mg/kg): 55.6

-- Highest concentration of SAR: 7.71

BTEX > 915-1: No

Vertical Extent > 915-1 (in feet): 6

Groundwater

Number of groundwater samples collected: 0

Was extent of groundwater contaminated delineated? Yes

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

Number of groundwater monitoring wells installed:

Number of groundwater samples exceeding 915-1:

Highest concentration of Benzene (µg/l):

Highest concentration of Toluene (µg/l):

Highest concentration of Ethylbenzene (µg/l):

Highest concentration of Xylene (µg/l):

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?

Two (2) background samples were collected from one soil boring (BG02) in native material adjacent to the former Herbster F35-27 tank battery location. Samples were collected from 0.5 feet and 2.5 feet below ground surface, and submitted for laboratory analysis for pH, EC, SAR, and boron in soil per ECMC Table 915-1. Based on the location of BG02 on the tank battery pad, the samples collected from this boring are not being used for comparison to site inorganic concentrations.

On May 23, 2025, 20 soil samples were collected from five discrete locations (BKG01-BKG05) in native material adjacent to the tank battery. The soil samples were collected at depths ranging from approximately 0.5-1.5 feet to 5.5-6.5 feet bgs and submitted for analysis of pH, EC, SAR, boron, and the Table 915-1 metals suite. Analytical results indicated that pH, EC, SAR, arsenic, barium, chromium, lead, and selenium were in exceedance of ECMC standards in native material at this location.

☐ 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 desktop review of nearby backgrounds is currently being conducted. Following the review, additional site investigation activities will be proposed as necessary.

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.

Decommissioning analytical results indicated that organic compound concentrations were in compliance with the applicable ECMC regulatory standards in all soil sample locations. Based on the remaining analytes, on May 20, 2205, a supplemental site investigation was completed to confirm and delineate the pH exceedances observed at FS01@5', SEP01DL@3' and SEP01-FL@3', the pH, SAR and EC exceedances observed at AST01@0.5', and to confirm Table 915-1 compliance on site. Twenty-one soil samples were collected from 13 soil borings (SB01-SB13) and submitted for analysis of the full Table 915-1 suite.

Analytical results indicated that organic compound concentrations were in compliance with ECMC standards in all soil sample locations. Additionally, all inorganic and metals concentrations were in compliance with ECMC standard or within background concentrations in all soil sample locations aside from the pH concentration in soil sample SB08@3.5-4.5'. Based on the results, soil samples SB01@0.5-1.5' and SB09@2.5-3.5, which were collected directly adjacent to soil samples AST01@0.5' and SEP01-FL@3', respectively, were in compliance with ECMC standards or within background concentrations. Consequently, the original pH and/or SAR concentrations were collected from a discrete location and could not be replicated.

A desktop review of nearby backgrounds is currently being conducted to address the pH exceedance recorded in soil sample SB08@3.5-4.5'. Following the review, a summary will be provided and any additional site investigation activities will be proposed as necessary.

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 not encountered during decommissioning or site investigation activities.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

[X] 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

[X] Other Supplemental Site Investigation Summary

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?

Does the previous reply indicate consideration of background concentrations?

Does Groundwater meet Table 915-1 standards?

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?

[X] 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. 05/20/2021

Proposed date of completion of Reclamation. 05/28/2026

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. 03/05/2021

Actual Spill or Release date, or date of discovery.

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/20/2021

Proposed site investigation commencement. 05/20/2025

Proposed completion of site investigation. 05/23/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/23/2025

Proposed date of completion of Remediation. 11/23/2025

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.

[X] Change from approved implementation schedule per Rule 913.d.(2).

Basis for change in implementation schedule:

The implementation schedule is being updated due to the completion of supplemental site investigation (SSI) activities at the site. A desktop review of nearby backgrounds is currently being conducted to address the pH exceedance recorded in soil sample SB08@3.5-4.5'. Following the review, a summary will be provided and any additional site investigation activities will be proposed as necessary.

OPERATOR COMMENT

This Supplemental Form 27 is being submitted to summarize supplemental site investigation activities at the Herbster F35-27 tank battery location.

May 2021 tank battery decommissioning analytical results indicated that organic compound concentrations were in compliance with the applicable ECMC regulatory standards in all soil sample locations. Based on the remaining analytes, on May 20, 2205, a supplemental site investigation was completed to confirm and delineate the pH exceedances observed at FS01@5', SEP01DL@3' and SEP01-FL@3', the pH, SAR and EC exceedances observed at AST01@0.5', and to confirm Table 915-1 compliance on site. Twenty-one soil samples were collected from 13 soil borings (SB01-SB13) and submitted for analysis of the full Table 915-1 suite.

On May 23, 2025, 20 background soil samples were collected from five discrete locations (BKG01-BKG05) in native material adjacent to the tank battery. The soil samples were collected at depths ranging from approximately 0.5-1.5 feet to 5.5-6.5 feet bgs and submitted for analysis of pH, EC, SAR, boron, and the Table 915-1 metals suite. Analytical results indicated that pH, EC, SAR, arsenic, barium, chromium, lead, and selenium were in exceedance of ECMC standards in native material at this location.

Due to a clerical error, the original boring logs for background soil boring BKG01 through BKG05 were misplaced and unable to be recovered. Consequently, a site investigation was conducted on July 25, 2025, to advance replacement borings immediately adjacent to borings BKG01 through BKG05. Lithologic descriptions and PID readings were collected for each boring to replace the missing boring logs. The replacement logs are included in the attached Site Investigation Report.

Analytical results indicated that organic compound concentrations were in compliance with ECMC standards in all soil sample locations. Additionally, all inorganic and metals concentrations were in compliance with ECMC standard or within background concentrations in all soil sample locations aside from the pH concentration in soil sample SB08@3.5-4.5'. Based on the results, soil samples SB01@0.5-1.5' and SB09@2.5-3.5, which were collected directly adjacent to soil samples AST01@0.5' and SEP01-FL@3', respectively, were in compliance with ECMC standards or within background concentrations. Consequently, the original pH and/or SAR concentrations were collected from a discrete location and could not be replicated.

A desktop review of nearby backgrounds is currently being conducted to address the pH exceedance recorded in soil sample SB08@3.5-4.5'. Following the review, a summary will be provided and any additional site investigation activities will be proposed as necessary.

Pursuant to Rule 913.e, Supplemental Form 27s will be submitted on a quarterly schedule to provide updates and progress of the remediation until closure criteria is met.

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

Signed: Jesse Marcus Title: Environmental Consultant

Submit Date: Email: jmarcus@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: Date:

Remediation Project Number: 20520

COA Type	Description
0 COA	

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
404297970	LABORATORY ANALYTICAL REPORT
404297971	LABORATORY ANALYTICAL REPORT
404297975	SITE INVESTIGATION REPORT

Total Attach: 3 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)