

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404297276

Receive Date:

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 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: Erica Zuniga	Email: RBUEUF27@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 27091 Initial Form 27 Document #: 403299120

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: 305142	API #: _____	County Name: WELD
Facility Name: SHAFER-63N65W 13SWNE	Latitude: 40.227040	Longitude: -104.609850	
** correct Lat/Long if needed: Latitude: 40.225353		Longitude: -104.609644	
QtrQtr: SWNE	Sec: 13	Twp: 3N	Range: 65W Meridian: 6 Sensitive Area? Yes
Facility Type: SPILL OR RELEASE	Facility ID: 487153	API #: _____	County Name: WELD
Facility Name: Diller 42-13	Latitude: 40.225346	Longitude: -104.609582	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SWNE	Sec: 13	Twp: 3N	Range: 65W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE Facility ID: 487155 API #: _____ County Name: WELD
 Facility Name: Diller 42-13 Latitude: 40.225300 Longitude: -104.609604
 ** correct Lat/Long if needed: Latitude: _____ Longitude: _____
 QtrQtr: SWNE Sec: 13 Twp: 3N Range: 65W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

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

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

Intermittent Riverine Wetlands 0.05mi E (Neres Canal), Holding Pond 0.24mi ESE
 Farm Structures 0.25 ENE, 0.23 ESE, 0.18/0.19/0.19 NNW, 0.17/0.18/0.20/0.21 NW, 0.15 WNW, 0.20/0.25/0.25 WSW, 0.18/0.18 SW
 Residential 0.19 NW, 0.16 WNW, 0.24 WSW, 0.20 SW

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	Lab analysis and field screening if encountered
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 DILLER SCHAFFER T3N-R65W-S13 L01 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 above ground oil tank(s), and at the risers for the flowline(s) and dumpline(s) of any 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):

If groundwater is encountered during the site investigation, a grab groundwater sample 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, is attached to ECMC Document No. 403836360.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil	NA / ND
Number of soil samples collected <u>11</u>	-- Highest concentration of TPH (mg/kg) <u>10.6</u>

Number of soil samples exceeding 915-1 5 -- Highest concentration of SAR 0.45

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

Approximate areal extent (square feet) 500 Vertical Extent > 915-1 (in feet) 6

Groundwater

Number of groundwater samples collected 0 Highest concentration of Benzene (µg/l) _____

Was extent of groundwater contaminated delineated? Yes Highest concentration of Toluene (µg/l) _____

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

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

Number of groundwater samples exceeding 915-1 _____ 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?

On May 28, 2024, three background soil samples were collected from one location (BKG01) near the facility. On December 12, 2025, 20 background soil samples were collected from four discrete locations (BKG02R-BKG05R). Background soil samples were collected from depths ranging between 0-6 inches and 9-10 feet bgs and submitted for laboratory analysis of pH, EC, SAR, boron (excluding the May 2024 samples), and metals in soil per ECMC Table 915-1. The maximum and minimum background concentration for pH was observed to be 8.23 and 6.27. The maximum background concentration with a 1.25x multiplier applied for arsenic was calculated to be 9.38 mg/kg. Based on the results, pH and chromium remain in exceedance of ECMC standards and background levels.

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?

Based on the organic exceedances originally observed in decommissioning soil samples AST01@0-6" and PWV01-B@5', remedial excavation activities will be conducted to remove any impacted material remaining in-situ in the vicinity of the aforementioned locations. Soil samples will be collected from the base and sidewalls of the final excavation extent and submitted for analysis of the full ECMC Table 915-1 suite. Following the completion of excavation activities, a supplemental site investigation will be conducted to address any inorganic and metals exceedances remaining in-situ.

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.

Remedial excavation activities will be conducted to remove the organic compound exceedances observed during initial decommissioning activities at soil sample locations AST01@0-6" and PWV01-B@5'.

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.

Based on decommissioning analytical results, a supplemental site investigation was completed on February 25, 2025 to vertically and horizontally delineate the organic exceedances observed at soil samples AST01@0-6" and PWV01-B@5'. Eleven soil samples were collected from eight soil borings (SB01 - SB08) and submitted for laboratory analysis of the full Table 915-1 suite. Soil samples SB01@5-6' and SB05@0.5-1' were collected directly adjacent to the original exceedances. Operator was informed by the laboratory that soil samples collected during the February 2025 site investigation were analyzed outside of allotted holding times due to delays at Summit Scientific Laboratory.

On December 12, 2025, a supplemental site investigation was conducted to re-collect the soil samples affected by the laboratory hold time exceedances. Analytical results indicated that organic compound concentrations were in compliance with ECMC regulatory standards in all soil sample locations. Concentrations of pH and chromium remain in exceedance of ECMC regulatory standards and background concentrations on site. Based on the results, the organic compound exceedances originally observed during decommissioning activities were not replicated by the resample locations SB01R@5-6' or SB05R@0.5-1' and have been vertically and laterally delineated.

Based on the organic exceedances originally observed in decommissioning soil samples AST01@0-6" and PWV01-B@5', remedial excavation activities will be conducted to remove any impacted material remaining in-situ in the vicinity of the aforementioned locations. Soil samples will be collected from the base and sidewalls of the final excavation extent and submitted for analysis of the full ECMC Table 915-1 suite. Following the completion of excavation activities, a supplemental site investigation will be conducted to address any inorganic and metals exceedances remaining in-situ.

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.

Groundwater was not encountered during decommissioning or site investigation activities.

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 SSIS, SSMRP

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?

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. 05/28/2024

Proposed date of completion of Reclamation. 03/30/2028

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. 01/04/2023

Actual Spill or Release date, or date of discovery. 06/25/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/28/2024

Proposed site investigation commencement. 06/30/2026

Proposed completion of site investigation. 09/30/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 06/30/2026

Proposed date of completion of Remediation. 09/30/2027

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 implementation schedule has been changed due to the necessity for remedial excavation activities on site. Remedial excavation are tentatively scheduled to be completed during the third quarter of 2026.

OPERATOR COMMENT

This Form 27 is being submitted to summarize December 2025 supplemental site investigation re-sampling activities at the Diller 42-13 location.

ECMC Document Number 404191141 was submitted on May 12, 2025, and was subsequently denied on July 7, 2025, due to samples being analyzed outside of the required hold times.

A detailed summary of initial decommissioning activities was included on ECMC Document No. 403836360.

A supplemental site investigation was completed on February 25, 2025 to vertically and horizontally delineate the organic exceedances observed at soil samples AST01@0-6" and PWV01-B@5'. Eleven soil samples were collected from eight soil borings (SB01 - SB08) and submitted for laboratory analysis of the full Table 915-1 suite. Soil samples SB01@5-6' and SB05@0.5-1' were collected directly adjacent to the original exceedances. Operator was informed by the laboratory that soil samples collected during the February 2025 site investigation were analyzed outside of allotted holding times due to delays at Summit Scientific Laboratory. On December 12, 2025, a supplemental site investigation was conducted to re-collect the soil samples affected by the laboratory hold time exceedances. Analytical results indicated that organic compound concentrations were in compliance with ECMC regulatory standards in all soil sample locations.

On December 12, 2025, 20 background soil samples were collected from four discrete locations (BKG02R-BKG05R) from depths ranging between 2-3 and 9-10 feet bgs and submitted for laboratory analysis of pH, EC, SAR, boron and the Table 915-1 metals suite. The maximum and minimum background concentration for pH was observed to be 8.23 and 6.27. The maximum background concentration with a 1.25x multiplier applied for arsenic was calculated to be 9.38 mg/kg. Concentrations of pH and chromium remain in exceedance of ECMC regulatory standards and background concentrations on site.

Based on the organic exceedances originally observed in decommissioning soil samples AST01@0-6" and PWV01-B@5', remedial excavation activities will be conducted to remove any impacted material remaining in-situ in the vicinity of the aforementioned locations. Soil samples will be collected from the base and sidewalls of the final excavation extent and submitted for analysis of the full ECMC Table 915-1 suite. Following the completion of excavation activities, a supplemental site investigation will be conducted to address any inorganic and metals exceedances remaining in-situ.

Remedial excavation activities are tentatively scheduled to commence during the third quarter of 2026.

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: Jimmy Webster

Title: Environmental Consultant

Submit Date: _____

Email: tas-chevron-2@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: 27091

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

404506143	LABORATORY ANALYTICAL REPORT
404602689	SITE INVESTIGATION REPORT

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)