

State of Colorado Energy & Carbon Management Commission

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Document Number:

404191141

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) 730-7281
City: DENVER State: CO Zip: 80202		Mobile: ()
Contact Person: Dan Peterson	Email: danpeterson@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: <u>SPILL OR RELEASE</u>	Facility ID: <u>487155</u>	API #: <u></u>	County Name: <u>WELD</u>
Facility Name: <u>Diller 42-13</u>	Latitude: <u>40.225300</u>	Longitude: <u>-104.609604</u>	
** correct Lat/Long if needed: Latitude: <u></u> Longitude: <u></u>			
QtrQtr: <u>SWNE</u>	Sec: <u>13</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 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:

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

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	GROUNDWATER	NA	Lab Analysis if encountered
Yes	SOILS	Refer to ECMC Document #403836360	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 SCHAFER 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 ground oil tank(s), and at the risers for the flowline(s) and dumphine(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. A detailed summary of decommissioning activities, including field notes, site photos, figures, and laboratory analytical results, is attached to ECMC Document No. 403836360.

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 11

ND Highest concentration of TPH (mg/kg)

Number of soil samples exceeding 915-1 5 -- Highest concentration of SAR 0.089
5
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 February 25, 2025, 20 background soil samples were collected from four discrete locations (BKG02-BKG05). 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, and the Table 915-1 metals suite. Background samples collected from borings BKG02-BKG05 were submitted for additional analysis of boron. Based on the location of the McKenney 6-42 wellhead (REM# 18662), approximately 2 miles northeast of the Diller 42-13 tank battery and within the same USDA soil classification (Vona Loamy Sand), the background samples collected under the McKenney 6-42 project were used to compare to site confirmation samples at the Diller 42-13 tank battery.

☐ 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 results from February 2025 supplemental site investigation activities, additional delineation activities are necessary to delineate the pH concentrations below the applicable ECMC regulatory range. Up to nine soil borings will be advanced adjacent to and surrounding SB06-SB08 and samples will be collected from these borings and submitted for laboratory analysis of the full Table 915-1 suite. Based on the depth of the pH exceedances within the shallow subsurface, additional background samples will be collected from approximately 0.5-1 feet bgs to continue to assess pH concentrations in native soil on site. The proposed soil boring locations are illustrated on Figure 4.

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.

Refer to the Remediation Summary Section below.

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.

On February 25, 2025, a supplemental site investigation was completed 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 to confirm the hydrocarbon impacts. Analytical results indicated that organic compound concentrations were in compliance with ECMC regulatory standards in all 11 soil sample locations. Based on the results, the original organic and/or arsenic exceedances recorded in soil samples AST01 and PWV01-B could not be replicated and no hydrocarbon impacts were encountered during site investigation activities.

On February 25, 2025, 20 background soil samples were collected from four discrete locations (BKG02-BKG05). Background soil samples were collected from depths ranging between 0.5-1 feet and 9-10 feet bgs and submitted for laboratory analysis of pH, EC, SAR, boron, and the Table 915-1 metals suite. Based on the location of the McKenney 6-42 wellhead (REM# 18662) in a neighboring plot of range land, approximately 2 miles northeast of the Diller 42-13 tank battery and within the same USDA soil classification (Vona Loamy Sand), the background samples collected under the McKenney 6-42 project were used to compare to site confirmation samples at the Diller 42-13 tank battery. A site map illustrating the relative locations of the two sites is included as Figure 3. Analytical results indicated that the pH concentrations recorded in soil samples SEP01-FL@2.5' and SB01@10' were below background concentrations recorded at the McKenney 42-13 wellhead and indicative of native soil conditions.

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 Supplemental Site Investigation Summary, Supplemental Site Investigation 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. 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. 09/30/2026

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. 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. 05/06/2025

Proposed completion of site investigation. 11/06/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 11/06/2025

Proposed date of completion of Remediation. 03/30/2026

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 implementation schedule has been changed due to the completion of supplemental site investigation activities around the former tank battery and the necessity for additional site investigation activities. The proposed site investigation will commence following the approval of this Form 27.

OPERATOR COMMENT

This Supplemental Form 27 is being submitted to summarize February 2025 supplemental site investigation activities completed at the Diller 42-13 tank battery location.

On February 25, 2025, a supplemental site investigation was completed 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 to confirm the hydrocarbon impacts. Analytical results indicated that organic compound concentrations were in compliance with ECMC regulatory standards in all 11 soil sample locations. Based on the results, the original organic and/or arsenic exceedances recorded in soil samples AST01 and PWV01-B could not be replicated and no hydrocarbon impacts were encountered during site investigation activities.

On February 25, 2025, 20 background soil samples were collected from four discrete locations (BKG02-BKG05). Background soil samples were collected from depths ranging between 0.5-1 feet and 9-10 feet bgs and submitted for laboratory analysis of pH, EC, SAR, boron, and the Table 915-1 metals suite. Based on the location of the McKenney 6-42 wellhead (REM# 18662) in a neighboring plot of range land, approximately 2 miles northeast of the Diller 42-13 tank battery and within the same USDA soil classification (Vona Loamy Sand), the background samples collected under the McKenney 6-42 project were used to compare to site confirmation samples at the Diller 42-13 tank battery. A site map illustrating the relative locations of the two sites is included as Figure 3. Analytical results indicated that the pH concentrations recorded in soil samples SEP01-FL@2.5' and SB01@10' were below background concentrations recorded at the McKenney 42-13 wellhead and indicative of native soil conditions.

Based on the results from February 2025 supplemental site investigation activities, additional delineation activities are necessary to delineate the pH concentrations below the applicable ECMC regulatory range. Up to nine soil borings will be advanced adjacent to and surrounding SB06-SB08 and samples will be collected from these borings and submitted for laboratory analysis of the full Table 915-1 suite. Based on the depth of the pH exceedances within the shallow subsurface, additional background samples will be collected from approximately 0.5-1 feet bgs to continue to assess pH concentrations in native soil on site. The proposed soil boring locations are illustrated on Figure 4.

Based on currently available data, this project is not affected by data integrity irregularities and is not associated with Operator's data integrity review process and its Rule 525.e. Voluntary Disclosure. As part of its data integrity review process, Operator requested the lab protect the laboratory analytical report from subsequent unauthorized modification by anyone outside the lab, which resulted in the lab reissuing the original report with additional protections (Reissued Report). The Reissued Report was received directly from the lab on April 17, 2025, which includes the application of a Digital ID/Verified Certification (lock) to support reissuance. The metadata associated with this Reissued Report also includes the lab representative's name, the date and time the laboratory reissued the report, and an explanation for the report reissuance. The Reissued Report is attached to this submission.

In the event additional responsive information is received or discovered that would suggest this project should be incorporated into the ongoing data integrity review process associated with Operator's Rule 525.e. Voluntary Disclosure, Operator will update and/or amend the statements in this submission and provide any new or revised data or other information.

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: 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

404191157	SITE INVESTIGATION REPORT
404191158	LABORATORY ANALYTICAL REPORT
404191159	LABORATORY ANALYTICAL REPORT

Total Attach: 3 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)