

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404447455
Receive Date:
12/05/2025

Report taken by:
Nick Cholas

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: <u>NOBLE ENERGY INC</u>	Operator No: <u>100322</u>	Phone Numbers
Address: <u>1099 18TH STREET SUITE 1500</u>		Phone: <u>(970) 304-5000</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>()</u>
Contact Person: <u>Dan Peterson</u>	Email: <u>RBUEUF27@chevron.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 38625 Initial Form 27 Document #: 403993062

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>LOCATION</u>	Facility ID: <u>310513</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>ALEXANDER F-65N65W 33NWSE</u>	Latitude: <u>40.355321</u>	Longitude: <u>-104.667805</u>	
	** correct Lat/Long if needed: Latitude: <u>40.354918</u>	Longitude: <u>-104.661420</u>	
QtrQtr: <u>NWSE</u> Sec: <u>33</u> Twp: <u>5N</u> Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>			

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>489602</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Alexander F-65N65W 33NWSE</u>	Latitude: <u>40.355231</u>	Longitude: <u>-104.661336</u>	
	** correct Lat/Long if needed: Latitude: _____	Longitude: _____	
QtrQtr: <u>NWSE</u> Sec: <u>33</u> Twp: <u>5N</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? 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

Bald Eagle Roost or Communal Roost HPH 0.1mi SE
Riverine 0.16mi NE
Freshwater Pond 0.22mi SE, 0.24mi SW
Residential 0.05/0.21/0.25mi SE, 0.09/0.13mi E, 0.08mi NE
Farm Structure 0.04/0.06/0.07/0.14/0.17/0.18mi E, 0.21mi SE, 0.06mi NE

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	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 during the decommissioning of the Alexander F-65N65W 33NWSE Tank Battery location on 03/21/25. The tank battery was decommissioned in accordance with ECMC rules. Laboratory soil samples were collected from the excavation base of the partially-buried produced water vessels (PWV01-B, PWV02-B, PWV03-B, PWV04-B@4'), from the N, W, S, and E excavation sidewalls (PWV01-W, S, E; PWV02-W, E; PWV03-W, E; PWV04-W, E, N@2.5'), from beneath the above-ground storage tanks (AST01, AST02, AST03, AST04@0-6"), beneath the separator risers for the dump lines (SEP01-DL, SEP02-DL@2.5'), and beneath the hammer union riser connecting the flowlines to a single separator (SEP01-FL). Samples were collected and field screened from beneath the former locations of the emission control devices (FLARE01, FLARE02@0-6"), meter house (MH01@0-6"), and water dump line (WDL01@2.5'). Due to field indicators of elevated PID and hydrocarbon odor observed during decommissioning, this facility was reported as a potential historic release.

Laboratory analytical results indicated that organic constituents benzene, 1,2,4-trimethylbenzene (TMB), 1,3,5-TMB, naphthalene, benzo(a)anthracene, 1-methylnaphthalene (M), and 2-M were detected in exceedance of ECMC Table 915-1 regulation in sample locations PWV01-W, PWV02-E, and PWV03-B. These were reported as a historic release on Form 19 Document # 404138260 (Spill ID # 489602).

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):

Soil samples were collected as described in the Initial Action Summary of this Form 27. Sampling deviated from the approved proposed sampling plan in Initial Form 27 Doc # 403993062 because a single flowline riser sample was collected at the separator (SEP01-FL) due to a hammer union joining the associated flowlines.

Soil samples were analyzed by a certified laboratory using approved ECMC laboratory analysis methods 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, EC, SAR, pH, metals, and boron.

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 groundwater sample 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):

During tank battery decommissioning activities, personnel field screened disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling was required. Confirmation soil samples submitted for laboratory analysis were analyzed for all ECMC Table 915-1 constituents. A detailed summary of tank battery decommissioning activities, including field notes, site photos, figures, and laboratory analytical results, was submitted as an attachment on Form 27 # 404137957. The previously submitted Form 27 Doc # 404137957 is currently In-Process on Web Forms.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 21

Number of soil samples exceeding 915-1 21

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

Approximate areal extent (square feet) 2100

NA / ND

-- Highest concentration of TPH (mg/kg) 350

-- Highest concentration of SAR 2.25

BTEX > 915-1 Yes

Vertical Extent > 915-1 (in feet) 4

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?

On 03/24/25, 8 background soil samples were collected from 2 discrete locations (BKG01, BKG02) near the associated Alexander 33-2 Flowline (REM # 38591). Background samples were collected from depths ranging from 0 to 4 feet below ground surface and analyzed for Table 915-1 metals, pH, SAR, EC, and boron. The maximum background pH was observed to be 8.95. The maximum background concentrations with a 1.25x multiplier applied for arsenic and selenium were calculated to be 0.965 mg/kg and 0.484 mg/kg, respectively. Site concentrations of pH, arsenic, and/or selenium exceed Table 915-1 standards and background levels in all samples collected to date.

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?

Following the tank battery decommissioning, elevated concentrations of Table 915-1 organic compounds, pH, arsenic, and selenium remain in-situ.

Prior to the excavation proposed in the Remedial Action Plan, a site investigation will be completed to delineate the organic exceedances identified during decommissioning and collect additional background samples. Soil borings SB01-SB07 will be advanced to vertically and laterally delineate the organic exceedances at sample locations PWV01-W, PWV02-E, and PWV03-B. Delineation samples will be collected from the highest screening level and clean terminus, then analyzed for full ECOM Table 915-1 constituents. Background samples will be collected from borings BKG04-BKG08 to determine if the elevated pH, arsenic, and selenium concentrations observed during decommissioning can be attributed to native soil conditions. Background soil samples will be collected and analyzed for Table 915-1 metals, pH, SAR, EC, and boron. These background boring locations will also be used for nearby the Alexander 33-2 & Alexander F33-24 flowlines (Rem # 38591, API #s 05-123-13896 & 05-123-25301). The soil boring locations are illustrated in the proposed site investigation plan attached to this Form 27. The investigation will be completed in accordance with the proposed implementation schedule, and the results will be submitted on a subsequent 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.

Following the tank battery decommissioning, elevated concentrations of Table 915-1 organic compounds, pH, arsenic, and selenium remain in-situ.

Following the site investigation proposed in the Site Investigation Report section, a remedial excavation will be conducted to address the organic exceedances observed during the tank battery decommissioning. The benzene, 1,2,4-trimethylbenzene (TMB), 1,3,5-TMB, naphthalene, benzo (a)anthracene, 1-methylnaphthalene (M), and/or 2-M exceedances at sample locations PWV01-W, PWV02-E, & PWV03-B will be removed via mechanical excavation. Confirmation soil samples will be collected per ECMC guidance and analyzed for all Table 915-1 contaminants. The excavation will be conducted per the proposed implementation schedule and the results will be provided in a subsequent Form 27.

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.

The remedial action plan has been updated from the proposal in Form 27 # 404137957 to modify the delineation efforts and include a remedial excavation. The total number of soil borings was reduced to delineate Table 915-1 organics, instead of including delineation for inorganics and metals that may be removed during the proposed remedial excavation activities. An excavation has been proposed to mechanically remove the organic exceedances. The site investigation and excavation will be conducted per the proposed implementation schedule, and the results will be provided in a subsequent 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.

Groundwater was not encountered during initial decommissioning 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 Updated Site Investigation Proposal and Remedial Excavation 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. 03/21/2025

Proposed date of completion of Reclamation. 09/14/2027

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. 10/02/2024

Actual Spill or Release date, or date of discovery. 03/21/2025

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/21/2025

Proposed site investigation commencement. 11/02/2025

Proposed completion of site investigation. 03/14/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 03/14/2026

Proposed date of completion of Remediation. 03/14/2027

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 was updated for the Alexander F-65N65W 33NWSE tank battery to reflect a change in start work dates. The tentative start date for the proposed site investigation has been updated from 02/10/2026 to 03/13/2026 due to rig availability. The proposed excavation does not have a tentative start date. The ECMC will be notified of any updates to the implementation schedule in a subsequent Form 27.

OPERATOR COMMENT

This Form 27 is being submitted to include an updated site investigation proposal and remedial excavation proposal for the the Alexander F-65N65W 33NWSE Tank Battery. The decommissioning data was summarized in prior Form27 # 404137957 (pending ECMC review).

Following the tank battery decommissioning, elevated concentrations of Table 915-1 organic compounds, pH, arsenic, and selenium remain in-situ.

A site investigation will be completed to delineate the organic exceedances identified during decommissioning and collect additional background samples. Soil borings SB01-SB07 will be advanced to vertically and laterally delineate the organic exceedances at sample locations PWV01-W, PWV02-E, and PWV03-B. Delineation samples will be collected from the highest screening level and clean terminus, then analyzed for full ECMC Table 915-1 constituents. Background samples will be collected from borings BKG04-BKG08 to determine if the elevated pH, arsenic, and selenium concentrations observed during decommissioning can be attributed to native soil conditions. Background soil samples will be collected and analyzed for Table 915-1 metals, pH, SAR, EC, and boron. These background boring locations will also be used for nearby the Alexander 33-2 & Alexander F33-24 flowlines (Rem # 38591, API #s 05-123-13896 & 05-123-25301). The soil boring locations are illustrated in the proposed site investigation plan attached to this Form 27.

A remedial excavation will be conducted to address the organic exceedances observed during the tank battery decommissioning. The benzene, 1,2,4-trimethylbenzene (TMB), 1,3,5-TMB, naphthalene, benzo(a)anthracene, 1-methylnaphthalene (M), and/or 2-M exceedances at sample locations PWV01-W, PWV02-E, & PWV03-B will be removed via mechanical excavation. Confirmation soil samples will be collected per ECMC guidance and analyzed for all Table 915-1 contaminants.

The remedial action plan has been updated from the proposal in Form 27 # 404137957 to modify the delineation efforts and include a remedial excavation. The total number of soil borings was reduced to delineate Table 915-1 organics, instead of including delineation for inorganics and metals that may be removed during the proposed remedial excavation activities. An excavation has been proposed to mechanically remove the organic exceedances.

The site investigation and excavation will be conducted per the proposed implementation schedule, and the results will be provided in a subsequent Form 27. Per ECMC Rule 913.e., quarterly reporting will be conducted until closure criteria are achieved for the remediation project

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

Signed: Jeff Rollins

Title: Env. Geologist III

Submit Date: 12/05/2025

Email: tas-chevron-5@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: Nick Cholas

Date: 12/29/2025

Remediation Project Number: 38625

COA Type

Description

	ECMC approves the proposed soil boring locations. Depending on the results of the current site investigation plan, Operator may be required to complete additional soil borings to fully delineate soil impacts.
1 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
404447455	INVESTIGATION/REMEDICATION WORKPLAN (SUPPLEMENTAL)
404455862	SITE INVESTIGATION PLAN
404455863	SITE INVESTIGATION PLAN
404487274	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 4 Files

General Comments

User Group	Comment	Comment Date
Environmental	ECMC notes: Operator states: "The tentative start date for the proposed site investigation has been updated from 02/10/2026 to 03/13/2026 due to rig availability. The proposed excavation does not have a tentative start date."	12/29/2025

Total: 1 comment(s)