

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404248036
Receive Date:
06/23/2025

Report taken by:
Laurel Anderson

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 Phone: <u>(970) 730-7281</u> Mobile: <u>()</u>
Address: <u>1099 18TH STREET SUITE 1500</u>		
City: <u>DENVER</u>	State: <u>CO</u>	Zip: <u>80202</u>
Contact Person: <u>Dan Peterson</u>	Email: <u>danpeterson@chevron.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 31354 Initial Form 27 Document #: 403513491

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>305404</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>EPHRAIM H-63N65W 13SWNW</u>	Latitude: <u>40.228440</u>	Longitude: <u>-104.617270</u>	
** correct Lat/Long if needed: Latitude: <u>40.230180</u>		Longitude: <u>-104.617040</u>	
QtrQtr: <u>SWNW</u>	Sec: <u>13</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>487562</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Ephraim-H63N65W 13SWNW</u>	Latitude: <u>40.230276</u>	Longitude: <u>-104.617046</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWNW</u>	Sec: <u>13</u>	Twp: <u>3N</u>	Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

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 if encountered
Yes	SOILS	Refer to tables and figures	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 pursuant to ECMC Rule 911 at the UPRC EPHRAIM FORD T3N-R65W-S13 L01 Facility and 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 vessels excavation, beneath the ground oil tanks, and at the risers for the flowlines and dump lines of any separators. 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):

If groundwater is encountered during the site investigation a grab groundwater sample will be collected and analyzed for all organic compounds and inorganic parameters 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 secured analytical data report is pending. A detailed summary of decommissioning activities, including field notes, site photos, figures, and laboratory analytical results is attached to this Form 27.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil	NA / ND
Number of soil samples collected <u>16</u>	ND Highest concentration of TPH (mg/kg) _____
Number of soil samples exceeding 915-1 <u>9</u>	-- Highest concentration of SAR <u>2.81</u>

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

BTEX > 915-1 No

Approximate areal extent (square feet) 900

Vertical Extent > 915-1 (in feet) 3

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?

Four background soil samples were collected near the tank battery and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. Background soil samples were collected from depths ranging between 0.5 to 4 feet below ground surface (ft bgs). The maximum background concentration for pH was observed to be 8.42. The maximum background concentration for arsenic with a 1.25x multiplier applied was calculated to be 3.23 mg/kg. All arsenic concentrations observed during decommissioning were below 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?

A supplemental site investigation (SSI) will be completed to vertically and horizontally delineate the benzo(a)anthracene exceedances observed at soil samples AST01 and SEP01-DL. Samples will be collected from the delineation borings and submitted for laboratory analysis of the full Table 915-1 suite. Concurrently with the SSI, additional background samples will be collected to continue to assess inorganic and metals concentrations in native material on site. The proposed soil boring locations are illustrated on Figure 3. The SSI will be completed in accordance with the proposed implementation schedule, and the results of the SSI 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.

Refer to the Remediation Summary section below.

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.

Analytical results for samples collected during July 2024 decommissioning activities indicated that benz(a)anthracene concentrations were in exceedance of ECMC standards in soil samples AST01@0-6" and SEP01-DL@2'. Based on the results, a supplemental site investigation (SSI) will be completed to vertically and horizontally delineate the benzo(a)anthracene exceedances observed at soil samples AST01 and SEP01-DL. Samples will be collected from the delineation borings and submitted for laboratory analysis of the full Table 915-1 suite. Concurrently with the SSI, additional background samples will be collected to continue to assess inorganic and metals concentrations in native material on site. The proposed soil boring locations are illustrated on Figure 3. The SSI will be completed in accordance with the proposed implementation schedule, and the results of the SSI will be submitted on a subsequent Form 27.

Soil Remediation Summary

In Situ

Ex Situ

 Bioremediation (or enhanced bioremediation)

 Excavate and offsite disposal

_____ Chemical oxidation
_____ Air sparge / Soil vapor extraction
_____ Natural Attenuation
_____ Other _____

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 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 Confirmation Soil Sampling 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. 07/30/2024

Proposed date of completion of Reclamation. 03/30/2027

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. 08/03/2023

Actual Spill or Release date, or date of discovery. 08/05/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 07/30/2024

Proposed site investigation commencement. 06/19/2025

Proposed completion of site investigation. 12/30/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 12/30/2025

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 decommissioning of the Ephraim H-63N65W 13SWNW tank battery and the necessity for additional site investigation activities. Site investigation activities will commence following the approval of this Form 27.

OPERATOR COMMENT

This Supplemental Form 27 is being re-submitted to summarize tank battery decommissioning results collected at the Ephraim H-63N65W 13SWNW tank battery location. This summary was originally submitted on ECMC Document Number 403876813 and was subsequently returned to draft on December 16, 2024 to confirm the encryption of the laboratory report.

In response to ECMC Form 27 Comment dated December 16, 2024. (Document Number 403876813), Operator is submitting a replacement Form 27. A technical review of the laboratory analytical report and data was conducted. 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 2, 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.

Four background soil samples were collected near the tank battery and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. Background soil samples were collected from depths ranging between 0.5 to 4 feet below ground surface (ft bgs). The maximum background concentration for pH was observed to be 8.42. The maximum background concentration for arsenic with a 1.25x multiplier applied was calculated to be 3.23 mg/kg. All arsenic concentrations observed during decommissioning were below background levels.

Analytical results for samples collected during July 2024 decommissioning activities indicated that benz(a)anthracene concentrations were in exceedance of ECMC standards in soil samples AST01@0-6" and SEP01-DL@2'. Based on the results, a supplemental site investigation (SSI) will be completed to vertically and horizontally delineate the benzo(a)anthracene exceedances observed at soil samples AST01 and SEP01-DL. Samples will be collected from the delineation borings and submitted for laboratory analysis of the full Table 915-1 suite. Concurrently with the SSI, additional background samples will be collected to continue to assess inorganic and metals concentrations in native material on site. The proposed soil boring locations are illustrated on Figure 3. The SSI will be completed in accordance with the proposed implementation schedule, and the results of the SSI will be submitted on a subsequent Form 27.

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 responsive to ECMC's general comments responding to Operator's Form 27 submission found in Document Number 403876813.

Pursuant to 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: Jesse Marcus

Title: Environmental Consultant

Submit Date: 06/23/2025

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: Laurel Anderson

Date: 08/27/2025

Remediation Project Number: 31354

COA Type

Description

	<p>ECMC approves the proposed remediation work plan. However, proposed soil samples shall be collected at a depth to ensure samples are representative conditions of in-situ soil beneath the backfill of excavations conducted during removal of the former equipment.</p> <p>Additionally, ECMC does not approve the proposed schedule. The Operator shall implement the proposed work plan upon approval of this Form 27, or propose a site specific timeline for implementation including reasons for specific dates selected. No justification was given for the delay in completion of site investigation and remediation.</p> <p>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.</p>
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	<p>ECMC performed a routine environmental field inspection at this location on 8/25/2025 (see Field Inspection Report Doc #717100363) - During the inspection ECMC EPS' noted no indication of remedial activities were observed at the time of inspection. No open excavations were observed. The areas where historic releases were identified appear to have been backfilled/ regraded above that of the surrounding location.</p> <p>Operator shall provide all waste manifests as required by Rule 905.b.(3) for oily waste hauled off site for disposal. Additionally, Operator shall provide all tickets for material hauled on site for backfill. This documentation shall be included on the next Supplemental Form 27.</p>
	<p>ECMC has corrected the subject form to reference the correct Lat/Long for the Tank Battery. No tank battery facility ID exists for this tank battery; Operator tied the Form 27i for this Remediation Project to the associated off-location wellhead location ID (305404).</p>
	<p>Operator will provide notice to the ECMC Area EPS via email at least 48 hours prior to backfill, soil boring, monitoring well installation, or any sampling events performed on location.</p>
4 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.

<u>Att Doc Num</u>	<u>Name</u>
404248036	FORM 27-SUPPLEMENTAL-SUBMITTED
404248143	SITE INVESTIGATION REPORT
404248148	LABORATORY ANALYTICAL REPORT

Total Attach: 3 Files

General Comments

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

Total: 0 comment(s)