

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
404458178  
Receive Date:  
12/10/2025

Report taken by:  
Candice (Nikki) Graber

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>	<b>Phone Numbers</b>
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 #: 21986 Initial Form 27 Document #: 402944529

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>424373</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>PATRIOT B16-69HN</u>	Latitude: <u>40.408030</u>	Longitude: <u>-104.563140</u>	
	** correct Lat/Long if needed: Latitude: <u>40.408172</u>	Longitude: <u>-104.561932</u>	
QtrQtr: <u>SWSW</u> Sec: <u>9</u> Twp: <u>5N</u> Range: <u>64W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>			

Facility Type: <u>WELL</u>	Facility ID: _____	API #: <u>123-34001</u>	County Name: <u>WELD</u>
Facility Name: <u>PATRIOT B16-69HN</u>	Latitude: <u>40.408030</u>	Longitude: <u>-104.563150</u>	
	** correct Lat/Long if needed: Latitude: _____	Longitude: _____	
QtrQtr: <u>SWSW</u> Sec: <u>9</u> Twp: <u>5N</u> Range: <u>64W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>			

Facility Type: SPILL OR RELEASE Facility ID: 483387 API #: \_\_\_\_\_ County Name: WELD  
 Facility Name: Patriot B16-69HN Latitude: 40.408030 Longitude: -104.563150  
 \*\* correct Lat/Long if needed: Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_  
 QtrQtr: SWSW Sec: 9 Twp: 5N Range: 64W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE Facility ID: 483933 API #: \_\_\_\_\_ County Name: WELD  
 Facility Name: Patriot B16-69HN Tank Battery Latitude: 40.408214 Longitude: -104.562209  
 \*\* correct Lat/Long if needed: Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_  
 QtrQtr: SWSW Sec: 9 Twp: 5N Range: 64W Meridian: 6 Sensitive Area? Yes

**SITE CONDITIONS**

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

- Freshwater Pond 0.5mi E, 0.03mi N, 0.21mi SE
- Freshwater Emergent Wetlands 0.08/0.14/0.19mi E, 0.05/0.12/0.19mi N
- Riverine 0.15/0.19mi N, 0.14/0.17mi NE
- Riparian Forested Shrub 0.06/0.19mi NE, 0.1mi N
- Riparian Herbaceous 0.09/0.15mi E, 0.08mi N
- Freshwater Forested Shrub Wetland 0.22mi E, 0.16/0.19mi NE
- HWY 0.11mi W
- Residential 0.14mi NW
- Industrial/Farm Structures 0.11/0.16mi NW, 0.16/0.2/0.21mi S

# 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 ECMC Doc #404277492	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.

WELL: Pursuant to ECMC Rule 911 a site investigation was conducted pertaining to the PATRIOT B16-69HN wellhead cut and cap and flowline removal. Approximately 390' of flowline was abandoned in place. The wellhead was cut and capped per ECMC rules.

FACILITY: A site investigation was conducted pursuant to ECMC Rule 911 at the PATRIOT T5N-R64W-S9 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 ):

On 11/22/2022, soil samples were collected at the based of the excavation or the area showing the highest degree of impact during field screening activities at the wellhead excavation. Soil samples were field screening at the N-E-S-W sides of the wellhead.

On 2/17/2023, grab confirmation soil samples were collected at the facility beneath the ASTs, produced water vessel excavation, separator and meter house. Soil samples were analyzed by a certified laboratory for organic compounds in soil per ECMC Table 915-1, and inorganics including EC, pH, SAR, and boron. All samples 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 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 ):

On 11/07/2023, pursuant to Spill ID 483933, five soil borings (BH01-BH05) were advanced to delineate impacts identified at FS01@6' during the tank battery decommissioning. Additionally, pursuant to Spill ID 483387, five soil borings (BH06-BH10) were advanced to delineate impacts identified at WH-FS-01@5' during the tank battery decommissioning. Soil samples were collected and analyzed for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons), organic compounds in soil, arsenic, lead, selenium, EC, SAR, pH, and boron. Groundwater was not encountered during this assessment.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

**Soil**

Number of soil samples collected 4  
Number of soil samples exceeding 915-1 2  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square feet) 200

**NA / ND**

ND Highest concentration of TPH (mg/kg) \_\_\_\_\_  
-- Highest concentration of SAR 2.38  
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 6

**Groundwater**

Number of groundwater samples collected 0  
Was extent of groundwater contaminated delineated? Yes  
Depth to groundwater (below ground surface, in feet) \_\_\_\_\_  
Number of groundwater monitoring wells installed \_\_\_\_\_  
Number of groundwater samples exceeding 915-1 \_\_\_\_\_

Highest concentration of Benzene (µg/l) \_\_\_\_\_  
Highest concentration of Toluene (µg/l) \_\_\_\_\_  
Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_  
Highest concentration of Xylene (µg/l) \_\_\_\_\_  
Highest concentration of Methane (mg/l) \_\_\_\_\_

**Surface Water**

0 Number of surface water samples collected  
\_\_\_\_\_ Number of surface water samples exceeding 915-1  
If surface water is impacted, other agency notification may be required.

**OTHER INVESTIGATION INFORMATION**

Were impacts to adjacent property or offsite impacts identified?

\_\_\_\_\_

Were background samples collected as part of this site investigation?

On 05/08/025, fifteen background soil samples were collected from five discrete locations (BKG06-BKG10) adjacent to the wellhead 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 1 to 10 ft bgs. The maximum background concentration for pH was observed to be 8.15. The maximum background concentrations with a 1.25x multiplier applied for the following metals were calculated to be: 3.3 mg/kg for arsenic; 123 mg/kg for barium; 8.5 mg/kg for lead; and 0.26 mg/kg for selenium. All arsenic concentrations observed during investigation activities were below 1.25x the maximum background level.

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?

On 11/05/2025, a supplemental site investigation (SSI) was performed, during which samples were collected from sample locations SS01, SS03, and SS04 for the full ECMC Table 915-1 suite. Samples were also collected to vertically (BH05R) and horizontally (BH14-BH18) delineate elevated pH to the extent of the former tank battery and well pad. Soil borings were advanced at the wellhead (BH11-BH13) to horizontally delineate the barium exceedance observed at BH09R, and at BH07 to confirm and vertically delineate the elevated pH value observed during the May 2025 SSI.

Laboratory analytical results for the SSI performed on 11/05/2025 are pending. Following the receipt of analytical reports, results will be summarized and provided. An executed chain-of-custody and sample receipt summary are attached to this form.

**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.

Pursuant to spill ID 483933, five soil borings (BH01-BH05) were advanced to total depths of 15 feet below ground surface (ft bgs) to delineate impacts identified at FS01@6' during the tank battery decommissioning. Soil samples were collected and analyzed for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons), organic compounds in soil, arsenic, lead, selenium, EC, SAR, pH, and boron. Groundwater was not encountered during this assessment.

Pursuant to spill ID 483387, five soil borings (BH06-BH10) were advanced to 10 ft bgs to delineate impacts identified at WH-FS-01@5' during the tank battery decommissioning. Soil samples were collected and analyzed for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons), organic compounds in soil, arsenic, barium, cadmium, selenium, and pH. Groundwater was not encountered during this assessment.

Hydrocarbon compounds identified at waste characterization sample locations FS01@6' and WH-FS-01@5' were not replicated during site assessment activities, and were successfully delineated vertically and laterally. Based on the successful delineation and lack of groundwater observed within 15 feet of the ground surface, Noble proposed to apply ECMC Table 915-1 Residential Soil Screening Levels (RSSLs). The request to use RSSLs across the site was approved on 05/13/2025 (ECMC Doc #404153473).

**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.

Please refer to ECMC document number 403631364 for a detailed discussion of metals results at the site.

A Site Assessment was conducted on 05/08/2025 to re-sample soil boring locations BH06 and BH09. Two soil borings (BH06R and BH09R) were advanced to depths of 10 ft. bgs. Soil samples were collected and analyzed for full ECMC Table 915-1 constituents. No organic compound exceedances were identified and groundwater was not encountered during this assessment.

On 11/05/2025, a site assessment was performed, during which samples were collected from sample locations SS01, SS03, and SS04 for the full ECMC Table 915-1 suite. Samples were also collected to vertically (BH05R) and horizontally (BH14-BH18) delineate elevated pH to the extent of the former tank battery and well pad. Soil borings were advanced at the wellhead (BH11-BH13) to horizontally delineate the barium exceedance observed at BH09R, and at BH07 to confirm and vertically delineate the elevated pH value observed during the May 2025 SSI.

Laboratory analytical results for the SSI performed on 11/05/2025 are pending. Following the receipt of analytical reports, results will be summarized and provided. An executed chain-of-custody and sample receipt summary are attached to this form.

### 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 or additional site investigation activities to date.

# 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 Timeline Update

## 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. 11/11/2022

Proposed date of completion of Reclamation. 06/30/2028

## 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. 08/05/2020

Actual Spill or Release date, or date of discovery. 12/05/2022

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/11/2022

Proposed site investigation commencement. 11/05/2025

Proposed completion of site investigation. 11/05/2025

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 12/10/2025

Proposed date of completion of Remediation. 06/30/2026

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 the November 2025 SSI the Patriot B16-69HN Tank Battery and Wellhead. Laboratory analytical results for the SSI performed on 11/05/2025 are pending. Following the receipt of analytical reports, results will be summarized and provided.

**OPERATOR COMMENT**

This Form 27 is being submitted to maintain quarterly compliance during the Fourth Quarter 2025 for completion of supplemental site investigation (SSI) activities at the Patriot B16-69HN Tank Battery and Wellhead (Rem # 21986) locations.

The previous Form 27 (ECMC Document # 404385017) was denied because no analytical or site investigation data was provided showing progress of remediation of impacts documented at this location.

Laboratory analytical results for the SSI performed on 11/05/2025 are pending. Following the receipt of analytical reports, results will be summarized and provided. An executed chain-of-custody and sample receipt summary are attached to this form.

Pursuant to Rule 913.e, quarterly reporting will be conducted until closure criteria are achieved for the remediation project. The results of the SSI will be submitted on a subsequent Form 27.

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

Signed: Michael Liston

Title: Environmental Consultant

Submit Date: 12/10/2025

Email: tas-chevron-3@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: Candice (Nikki) Graber

Date: 01/06/2026

Remediation Project Number: 21986

**COA Type****Description**

	<p>ECMC has processed this form as an update; no analytical was attached thus approval of this form does not imply any agreement with comments on completion of site investigation. All ongoing/unaddressed comments/COAs from previous Forms remain applicable.</p> <p>A full report is due with the next Form 27.</p>
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**

404458178	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404458243	OTHER
404496188	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 3 Files

**General Comments****User Group****Comment****Comment Date**

		Stamp Upon Approval
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Total: 0 comment(s)