

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404381702

Receive Date:

Report taken by:

Site Investigation and Remediation Workplan (Supplemental Form)

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. However, this shall not preclude the Operator from taking immediate action to protect public health or safety, the environment, wildlife, or livestock.

This Form 27 describes site conditions as currently understood by the Operator; approval of this Form 27 by ECMC is based on the site conditions accurately described herein; any changes in site conditions identified during or subsequent to the performance of the approved workplan may necessitate additional investigation or remediation which shall be described on a supplemental Form 27.

This Form 27 is intended to provide basic information regarding the proposed site investigation and remediation actions, but the workplan may be more fully described in attached documentation.

Closure request is not available for an Initial Site Investigation and Remediation Workplan.

OPERATOR INFORMATION

Name of Operator: NOBLE ENERGY INC	Operator No: 100322	Phone Numbers
Address: 1099 18TH STREET SUITE 1500		Phone: (970) 304-5000
City: DENVER State: CO Zip: 80202		Mobile: ()
Contact Person: Dan Peterson	Email: Rbueuf27@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 32623 Initial Form 27 Document #: 403593271

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: 329599	API #: _____	County Name: WELD
Facility Name: WATKINS-64N64W 12NESE	Latitude: 40.325527	Longitude: -104.491837	
** correct Lat/Long if needed: Latitude: 40.326455		Longitude: -104.489826	
QtrQtr: NESE	Sec: 12	Twp: 4N	Range: 64W Meridian: 6 Sensitive Area? Yes
Facility Type: SPILL OR RELEASE	Facility ID: 489361	API #: _____	County Name: WELD
Facility Name: Watkins 12-09	Latitude: 40.326448	Longitude: -104.489940	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NESE	Sec: 12	Twp: 4N	Range: 64W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SW _____

Most Sensitive Adjacent Land Use Cropland _____

Is domestic water well within 1/4 mile? No _____

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

Riverine 0.24mi NNE Holding Pond 0.21mi SE
Farming Structure 0.14/0.15/.16mi E, 0.19/0.20/0.22mi NW
Residential Structure 0.19mi NW

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
Yes	GROUNDWATER	Refer to ECMC Document #404285338	Lab Analysis and Field Screening
Yes	SOILS	Refer to ECMC Document #404285338	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 WATKINS T4N-R64W-S12 L01 Facility and Tank Battery location.

On 04/17/2024, the tank battery was decommissioned in accordance with ECMC rules. Laboratory soil samples were collected from the partially-buried produced water vessel excavation (FS01@3') and field screening samples were taken from the N, E, S, & W sidewalls (SS01 through SS04). The screening sample with the highest PID (SS01@1.5') was collected for laboratory analysis from the N sidewall. Lab samples were also collected beneath the above ground storage tank (AST01@0.5') and beneath the the separator risers for the dumpline (SEP01-DL@3') and the flowline (SEP01-FL@3'). Additionally, field screening samples were collected beneath the flare (FLARE01@0.5'), meter house (MH01@0.5'), and automated solar panel (AUTO01@0.5').

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):

Soils were collected as described in the Initial Action Summary of this Supplemental Form 27. 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):

Groundwater was encountered during excavation activities at approximately 10 feet bgs. One groundwater sample (GW01) was collected and submitted for analysis of BTEX, naphthalene, 1,2,4-TMB, 1,3,5-TMB, TDS, chloride, and sulfate. Monitoring wells will be installed to delineate the dissolved-phase hydrocarbon exceedances.

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 and field screening at the tank battery (TB) was performed during abandonment activities. A historical release was discovered near the TB during the decommissioning of the associated Watkins 12-09 flowline(REM #32547) at sample location FLR01-S. Due to the proximity of the release to the TB, Noble proposed to move the reporting of spill ID (489361) and all future remediation for soil sample FLR01-S to the Watkins 12-9 TB remediation project (REM #32623) in Doc. #404172773. In March 2025, initial excavation activities commenced at the TB and hydrocarbon impacts were delineated around the excavation. A detailed summary of decommissioning activities, March 2025 delineation, and excavation activities was attached Doc. #404172773 which is in-process and pending approval.

A summary of final excavation activities including field notes, site photos, figures, and laboratory analytical results, was attached to ECMC Doc. #404285338, which is in process and pending approval.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 63

Number of soil samples exceeding 915-1 28

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

Approximate areal extent (square feet) 2800

NA / ND

-- Highest concentration of TPH (mg/kg) 140

-- Highest concentration of SAR 23

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 12

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

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 4/16/24, 3 background soil samples were collected from one discrete location (BG01) near the tank battery depths ranging between 0.5 ft and 3 ft below ground surface (bgs) and analyzed for metals in soil per ECMC Table 915-1 and pH. Due to the proximity to the excavation extent, these samples are being excluded from the background data set.

On 1/29/25, 4 background soil samples were collected from two discrete locations (BKG01 & BKG02) under the associated Watkins 12-09 flowline (REM #32547) at depths of 2 ft and 4 ft bgs and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron.

The maximum background concentration for pH and SAR was observed to be 7.83 and 2.76. The maximum background concentration with a 1.25x multiplier for arsenic and barium was calculated to be 2.38 mg/kg and 51.0 mg/kg. Based on the results, pH, SAR, boron, arsenic, barium, and/or cadmium remain in exceedance of ECMC standards and backgrounds in 35 soil sample locations on site.

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 site investigation will be conducted to install groundwater monitoring wells. Up to twelve (12) groundwater monitoring wells will be advanced within and surrounding the former excavation extent to evaluate and delineate dissolved-phase hydrocarbon impacts at this location. Volatile organic compound (VOC) concentrations using a photoionization detector (PID) and lithologic descriptions will be recorded for each borehole. If hydrocarbon impacts are encountered, soil samples will be collected from the interval exhibiting the highest PID response and the clean terminus of the boring and submitted for analysis of the full Table 915-1 suite. Additionally, background soil samples will be collected from monitoring well boreholes sufficiently away from historical oil and gas infrastructure and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. The proposed monitoring well location map is attached to ECMC document number 404285338, which is still in process and pending at the time of this submittal.

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.

On 1/30/25, a historical release was discovered near the tank battery during the decommissioning of the associated Watkins 12-9 flowline (REM #32547) at soil sample location FLR01-S. Due to the proximity of the release to the tank battery, Noble proposed to move the reporting of spill ID (489361) and all future remediation for soil sample FLR01-S to the Watkins 12-9 tank battery remediation project (REM #32623) in ECMC Document #404172773, which is currently in process and pending review.

Between 3/20/25 and 6/16/25, excavation activities were completed in the vicinity of the tank battery pad. Approximately 3,700 CY of hydrocarbon impacted material were removed from site and transported to Waste Management (WM) Buffalo Ridge and WM-Ault landfills and disposed of under Noble waste manifests. Groundwater was encountered within the excavation at approximately 10 ft bgs. Groundwater recovery operations were conducted concurrently with excavation activities and approximately 2,146 barrels of groundwater was removed and transported to Republic, NGL C3, and NGL C1 disposal facilities under Noble waste manifests.

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 4/17/24, tank battery decommissioning activities were completed. Analytical results indicated that organic compound concentrations were in compliance with ECMC standards in all samples collected.

On 1/30/25, a historical release was discovered near the tank battery during the decommissioning of the associated Watkins 12-9 flowline (REM #32547) at soil sample location FLR01-S.

On 3/20, and 3/21/25, excavation activities were initiated in the vicinity of the former tank battery pad. Excavation activities were put on pause due to safety concerns and on 3/24/25, four test pits (TP01-TP04) were advanced to approximately 11 ft bgs to the north and west of the excavation to delineate hydrocarbon impacts.

Excavation activities were re-initiated on 5/9/25. Between 3/20, and 6/16/25, 68 soil samples (SS01-SS43 & SS46-SS70) were collected from the base and sidewalls of the excavation and submitted for analysis of the full Table 915-1 suite. Analytical results indicated that organic compound concentrations were in compliance with ECMC standards in all samples collected from the final excavation extent. However, pH, SAR, boron, arsenic, barium, and/or cadmium remain in exceedance of ECMC standards and background concentrations in 35 soil sample locations on site. Background soil samples will be collected from monitoring well boreholes sufficiently away from historical oil and gas infrastructure and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron to continue to assess inorganic and metals concentrations in native material on site.

Following monitoring well installation activities and the return of groundwater monitoring analytical results, a remediation strategy will be determined for this location.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes _____ Excavate and offsite disposal

_____ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) _____ 3700

_____ 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.

On March 20, 2025, groundwater was encountered during excavation activities at approximately 10 ft bgs. As such, one groundwater sample (GW01) was collected and submitted for laboratory analysis of BTEX, naphthalene, 1,2,4-TMB, 1,3,5-TMB, TDS, chloride, and sulfate. Analytical results indicated that organic compound concentrations were in exceedance of ECMC standards.

Based on the groundwater analytical data collected during source mass removal activities, Noble will conduct quarterly groundwater monitoring at the 12 proposed monitoring wells until closure criteria are met. Groundwater samples will be submitted for laboratory analysis of BTEX, naphthalene, 1,2,4-TMB, and 1,3,5-TMB by EPA Method 8260B, chloride and sulfate anions by EPA Method 300.0 and TDS by Method SM 2540C.

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 Fourth Quarter 2025 - 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? Yes

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

No beneficial use.

Volume of E&P Waste (solid) in cubic yards 3700

E&P waste (solid) description Hydrocarbon impacted soil

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: Buffalo Ridge Waste Management and Waste Management-Ault

Volume of E&P Waste (liquid) in barrels 2146

E&P waste (liquid) description Groundwater

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: Republic, NGL C3, and NGL C1 Disposal Facilities

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. 04/17/2024

Proposed date of completion of Reclamation. 04/21/2027

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. 10/17/2023

Actual Spill or Release date, or date of discovery. 01/30/2025

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/17/2024

Proposed site investigation commencement. 10/21/2025

Proposed completion of site investigation. 04/21/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/21/2026

Proposed date of completion of Remediation. 10/21/2026

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 updated based on the completion of source mass removal activities and the necessity of four consecutive quarters of compliant groundwater monitoring results following the installation of the groundwater monitoring well network. Monitoring wells will be installed following the approval of ECMC Document Number 404285338.

OPERATOR COMMENT

This Supplemental Form 27 is being submitted as a Fourth Quarter 2025 timeline update for the remedial excavation activities at the former Watkins 12-09 tank battery location.

A detailed summary of tank battery decommissioning activities, and March 2025 delineation and excavation activities are attached ECMC Document No. 404172773, which is currently in process and pending review at the time of this submittal. ECMC Document No. 404172773 also proposes to move the reporting of spill ID (489361) and all future remediation for soil sample FLR01-S to the Watkins 12-9 tank battery remediation project (REM #32623). The aforementioned Form also addresses the previously denied Forms (Document No.'s 403943424, 404045169, and 404143617) and summarizes the attached encrypted laboratory reports.

A summary of final excavation activities including field notes, site photos, figures, and laboratory analytical results, was attached to ECMC Doc. #404285338 which is in-process and pending approval at the time of this submittal.

On March 20, 2025, groundwater was encountered during excavation activities at approximately 10 ft bgs. As such, one groundwater sample (GW01) was collected and submitted for laboratory analysis of BTEX, naphthalene, 1,2,4-TMB, 1,3,5 TMB, TDS, chloride, and sulfate. Analytical results indicated that groundwater constituents were above the applicable Table 915-1 standards.

Based on the results, up to twelve (12) groundwater monitoring wells will be advanced within and surrounding the former excavation extent to evaluate and delineate dissolved-phase hydrocarbon impacts at this location. Volatile organic compound (VOC) concentrations using a photoionization detector (PID) and lithologic descriptions will be recorded for each borehole. If hydrocarbon impacts are encountered, soil samples will be collected from the interval exhibiting the highest PID response and the clean terminus of the boring and submitted for analysis of the full Table 915-1 suite. Additionally, background soil samples will be collected from monitoring well boreholes sufficiently away from historical oil and gas infrastructure and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. The proposed monitoring well location map is attached to ECMC document number 404285338, which is still in process and pending at the time of this submittal. Monitoring wells will be installed following the approval of ECMC Document Number 404285338.

Pursuant to Rule 913.e, Supplemental Form 27s will be submitted on a quarterly schedule to provide updates and progress of the remediation until closure criteria is met.

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

Signed: Bronlyn Bates

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: 32623

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

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Total Attach: 0 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)