

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404417940

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 #: 30722 Initial Form 27 Document #: 403464005

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: 329913	API #: _____	County Name: WELD
Facility Name: SPOMER-65N66W 32SESE	Latitude: 40.350710	Longitude: -104.796440	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SESE	Sec: 32	Twp: 5N	Range: 66W Meridian: 6 Sensitive Area? Yes
Facility Type: TANK BATTERY	Facility ID: 488299	API #: _____	County Name: WELD
Facility Name: SPOMERT5N-R66W-S32 L02	Latitude: 40.350072	Longitude: -104.795908	
** correct Lat/Long if needed: Latitude: 40.350234		Longitude: -104.795704	
QtrQtr: SESE	Sec: 32	Twp: 5N	Range: 66W Meridian: 6 Sensitive Area? Yes

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	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.

Pursuant to ECMC Rule 911, a site investigation was conducted during decommissioning at the SPOMER-65N66W 32SESE (AKA Spomer T5NR66WS32 L02) Facility and Tank Battery location. The tank battery was decommissioned on 01/09/25 in accordance with ECMC rules. Laboratory soil samples were collected from the partially-buried produced water vault excavation base (PWV01-B@4') and N, W, S, & E sidewalls (PVW01-N@2', PWV01-W@2', PWV01-E@2', PVW01-S@2') and from beneath the above-ground storage tank (AST01@0-6"). Laboratory samples were also collected beneath the separator risers at the dump line (SEP01-DL@3') and at the flowline (SEP01-FL@3'). Field screening samples were collected from beneath the flare location (FLARE01@0-6") and meter house (MH01@0-6"). Due to field indicators observed during decommissioning (odor and elevated volatile organic compound reading: 138.0 ppm), sample AST01@0-6" was reported as a potential historic release. Groundwater was not encountered during initial decommissioning activities.

Laboratory analytical results indicated that organic constituents 1,2,4-trimethylbenzene (TMB) and 1,3,5-TMB, were detected at sample location AST01@0-6" in exceedance of ECMC Table 915-1 regulatory standards. This was assigned Spill ID 489218 under Initial Form 19 Doc # 404054593.

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 the Initial Form 27 # Doc 403464005 because soil samples were submitted for laboratory analysis from all sidewalls of the produced water vault (PWV) excavation (PVW01-N, PWV01-W, PWV01-E', PVW01-S) in addition to the PWV base (PWV-01-B). 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 1,3,5TMB 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):

Visual inspection at the tank battery area occurred during decommissioning activities. Field personnel field screened all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling was required. A detailed summary of the tank battery decommissioning activities, including field notes, site photos, figures, and laboratory analytical results, was attached to a previous Form 27 (ECMC Document # 404054533).

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 5
Number of soil samples exceeding 915-1 0
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 0

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 0.259
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 0

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 01/09/25, five background soil samples were collected from one discrete location (BKG01) and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. During Site Investigation activities on 06/19/25, fifteen background soil samples were collected from five discrete locations (BKG02-BKG06) 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 to 5 feet below ground surface (ft bgs). The maximum background concentration for pH was observed to be 8.36. The maximum background concentrations with a 1.25x multiplier applied for arsenic, lead, and selenium were calculated to be 28.3 mg/kg, 31.6 mg/kg, and 6.5 mg/kg, respectively. All arsenic, lead, and selenium 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?

Following the 2Q25 site investigation, analytical results indicate that pH concentrations exceeding regulatory limits and background levels persist in soil sample locations PWV01-B@4', PWV01-E@2', PWV01-N@2', PWV01-S@2', and SEP01-FL@3'. A supplemental site investigation (SSI) will be conducted to collect additional background samples to determine if elevated pH concentrations can be attributed to native soil conditions at the site. Background samples will be submitted for Table 915-1 metals, boron, pH, SAR, and EC. Soil boring locations are shown in the proposed SSI map attached to this Form 27. The SSI 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? Yes

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

On 10/16/25, the organic exceedances identified at the AST01@0-6" location were addressed through remedial excavation. A total of five confirmation soil samples were collected from the sidewalls and base of the excavation, with depths ranging between 2 to 3 feet below ground surface (ft. bgs), and analyzed for the full Table 915-1 analytical suite. In total, approximately 20 cubic yards of impacted soil was excavated and transported off-site for disposal under Operator waste manifests at Waste Management's Buffalo Ridge Landfill. Groundwater was not encountered during remedial excavation activities. The analytical results for the 3Q25 remedial excavation indicate that the organic exceedances identified during decommissioning at sample location AST01@0-6" were successfully removed.

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.

A site investigation was conducted on 6/19/25 to assess native soil conditions at the site. Fifteen background soil samples were collected from five discrete locations (BKG02-BKG06) and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. Based on the analytical results, all arsenic, lead, and selenium concentrations collected during decommissioning and remedial excavation activities were below 1.25x maximum background levels.

Following the 2Q25 site investigation, analytical results indicate that pH concentrations exceeding regulatory limits and background levels persist in soil sample locations PWV01-B@4', PWV01-E@2', PWV01-N@2', PWV01-S@2', and SEP01-FL@3'. A supplemental site investigation (SSI) will be conducted to collect additional background samples to determine if elevated pH concentrations can be attributed to native soil conditions at the site. Background samples will be submitted for Table 915-1 metals, boron, pH, SAR, and EC. Soil boring locations are shown in the proposed SSI map attached to this Form 27. The SSI will be completed in accordance with the proposed implementation schedule, and the results will be submitted on a subsequent Form 27.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes _____ Excavate and offsite disposal

_____ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) _____ 20

_____ 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 the initial site decommissioning, site assessment or remedial excavation activities.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

Quarterly Semi-Annually Annually Other

Request Alternative Reporting Schedule:

Semi-Annually Annually Other

Rule 913.e:

After initial approval of a Form 27, the Operator will provide quarterly update reports in a Supplemental Form 27 to document progress of site investigation and remediation, unless an alternative reporting schedule has been requested by the Operator and approved by the Director. The Director may request a more frequent reporting schedule based on site-specific conditions.

Report Type: Groundwater Monitoring Land Treatment Progress Report O&M Report

Other Supplemental Source Mass Removal Report & 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? 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 _____ 20

E&P waste (solid) description hydrocarbon impacted soil

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: Waste Management Buffalo Ridge Landfill

Volume of E&P Waste (liquid) in barrels _____ 0

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. 01/09/2025

Proposed date of completion of Reclamation. 05/26/2027

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. 07/06/2023

Actual Spill or Release date, or date of discovery. 01/09/2025

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/09/2025

Proposed site investigation commencement. 05/26/2026

Proposed completion of site investigation. 05/26/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 05/26/2026

Proposed date of completion of Remediation. 11/26/2026

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 4Q25 remedial excavation at the Spomer-65N66W 32SESE Tank Battery and the necessity for additional supplemental site investigation (SSI) activities. The SSI proposed in the Site Investigation Report is tentatively scheduled to commence 05/26/26. The ECMC will be updated with any changes to the implementation schedule in a subsequent Form 27.

OPERATOR COMMENT

This Form 27 is being submitted to include the remedial excavation activity results for the SPOMER-65N66W 32SESE Tank Battery (REM #30722) location and to propose additional site investigation activities.

On 10/16/25, the organic exceedances identified at the AST01@0-6" location were addressed through remedial excavation. A total of five confirmation soil samples were collected from the sidewalls and base of the excavation, with depths ranging between 2 to 3 feet below ground surface (ft. bgs). Soil samples were analyzed for the full Table 915-1 analytical suite. In total, approximately 20 cubic yards of impacted soil was excavated and transported off-site for disposal under Operator waste manifests at Waste Management's Buffalo Ridge Landfill. Groundwater was not encountered during remedial excavation activities. The analytical results for the 3Q25 remedial excavation indicate that the organic exceedances identified during decommissioning at sample location AST01@0-6" were successfully removed.

On 01/09/25, five background soil samples were collected from one discrete location (BKG01) and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. A site investigation was conducted on 6/19/25 to assess native soil conditions at the site, during which fifteen additional background soil samples were collected from five discrete locations (BKG02-BKG06) 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 to 5 feet below ground surface (ft bgs). The maximum background concentration for pH was observed to be 8.36. The maximum background concentrations with a 1.25x multiplier applied for arsenic, lead, and selenium were calculated to be 28.3 mg/kg, 31.6 mg/kg, and 6.5 mg/kg, respectively. All arsenic, lead, and selenium concentrations observed during decommissioning and remedial excavation activities were below 1.25x maximum background levels.

Following the 2Q25 site investigation, analytical results indicate that pH concentrations exceeding regulatory limits and background levels persist in soil sample locations PWV01-B@4', PWV01-E@2', PWV01-N@2', PWV01-S@2', and SEP01-FL@3'. A supplemental site investigation (SSI) will be conducted to collect additional background samples to determine if elevated pH concentrations can be attributed to native soil conditions at the site. Background samples will be submitted for Table 915-1 metals, boron, pH, SAR, and EC. Soil boring locations are shown in the proposed SSI map attached to this Form 27. The SSI will be completed in accordance with the proposed implementation schedule, and the results will be submitted on a subsequent Form 27.

Pursuant to Rule 913.e, quarterly reporting will be conducted until closure criteria are achieved for the remediation project. The results of the supplemental site investigation 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: Lo Blanchard

Title: Reg. Reporting Analyst

Submit Date: _____

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: _____

Date: _____

Remediation Project Number: 30722

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**

404436967	LABORATORY ANALYTICAL REPORT
404438036	SITE INVESTIGATION REPORT
404438088	SITE INVESTIGATION PLAN

Total Attach: 3 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)