

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404218573
Receive Date:
07/30/2025
Report taken by:
Chris Sanchez

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

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 26899 Initial Form 27 Document #: 403292062

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: WELL	Facility ID: _____	API #: 123-24129	County Name: WELD
Facility Name: Sater USX CC 19-23	Latitude: 40.294100	Longitude: -104.475800	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWSE	Sec: 19	Twp: 4N	Range: 63W Meridian: 6 Sensitive Area? Yes
Facility Type: LOCATION	Facility ID: 306177	API #: _____	County Name: WELD
Facility Name: SATER USX CC-64N63W 19NWSE	Latitude: 40.294100	Longitude: -104.475800	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWSE	Sec: 19	Twp: 4N	Range: 63W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE Facility ID: 490446 API #: _____ County Name: WELD
Facility Name: Sater USX CC 19-09,10,15,16,23 Latitude: 40.293838 Longitude: -104.475634
** correct Lat/Long if needed: Latitude: _____ Longitude: _____
QtrQtr: SESE Sec: 19 Twp: 4N Range: 63W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE Facility ID: 490447 API #: _____ County Name: WELD
Facility Name: Sater USX CC-64N63W 19NWSE Latitude: 40.293687 Longitude: -104.475848
** correct Lat/Long if needed: Latitude: _____ Longitude: _____
QtrQtr: SWSE Sec: 19 Twp: 4N Range: 63W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

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

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

Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

Within Pronghorn Winter Concentration Area

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 tables and figures	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.

Pursuant to ECMC Rule 911 a site investigation was conducted pertaining to the SATER USX CC19-23 wellhead cut and cap and flowline removal. Approximately 101' of flowline was removed. The wellhead was cut and capped per ECMC rules. Additionally, soil samples were collected at any points of material change and/or hammer unions, directional changes, as well as at the bell holes on either side of a waterway, AS APPLICABLE to abandonment type.

Tank battery decommissioning was conducted pursuant to ECMC Rule 911 at the SATER CC 19-9,10,15,16,23 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):

A grab soil sample was collected at the base of the excavation or the area showing the highest degree of impact during field screening activities at the wellhead excavation. Additionally, soil samples were collected at any points of material change and/or hammer unions, directional changes, as well as at the bell holes on either side of a waterway, AS APPLICABLE to abandonment type. A grab confirmation soil sample was collected at the wellhead excavation. Grab confirmation soil samples were collected from the produced water vessel(s) excavation, beneath the ground oil tank(s), and at the risers for the flowline(s) and dumpline(s) of any separator(s). Soil samples were analyzed by a certified laboratory for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons), organic compounds in soil per ECMC Table 915-1, and EC, SAR, pH, 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, grab groundwater samples 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):

Visual inspection of the wellhead, flowline, and tank battery areas 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 detailed summary of decommissioning activities, including field notes, site photos, figures, and laboratory analytical results, was attached to ECMC Document Nos. 403498915 & 403673040.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 10
Number of soil samples exceeding 915-1 6
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 600

NA / ND

-- Highest concentration of TPH (mg/kg) 201.4
-- Highest concentration of SAR 2.81
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 7

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?

During Site Investigation activities on 05/02/2025, twenty background soil samples were collected from five discrete locations (BKG01-BKG05) adjacent to 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 1-2 to 6-7 feet below ground surface (ft bgs). The maximum background concentrations for pH and EC were observed to be 8.07 and 0.45 mmhos/cm, respectively. The maximum background concentrations with a 1.25x multiplier applied for arsenic, barium, chromium (VI), and lead were calculated to be 2.8 mg/kg, 130 mg/kg, 1.8 mg/kg, and 7.1 mg/kg, respectively. All barium and chromium (VI) concentrations observed during SSI activities were below background levels. However, EC, arsenic, lead, and selenium remain in exceedance of ECMC regulatory standards in five soil sample locations.

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?

Based on the results of the May 2, 2025 supplemental site investigation (SSI) activities, remedial excavation activities will be conducted to the remove hydrocarbon impacted material in the vicinity of soil samples SB01@1' and SB09@4.5-5.5'. Soil samples will be collected from the base and sidewalls of the excavation extents and submitted for analysis of the full ECMC Table 915-1 suite.

Concurrently with the remedial excavation activities, additional background soil samples will be collected to determine if elevated EC, arsenic, lead, and selenium are attributed to native soil conditions at the site. Proposed background soil sample locations are shown on the attached proposed site investigation plan.

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.

The naphthalene, 1-methyl-naphthalene, and 2-methyl-naphthalene exceedances observed at sample location SB01@1' and benzo(a)anthracene exceedance observed at sample location SB09@4.5-5.5' will be removed through remedial excavations.

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 supplemental site investigation (SSI) was conducted on 5/2/2025 to confirm Table 915-1 compliance at soil sample locations WH-FS-01@6', FS01@6', SS01@2.5', AST01@0.5', AST02@0.5', SEP01-DL@3', SEP01-FL@4.5', SEP02-DL@3', SEP02-FL@4.5', SEP03-FL@4.5'. Additionally, background samples (BKG01-BKG05) were collected to assess native soil conditions at the site.

Analytical results from the May 2, 2025 SSI activities indicated that organic compound concentrations were in exceedance of the applicable ECMC regulatory standards in soil samples SB01@1' and SB09@4.5-5.5'. Based on the results, remedial excavation activities will be conducted to remove the hydrocarbon impacted material in the vicinity of the aforementioned soil sample locations. Soil samples will be collected from the base and sidewalls of the excavation extents and submitted for analysis of the full ECMC Table 915-1 suite. Concurrently with the remedial excavation activities, additional background soil samples will be collected to determine if elevated pH, EC, arsenic, lead, and selenium are attributed to native soil conditions at the site. Proposed background soil sample locations are shown on the attached proposed site investigation plan.

Soil Remediation Summary

In Situ

Ex Situ

- _____ Bioremediation (or enhanced bioremediation)
- _____ Chemical oxidation
- _____ Air sparge / Soil vapor extraction
- _____ Natural Attenuation
- _____ Other _____

- _____ Excavate and offsite disposal
- _____ 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 or supplemental site investigation 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 SSIS, SSMRP, SSIP

Adequacy of Operator's General Liability Insurance and Financial Assurance

Describe the adequacy of the Operator's general liability insurance and Financial Assurance to fully address the anticipated costs of Remediation, including the estimated remaining cost for this project (below).

If this information has been provided on a Form 27 within the last 12 months, provide the Document Number of that form.

Noble intends to directly address the costs of remediation at the locations as part of our asset retirement obligation process and operations. Noble has general liability insurance (policies MWZZ316714 and MWZX316724) and financial assurance in compliance with ECMC rules. Records are available on the ECMC's website. The cost for remediation is an estimate only, costs may change upwards or downward based on site-specific information. Noble makes no representation or guarantees as to the accuracy of the estimate.

Operator anticipates the remaining cost for this project to be: \$ 50000

WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? No

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

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

E&P waste (solid) description _____

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: _____

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

E&P waste (liquid) description _____

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: _____

REMEDIATION COMPLETION REPORT

REMEDIATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? No

If YES:

Compliant with Rule 913.h.(1).

Compliant with Rule 913.h.(2).

Compliant with Rule 913.h.(3).

Do all soils meet Table 915-1 standards? _____

Does the previous reply indicate consideration of background concentrations? _____

Does Groundwater meet Table 915-1 standards? _____

Is additional groundwater monitoring to be conducted? _____

Operator shall comply with the ECMC 1000-Series Reclamation Requirements for all impacted and disturbed areas.

RECLAMATION PLAN

RECLAMATION PLANNING

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing.

Reclamation will be in accordance with ECMC 1000 Series Rules.

Is the described reclamation complete? Yes _____

Does the reclamation described herein constitute interim or final reclamation of the Oil and Gas Location?

Interim Final

Did the Surface Owner provide the seed mix? _____

If YES, does the seed mix comply with local soil conservation district recommendations? _____

Did the local soil conservation district provide the seed mix? _____

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 03/31/2023

Proposed date of completion of Reclamation. 10/22/2027

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. 12/08/2022

Actual Spill or Release date, or date of discovery. 06/04/2025

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/31/2023

Proposed site investigation commencement. 07/22/2025

Proposed completion of site investigation. 04/22/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/22/2026

Proposed date of completion of Remediation. 04/22/2027

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

Change from approved implementation schedule per Rule 913.d.(2).

Basis for change in implementation schedule:

The implementation schedule has been changed due to the completion of the May 2025 supplemental site investigation (SSI) and necessity for remedial excavation activities and additional background soil sampling. The proposed remedial excavation and additional background soil sampling will be completed following the approval of this form.

OPERATOR COMMENT

This Form 27 is being submitted to include the May 2, 2025 supplemental site investigation (SSI) results and propose source removal activities for the Sater USX CC-64N63W 19NWSE Tank Battery.

A supplemental site investigation (SSI) was conducted on 5/2/2025 to confirm Table 915-1 compliance at soil sample locations WH-FS-01@6', FS01@6', SS01@2.5', AST01@0.5', AST02@0.5', SEP01-DL@3', SEP01-FL@4.5', SEP02-DL@3', SEP02-FL@4.5', SEP03-FL@4.5'. Additionally, twenty background soil samples were collected from five discrete locations (BKG01-BKG05) adjacent to 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 1-2 to 6-7 feet below ground surface (ft bgs). The maximum background concentrations for pH and EC were observed to be 8.07 and 0.45 mmhos/cm, respectively. The maximum background concentrations with a 1.25x multiplier applied for metals arsenic, barium, chromium (VI), and lead were calculated to be 2.8 mg/kg, 130 mg/kg, 1.8 mg/kg, and 7.1 mg/kg, respectively. All barium and chromium (VI) concentrations observed during SSI activities were below background levels. However, pH, EC, arsenic, lead, and selenium remain in exceedance of ECMC regulatory standards in five soil sample locations.

Analytical results from the May 2, 2025 SSI activities indicated that organic compound concentrations were in exceedance of the applicable ECMC regulatory standards in soil samples SB01@1' and SB09@4.5-5.5'. Based on the results, remedial excavation activities will be conducted to remove the hydrocarbon impacted material in the vicinity of the aforementioned soil sample locations. Soil samples will be collected from the base and sidewalls of the excavation extents and submitted for analysis of the full ECMC Table 915-1 suite. Concurrently with the remedial excavation activities, additional background soil samples will be collected to determine if elevated EC, arsenic, lead, and selenium are attributed to native soil conditions at the site. Proposed background soil sample locations are shown on the attached proposed site investigation plan.

The proposed remedial excavation and additional background sampling will be completed following the approval of this form and the results will be summarized on a subsequent Supplemental Form 27.

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: David Vigil

Title: Environmental Consultant

Submit Date: 07/30/2025

Email: dvigil@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: Chris Sanchez

Date: 03/24/2026

Remediation Project Number: 26899

COA Type

Description

	<p>This Form 27-S Document No. 404218573 received on 7/30/2025 was the last quarterly report received for Rem Project # 26899.</p> <p>In accordance with Rule 913.e.(3), Operator will adopt a quarterly reporting schedule (every 90 days).</p>
	<p>Operator shall define the vertical and lateral extent of impacts to soil. Additional sampling is required to fully delineate the vertical and lateral impacts to soil</p> <p>Operator shall collect confirmation soil samples for Full Table 915-1 Contaminants of Concern</p>
	<p>Operator shall continue Quarterly Reporting until the Site Assessment is completed, and the remediation area demonstrates Compliance with Full Table 915-1 Standards.</p>
	<p>Per Rule 912.a.(1-2): Operators will investigate, clean up, and document impacts resulting from Spills and Releases as soon as the impacts are discovered. Operator shall not delay execution of remedial or investigative actions while waiting for ECMC approval and may request expedited review if necessary.</p> <p>Operator shall conduct work in compliance with approved workplans and the 900 Series Rules. Operator shall provide a replacement form documenting investigation and clean up of these impacts. All ongoing/unaddressed comments/COAs from previous Forms remain applicable.</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.

Att Doc Num	Name
404218573	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
404290199	LABORATORY ANALYTICAL REPORT
404296889	SITE INVESTIGATION REPORT
404592715	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 4 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)