FORM 27 Rev 5/22

State of Colorado
Energy & Carbon Management Commission

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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 INFORMATON

Name of Operator: NOBLE ENERGY INC Operator No: 100322
Address: 1099 18TH STREET SUITE 1500
City: DENVER State: CO Zip: 80202
Contact Person: Dan Peterson Email: danpeterson@chevron.com

Phone Numbers
Phone: (970) 730-7281
Mobile: ( )

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 37325 Initial Form 27 Document #: 403928292

PURPOSE INFORMATION

- [ ] Rule 913.c.(1): Pit or Cuttings Trench closure.
- [X] 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.
- [X] 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

No Multiple Facilities

Facility Type: LOCATION Facility ID: 422215 API #: County Name: WELD
Facility Name: GARCIA USX AB 35-10D TANK Latitude: 40.529490 Longitude: -104.508010
** correct Lat/Long if needed: Latitude: 40.529602 Longitude: -104.508006
QtrQtr: NESE Sec: 35 Twp: 7N 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? 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

Within Pronghorn Winter Concentration Area HPH
Within Mule Deer Severe Winter Range HPH
Riverine 0.13mi N
Residential 0.03/0.09mi N
Farm Structure 0.02mi W, 0.03/0.04/0.06/0.08/0.12/0.13/0.14/0.15mi N, 0.05/0.08/0.14/0.15mi NE, 0.03/0.07/0.12/0.13mi E

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- [X] **E&P Waste**
  - [X] Produced Water
  - [X] Oil
  - [X] Condensate
  - [ ] Drilling Fluids
  - [ ] Drill Cuttings
- [ ] **Other E&P Waste**
  - [ ] Workover Fluids
  - [ ] Tank Bottoms
  - [ ] Pigging Waste
  - [ ] Rig Wash
  - [ ] Spent Filters
  - [ ] Pit Bottoms
  - [ ] Other (as described by EPA) _____
- [ ] **Non-E&P Waste** _____

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
UNDETERMINED	GROUNDWATER	NA	Lab analysis if encountered
Yes	SOILS	Refer to Tables and Figures	Lab Analysis 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 TORRES GARCIA USX T7N-R64W-S35 L01 Facility and Tank Battery location. An investigation related to the tank battery decommissioning was conducted on November 13, 2024 and November 19, 2024, the tank battery was decommissioned in accordance with ECMC rules. The on-site dump lines located between the separator and the tank batter were removed. Laboratory soil samples were collected from beneath the above ground storage tanks (AST01@0-6", AST02@0-6", AST03@0-6"), at the risers for the dumpline and flowline of any separator (SEP01DL@2.5, SEP02-DL@2.5, SEP02-FL@1', SEP01-FL@0-6"), and produced water vault (PWV01-B@4', PWV01-W@2.5', PWV02-B@4', PWV02-E@4'). All samples were field screed prior to lab analysis. Soil samples were field screened at the emission control devices (FLARE01@0-6") and Meterhouse (MH01@0-6").

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

[X] 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 and 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. All samples collected were analyzed by a certified laboratory using approved ECMC laboratory analysis methods.

Proposed Groundwater Sampling

[X] 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 samples 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 1,3,5-TMB 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 abandonment activities. Field personnel field screened all disturbed areas using visual and olfactory senses. Additionally, discrete soil samples were collected from the base of the excavation and excavation sidewall in areas most likely to be impacted and exhibiting the highest field screened VOC concentration. A detailed summary of decommissioning activities, including field notes, site photos, figures, and laboratory analytical results, is attached to this Form 27.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected: 11

Number of soil samples exceeeding 915-1: 8

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

Approximate areal extent (square feet): 800

NA / ND

-- Highest concentration of TPH (mg/kg): 63

-- Highest concentration of SAR: 1.82

BTEX > 915-1: No

Vertical Extent > 915-1 (in feet): 4

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?

[X] Were background samples collected as part of this site investigation?

Background soil samples were collected adjacent to the Garcia USX AB35-10D tank battery and adjacent to the Garcia USX AB35-10D flowline (REM# 37319, API # 05-123-33201) and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. Twenty background soil samples were collected from five distinct locations, labeled (BKG01 through BKG05) from depths ranging between 0 to 8 feet below ground surface (ft bgs). Background sample lithology between the site and background locations were observed to be well graded sands. The maximum background concentration for pH was observed to be 8.68. The maximum background concentrations with a 1.25x multiplier applied for arsenic, barium, and cadmium were calculated to be 11.98mg/kg, 360 mg/kg, and 0.470 mg/kg, respectively. All arsenic concentrations observed during decommissioning activities 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):

[X] Is further site investigation required?

A supplemental site investigation (SSI) will be completed to collect to vertically and horizontally delineate the pH, barium, and cadmium exceedances observed at sample locations AST01@0-6", AST02@0-6", AST03@0-6", SEP01-DL@2.5, SEP02-DL@2.5, SEP01-FL@0-6", PWV01-B@4', PWV02-B@4'. A proposed SSI map is attached to this Form 27. During the SSI, soil samples will be collected and analyzed for full ECMC Table 915-1 constituents. Concurrently with the SSI, six additional background samples (BKG06-BKG11) will be collected to determine if barium, cadmium and pH exceedances are attributed to native soil conditions at the site. A proposed background soil sample location map is attached to this Form 27. The SSI will be completed in accordance with the proposed implementation schedule, and the results of the SSI will be submitted on a subsequent Form 27.

REMEDIAL ACTION PLAN

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? No

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

No impacted material caused by oil and gas operations was identified at this time.

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.

The Site Investigation Report Section of this Form 27 proposes a Supplemental Site Investigation (SSI) to vertically and horizontally delineate the elevated barium, cadmium and pH concentrations observed during initial decommissioning activities at sample locations AST01@0-6", AST02@0-6", AST03@0-6", SEP01-DL@2.5, SEP02-DL@2.5, PWV01-B@4', PWV02-B@4'. Additional background samples (BKG06 through BKG11) will be collected to determine if elevated barium, cadmium and pH concentrations can be attributed to the site's native soil conditions. Additional SSI activities will be proposed (as applicable) on a future Form 27 if further investigation is required. Sampling will be conducted in accordance with the attached proposed site investigation map, and proposed sampling plan outlined in the Site Investigation Report section of this Form 27.

Soil Remediation Summary

☐ **In Situ**

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

_____ Other _____

☐ **Ex Situ**

_____ 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 initial decommissioning activities.

REMEDIATION PROGRESS UPDATE

PERIODIC REPORTING

Approved Reporting Schedule:

[X] 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

[X] Other Decommissioning Sample Summary & Supplemental Site Investigation Proposal

Adequacy of Operator's General Liability Insurance and Financial Assurance

Describe the adequacy of the Operator's general liability insurance and Financial Assurance to fully address the anticipated costs of Remediation, including the estimated remaining cost for this project (below).
If this information has been provided on a Form 27 within the last 12 months, provide the Document Number of that form.

Noble intends to directly address the costs of remediation at the locations as part of our asset retirement obligation process and operations. Noble has general liability insurance (policy MWZZ 316714) 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?

[X] 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. 11/13/2024

Proposed date of completion of Reclamation. 11/11/2026

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. 09/05/2024

Actual Spill or Release date, or date of discovery.

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/13/2024

Proposed site investigation commencement. 02/11/2025

Proposed completion of site investigation. 11/11/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 11/11/2025

Proposed date of completion of Remediation. 05/11/2026

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.

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

Basis for change in implementation schedule:

The implementation schedule has been changed due to the decommissioning of the Garcia USX AB35-10D Tank Battery and necessity for Supplemental Site Investigation activities adjacent to the Tank Battery. The proposed Supplemental Site Investigation will be completed following the approval of this form.

OPERATOR COMMENT

This Form 27 is being submitted to include the decommissioning results at the former Garcia USX AB35-10D Tank Battery location. This Form 27 also serves to propose a Supplemental Site Investigation (SSI) and Background Investigation.

A site investigation was conducted pursuant to ECMC Rule 911 at the TORRES GARCIA USX T7N-R64W-S35 L01 Facility and Tank Battery location. An investigation related to the tank battery decommissioning was conducted on November 13, 2024 and November 19, 2024, the tank battery was decommissioned in accordance with ECMC rules. The on-site dump lines located between the separator and the tank batter were removed. Laboratory soil samples were collected from beneath the above ground storage tanks (AST01@0-6", AST02@0-6", AST03@0-6"), at the risers for the dumpline and flowline of any separator (SEP01DL@2.5, SEP02-DL@2.5, SEP02-FL@1', SEP01-FL@0-6"), and produced water vault (PWV01-B@4', PWV01-W@2.5', PWV02-B@4', PWV02-E@4'). All samples were field screed prior to lab analysis. Soil samples were field screened at the emission control devices (FLARE01@0-6") and Meterhouse (MH01@0-6").

Background soil samples were collected adjacent to the Garcia USX AB35-10D tank battery and adjacent to the Garcia USX AB35-10D flowline (REM# 37319, API # 05-123-33201) and analyzed for metals in soil per ECMC Table 915-1, pH, SAR, EC, and boron. Twenty background soil samples were collected from five distinct locations, labeled (BKG01 through BKG05) from depths ranging between 0 to 8 feet below ground surface (ft bgs). Background sample lithology between the site and background locations were observed to be well graded sands. The maximum background concentration for pH was observed to be 8.68. The maximum background concentrations with a 1.25x multiplier applied for arsenic, barium, and cadmium were calculated to be 11.98mg/kg, 360 mg/kg, and 0.470 mg/kg, respectively. All arsenic concentrations observed during decommissioning activities were below background levels.

A supplemental site investigation (SSI) will be completed to collect to vertically and horizontally delineate the pH, barium, and cadmium exceedances observed at sample locations AST01@0-6", AST02@0-6", AST03@0-6", SEP01-DL@2.5, SEP02-DL@2.5, SEP01-FL@0-6", PWV01-B@4', PWV02-B@4'. A proposed SSI map is attached to this Form 27. During the SSI, soil samples will be collected and analyzed for full ECMC Table 915-1 constituents. Concurrently with the SSI, six additional background samples (BKG06-BKG11) will be collected to determine if barium, cadmium and pH exceedances are attributed to native soil conditions at the site. A proposed background soil sample location map is attached to this Form 27. The SSI will be completed in accordance with the proposed implementation schedule, and the results of the SSI will be submitted on a subsequent Form 27.

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: Brock Nelson

Title: Environmental Consultant

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: 37325

COA Type	Description
0 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
404080974	ANALYTICAL RESULTS
404080975	ANALYTICAL RESULTS
404089824	SITE INVESTIGATION REPORT
404089826	ANALYTICAL RESULTS
404089829	ANALYTICAL RESULTS
404089831	ANALYTICAL RESULTS
404089847	SITE INVESTIGATION PLAN
404089849	SITE INVESTIGATION PLAN

Total Attach: 8 Files

General Comments

User Group	Comment	Comment Date
		Stamp Upon Approval

Total: 0 comment(s)