FORM 27 Rev 5/22

State of Colorado
Energy & Carbon Management Commission

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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 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: RBUEUF27@chevron.com

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

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 31544 Initial Form 27 Document #: 403471446

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.
- [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: WELL Facility ID: API #: 123-31173 County Name: WELD
Facility Name: GUTTERSEN STATE CC 20-32D Latitude: 40.296220 Longitude: -104.469220
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: NWSW Sec: 20 Twp: 4N Range: 63W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

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

Well Within Pronghorn Winter Concentration Area HPH

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
No	GROUNDWATER	NA	Not encountered
No	SOILS	NA	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 pertaining to the GUTTERSEN STATE CC20-32D wellhead cut and cap and flowline removal. The wellhead was cut and capped per ECMC rules. Approximately 1327' of flowline was removed. Four (4) grab soil samples were collected at the wellhead excavation, flowline terminus at the wellhead, and flowline directional changes. Additionally, soil samples will be field screened at the N-E-S-W sides of the wellhead. One (1) grab soil sample was collected at the flowline terminus at the separator and reported under Rem. # 31580 (Form 27 Document Number 403656558). Soil samples were analyzed by a certified laboratory for the full extent of Table 915-1, including: 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.

Tasman Geosciences, Inc. (TASMAN) completed initial site investigation activities on 19 December 2023 that included the collection of five grab soil samples along the flowline. Samples were analyzed by a certified laboratory for the full extent of ECMC Table 915-1 analytes. One soil wellhead sample, WH-FS-01@6', collected by EAGLE exceeded the ECMC Table 915-1 Residential Soil Screening Level (SSL) for arsenic and was above Groundwater Protection SSLs for barium and selenium. One soil flowline sample FL01-A@2' exceeded the ECMC Table 915-1 regulatory standards for arsenic and pH; therefore, further delineation of these residual constituents was deemed necessary.

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):

On 24 September 2024, ERM advanced four wellhead delineation soil borings (31544-WH-01-N, 31544-WH-01-S, 31544-WH-01-E, and 31544-WH-01-W) within the Guttersen State CC #20-32D former operations boundary to delineate samples WH-FS-01@6' and FL01-A@2'. Samples were collected at 4-, 6-, and 8- feet below ground surface (bgs) at each boring location and analyzed for pH, arsenic, barium and selenium. Wellhead delineation borings exceed the ECMC Table 915-1 pH range of 6.0 to 8.3 standard units (SU) in nine of the 12 samples and the pH values range from 8.0 to 9.1 SUs. Wellhead delineation borings exceed the ECMC Table 915-1 Residential SSL arsenic value of 0.68 mg/kg in all 12 samples. Wellhead delineation borings do not exceed the ECMC Table 915-1 Residential SSL barium. Wellhead delineation samples do not exceed the ECMC Table 915-1 Residential SSL for selenium.

Proposed Groundwater Sampling

[ ] Will groundwater samples be collected as part of this investigation? (Number, analyses, and locations of samples):

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):

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected: 12
Number of soil samples exceeeding 915-1: 12
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: 4.56
BTEX > 915-1: No
Vertical Extent > 915-1 (in feet): 0

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?

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

Six background soil borings (BG-01 through BG-06) were advanced to evaluate arsenic, barium, lead, selenium and pH background concentrations from the non-impacted area of the Site. Samples were collected from the 2-feet bgs interval from all the background sampling locations to compare with the previous exceedance.

[ ] 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?

Four samples exceed the ECMC Table 915-1 Protection of Groundwater SSL for barium. When compared to the maximum barium result (45.5 mg/kg) of samples taken from the nearby background soil borings, multiplied by 1.25 (56.9 mg/kg), all 4 samples statistically exceed background concentrations. However, ERM reviewed historical documentation which indicates groundwater is not within 20-feet of the ground surface and comparison of analytical results to Groundwater Protection SSLs do not seem to be appropriate. The laboratory-reported values in soil samples taken from delineation borings around the Guttersen State CC #20-32D wellhead location for selenium were non-detect and therefore below any ECMC Table 915-1 values. No further assessment is recommended for arsenic and selenium at this Site. Further assessment is recommended of barium for on-Site and background samples from non-impacted portions of the Site related to Soil Reclamation in 1st Quarter 2025.

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 source was generated.

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.

NA

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.

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 Progress 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 (policy MWZZ 316714) and financial assurance in compliance with ECMC rules. Records are available on the ECMC's website.

Operator anticipates the remaining cost for this project to be: $ 1000

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? No

Does the previous reply indicate consideration of background concentrations?

Does Groundwater meet Table 915-1 standards? Yes

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. Residual pH will be confirmed as still present, and previous values will be laterally and vertically defined. If residual pH is observed and is delineated, a detailed reclamation plan will be provided in a Supplemental Form 27 as applicable to request closure with ECMC.

Is the described reclamation complete? No

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. 10/03/2023

Proposed date of completion of Reclamation. 10/03/2026

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. 06/29/2023

Actual Spill or Release date, or date of discovery.

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 10/03/2023

Proposed site investigation commencement. 09/01/2023

Proposed completion of site investigation. 07/31/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation.

Proposed date of completion of Remediation.

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:

OPERATOR COMMENT

The operator recommends no further assessment of arsenic and selenium at this Site. However, further assessment is recommended of barium for on-Site and background samples from non-impacted portions of the Site related to Soil Reclamation in 1st Quarter 2025.

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

Signed: Sahithi Rondla Title: Environmental Consultant

Submit Date: 01/06/2025 Email: cvxform27@ERM.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: 31544

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
404039791	FORM 27 DENIED
404039795	ANALYTICAL RESULTS
404048860	SITE INVESTIGATION REPORT
404066671	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 4 Files

General Comments

User Group	Comment	Comment Date
Environmental	ECMC has denied this Form 27 due to discrepancies in analytical data associated with the Remediation project. Operator will submit a replacement Form 27 for this project that includes the following components: A statement from the Operator indicating that this project is included in the data integrity review; A site-specific description describing any data anomalies in the project record; The original, correct laboratory analytical report as a stand-alone attachment; and A Form 19 Document ID as a Related Document, if necessary to report a Spill or Release.	01/22/2025

Total: 1 comment(s)