FORM 27 Rev 5/22

State of Colorado
Energy & Carbon Management Commission

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Document Number: 404045166
Receive Date: 01/10/2025
Report taken by: Krystal Heibel

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: Jason Davidson Email: RBUEUF27@chevron.com

Phone Numbers
Phone: (970) 939-1929
Mobile: ( )

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 30216 Initial Form 27 Document #: 403417577

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.
- [X] 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 #: 123-36782 County Name: WELD
Facility Name: BETHYL GW 29-12 Latitude: 40.629892 Longitude: -104.465929
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: NWSW Sec: 29 Twp: 8N Range: 63W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE Facility ID: 484956 API #: County Name: WELD
Facility Name: Bethyl GW 29-12 Latitude: 40.629892 Longitude: -104.465929
** correct Lat/Long if needed: Latitude: Longitude:
QtrQtr: NWSW Sec: 29 Twp: 8N Range: 63W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SC

Most Sensitive Adjacent Land Use Grassland

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 0.01mi W

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
Yes	SOILS	20'x20'x12'	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 BETHYL GW29-12 wellhead cut and cap. The wellhead was cut and capped per ECMC rules. Additionally, soil samples were field screened at the N-E-S-W sides of the wellhead.

Pursuant to ECMC Rule 911 a site investigation was conducted pertaining to the BETHYL GW29-12 flowline. Approximately 710' of flowline was abandoned in place. See ECMC Form 44 Doc # 403624203.

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):

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: 0

NA / ND

-- Highest concentration of TPH (mg/kg): 2228.6

Number of soil samples exceeeding 915-1 | -- | Highest concentration of SAR 0.526

Was the areal and vertical extent of soil contamination delineated? Yes | BTEX > 915-1 No

Approximate areal extent (square feet) 400 | Vertical Extent > 915-1 (in feet) 12

Groundwater

Number of groundwater samples collected 0 | Highest concentration of Benzene (µg/l)

Was extent of groundwater contaminated delineated? No | Highest concentration of Toluene (µg/l)

Depth to groundwater (below ground surface, in feet) | Highest concentration of Ethylbenzene (µg/l)

Number of groundwater monitoring wells installed | Highest concentration of Xylene (µg/l)

Number of groundwater samples exceeding 915-1 | 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?

☐ 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?

Verification soil samples will be collected to confirm the arsenic and/or barium concentrations in EX-SS-02 @ 11', EX-SS-03 @ 11', EX-SS-04 @ 11', EX-SS-06 @ 11', and EX-SS-07 @ 11'.
Additional background samples will be collected from soil of native/similar lithologic material not impacted by oil and gas activity to further compare arsenic and barium, as needed.

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.

Residual petroleum hydrocarbon impacts identified at the site were removed through excavation. Soil samples were collected for analysis of TPH C6-36, Table 915-1 organics in soil, arsenic, and barium, per supplemental Form 27 Doc. # 403655798. Soil samples were collected to confirm the vertical and lateral extents of the impacts following source removal.

Results of the excavation/confirmation sampling indicate that all current organic concentrations are in compliance with ECMC Table 915-1 regulatory limits. However, further evaluation of residual arsenic and barium appears warranted at this time.

Verification soil samples will be collected to confirm the arsenic and/or barium concentrations in EX-SS-02 @ 11', EX-SS-03 @ 11', EX-SS-04 @ 11', EX-SS-06 @ 11', and EX-SS-07 @ 11'. Additional background samples will be collected from soil of native/similar lithologic material not impacted by oil and gas activity to further compare arsenic and barium, as needed.

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.

Results of the excavation/confirmation sampling indicate that all current organic concentrations are in compliance with ECMC Table 915-1 regulatory limits. However, further evaluation of residual arsenic and barium appears warranted at this time.

Verification soil samples will be collected to confirm the arsenic and/or barium concentrations in EX-SS-02 @ 11', EX-SS-03 @ 11', EX-SS-04 @ 11', EX-SS-06 @ 11', and EX-SS-07 @ 11'. Additional background samples will be collected from soil of native/similar lithologic material not impacted by oil and gas activity to further compare arsenic and barium, as needed.

Site assessment activities to delineate residual metals and to determine if GSSLs are applicable may be proposed on a supplemental Form 27 as needed, following further background and verification sampling. NFA will be considered when soil concentrations are in compliance with ECMC Table915-1 standards.

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 the assessment.

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 Quarterly 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: $ 5000

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 220

E&P waste (solid) description E&P solid waste derived from excavation activities.

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility: Waste Management

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? 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 ECMC1000 Series Rules.

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. 08/01/2023

Proposed date of completion of Reclamation. 10/31/2029

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. 04/06/2023

Actual Spill or Release date, or date of discovery. 08/15/2023

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/01/2023

Proposed site investigation commencement. 07/01/2023

Proposed completion of site investigation. 06/30/2024

REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/01/2023

Proposed date of completion of Remediation. 10/31/2025

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:

Implementation schedule updated to reflect the schedule to complete the supplemental site investigation. The ECMC will be updated on a subsequent Form 27 with the results of the supplemental site investigation, or if the schedule is changed due to site access constraints.

OPERATOR COMMENT

This form serves as a quarterly update.

Per previous approved form (#403919734), verification soil samples will be collected to confirm the arsenic and/or barium concentrations in EX-SS-02 @ 11', EX-SS-03 @ 11', EX-SS-04 @ 11',
EX-SS-06 @ 11', and EX-SS-07 @ 11'. Additional background samples will be collected from soil of native/similar lithologic material not impacted by oil and gas activity to further compare arsenic and barium, as needed.

Scheduling is currently pending site access. The Operator is expecting to include the sampling report and analytical data with the next quarterly update.

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

Signed: William Schoff Title: Environmental Consultant

Submit Date: 01/10/2025 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: Krystal Heibel Date: 03/17/2025

Remediation Project Number: 30216

COA Type	Description
	ECMC has processed this form as an update; no analytical was attached thus approval of this form does not imply any agreement with comments on completion of site investigation. All ongoing/unaddressed comments/COAs from previous Forms remain applicable.

1 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
404045166	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 1 Files

General Comments

User Group	Comment	Comment Date
Environmental	"This form serves as a quarterly update. Per previous approved form (#403919734), verification soil samples will be collected to confirm the arsenic and/or barium concentrations in EX-SS-02 @ 11', EX-SS-03 @ 11', EX-SS-04 @ 11', EX-SS-06 @ 11', and EX-SS-07 @ 11'. Additional background samples will be collected from soil of native/similar lithologic material not impacted by oil and gas activity to further compare arsenic and barium, as needed. Scheduling is currently pending site access. The Operator is expecting to include the sampling report and analytical data with the next quarterly update."	03/17/2025

Total: 1 comment(s)