

State of Colorado
Energy & Carbon Management Commission

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Document Number:
403917457
Receive Date:
09/16/2024
Report taken by:
RICK ALLISON

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) 730-7281 |
| City: DENVER State: CO Zip: 80202 | | Mobile: () |
| Contact Person: Dan Peterson | Email: RBUEUF27@chevron.com | |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 21120 Initial Form 27 Document #: 402884092

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: 323456 | API #: _____ | County Name: WELD |
| Facility Name: WEBSTER-66N64W 28NESE | Latitude: 40.455325 | Longitude: -104.548839 | |
| ** correct Lat/Long if needed: Latitude: 40.455538 | | Longitude: -104.550408 | |
| QtrQtr: NESE | Sec: 28 | Twp: 6N | Range: 64W Meridian: 6 Sensitive Area? Yes |
| Facility Type: SPILL OR RELEASE | Facility ID: 482050 | API #: _____ | County Name: WELD |
| Facility Name: Wardlaw Webster T6N-R64W-S28 | Latitude: 40.455565 | Longitude: -104.550662 | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: NESE | Sec: 28 | Twp: 6N | Range: 64W Meridian: 6 Sensitive Area? Yes |

SITE CONDITIONS

General soil type - USCS Classifications CL

Most Sensitive Adjacent Land Use Prairie Land

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 0.02mi W
Freshwater Pond 0.11/0.12mi S, 0.11mi N
Freshwater Emergent Wetland 0.12mi N
Residential 0.23mi E
Farm/Home Structures 0.23mi E

DENIED

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 |
|-----------|----------------|------------------|----------------|
| No | GROUNDWATER | NA | Lab analysis |
| Yes | SOILS | ~18'x~15'x4' | 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.

A site investigation was conducted pursuant to ECMC Rule 911 at the WARDLAW WEBSTER T6N-R64W-S28 L01 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):

Eight (8) grab confirmation soil samples were collected from the produced water vessel excavation (5), beneath the ground oil tank (2), and at the separator (1). 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, EC, SAR, pH, and boron. Two (2) waste characterization samples were submitted for COGG Table 915-1 metals. 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):

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 | NA / ND |
|--|---|
| Number of soil samples collected <u>37</u> | -- Highest concentration of TPH (mg/kg) <u>39</u> |
| Number of soil samples exceeding 915-1 <u>11</u> | -- Highest concentration of SAR <u>2.01</u> |

Was the areal and vertical extent of soil contamination delineated? Yes _____

BTEX > 915-1 No _____

Approximate areal extent (square feet) 270 _____

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

Groundwater

Number of groundwater samples collected 10 _____

ND Highest concentration of Benzene (µg/l) _____

Was extent of groundwater contaminated delineated? Yes _____

ND Highest concentration of Toluene (µg/l) _____

Depth to groundwater (below ground surface, in feet) 3 _____

ND Highest concentration of Ethylbenzene (µg/l) _____

Number of groundwater monitoring wells installed 5 _____

Highest concentration of Xylene (µg/l) _____

Number of groundwater samples exceeding 915-1 4 _____

NA 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?

A background sample for pH, arsenic, and selenium analysis was collected during decommissioning activities. Residual arsenic appears consistent with background comparison. Five (5) additional backgrounds were collected from soil of native/similar lithologic material not impacted by oil and gas activity during delineation activities to further compare pH and selenium. The residual pH and selenium values/concentrations are less than/consistent with background comparison and do not appear to warrant additional soil sampling.

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?

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.
A site assessment was conducted to delineate soil impacts at the former produced water vessel excavation. Soil samples were collected for analysis of TPH (C6-C36), organic compounds in soil per ECMC Table 915-1, pH, and selenium per approved Form 27 document #403179495.

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.

Residual pH and selenium were delineated at the site and found to be less than/consistent with background comparisons. Five (5) monitoring wells were installed to monitor organic compounds per ECMC Table 915-1 and inorganic parameters in groundwater. NFA will be considered when four (4) consecutive quarters of compliant concentrations in groundwater have been observed.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Excavate and offsite disposal

_____ Chemical oxidation

_____ If Yes: Estimated Volume (Cubic Yards) _____

_____ 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

Yes _____ 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.

Monitoring wells MW-01 through MW-05 will be sampled on a quarterly basis for BTEX, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and EMC Table 915-1 inorganic compounds. All samples collected will be analyzed by a certified laboratory using approved ECMC laboratory analysis methods.

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 _____

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? 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? Yes _____

Does the previous reply indicate consideration of background concentrations? Yes _____

Does Groundwater meet Table 915-1 standards? No _____

Is additional groundwater monitoring to be conducted? Yes

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. In the absence of any elevated hydrocarbons, and with consideration to all other soil suitability parameters in compliance with ECMC Table 915-1, the elevated pH and selenium values at the produced water vessel appear to be consistent with background comparison. Based upon the depth and level of soil suitability impacts, the risk to vegetation is likely negligible. Based upon this and the use of inspections to monitor future growth, no additional assessment or remediation of soil concentrations appears necessary.

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. 04/07/2022

Proposed date of completion of Reclamation. 04/07/2025

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. 09/08/2021

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/07/2022

Proposed site investigation commencement. 04/07/2022

Proposed completion of site investigation. 12/31/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 04/07/2022

Proposed date of completion of Remediation. 12/31/2025

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

Monitoring wells MW-01 through MW-05 will be sampled on a quarterly basis for BTEX, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and ECMC Table 915-1 inorganic compounds.

In the absence of any elevated hydrocarbons, and with consideration to all soil suitability parameters and other metals concentrations in compliance with ECMC Table 915-1, the residual pH and selenium values/concentrations are consistent with background comparison.

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

Signed: Secondary Reviewer

Title: Environmental Consultant

Submit Date: 09/16/2024

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: 21120

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

| | |
|-----------|--------------------------------|
| 403917457 | FORM 27-SUPPLEMENTAL-SUBMITTED |
| 403917648 | REMEDATION PROGRESS REPORT |
| 403920821 | REMEDATION PROGRESS REPORT |

Total Attach: 3 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. | 12/05/2024 |
|---------------|---|------------|

Total: 1 comment(s)