

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404043518
Receive Date:
01/14/2025

Report taken by:
Laurel Anderson

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: (303) 597-6847
City: DENVER State: CO Zip: 80202		Mobile: ()
Contact Person: Phillip Porter	Email: RBUEUF27@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 25946 Initial Form 27 Document #: 403225613

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 #: 123-27115	County Name: WELD
Facility Name: FRONT RANGE D 09-28	Latitude: 40.246688	Longitude: -104.555994	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWNE	Sec: 9	Twp: 3N	Range: 64W Meridian: 6 Sensitive Area? Yes
Facility Type: SPILL OR RELEASE	Facility ID: 484123	API #: _____	County Name: WELD
Facility Name: Front Range D #09-28	Latitude: 40.246842	Longitude: -104.552127	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWNE	Sec: 9	Twp: 3N	Range: 64W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SC

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? Yes

Other Potential Receptors within 1/4 mile

HPH - Y Aquatic Native Species Conservation Waters
Intermittent Riverine Wetlands 0.19mi NW, Palustrine Wetlands 0.07 E
NA



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
Yes	GROUNDWATER	NA	Laboratory analysis
Yes	SOILS	TBD	Laboratory 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 FRONT RANGE D09-28 flowline removal. Approximately 1180' of flowline was removed. The wellhead will be cut and capped per ECMC rules at a later date.

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):

Four (4) grab confirmation soil samples were collected at the flowline terminuses at the wellhead and separator (2), and at changes of direction (2). 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) samples were analyzed for waste characterization of 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 19	-- Highest concentration of TPH (mg/kg) 888.6 8
Number of soil samples exceeding 915-1 4	-- Highest concentration of SAR 3.48

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

BTEX > 915-1 No

Approximate areal extent (square feet) 18

Vertical Extent > 915-1 (in feet) 9

Groundwater

Number of groundwater samples collected 27

ND Highest concentration of Benzene (µg/l)

Was extent of groundwater contaminated delineated? No

-- Highest concentration of Toluene (µg/l) 1.22

Depth to groundwater (below ground surface, in feet) 6

-- Highest concentration of Ethylbenzene (µg/l) 1.55

Number of groundwater monitoring wells installed 9

-- Highest concentration of Xylene (µg/l) 3.88

Number of groundwater samples exceeding 915-1 4

NA Highest concentration of Methane (mg/l)

Surface Water

0 Number of surface water samples collected

0 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 Table 915-1 metals analysis was collected during decommissioning activities. Residual arsenic concentrations are consistent and/or less than background comparison and do not appear to warrant additional assessment or remediation. Additional backgrounds (5+) were collected from native soil in comparable intervals to residual metals previously identified, for further comparison. Residual cadmium at the site is less than/consistent with background comparison and does not warrant further assessment. Selenium, lead, and barium do exceed background concentrations. This work will continue under REM 32020.

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?

A site assessment will be completed prior to December 31, 2023 or following land approval, to delineate residual soil impacts at the site. Noble proposes soil samples will be collected during the delineation for analysis of TPH (C6-C36), organics in soil per ECMC Table 915-1, barium, cadmium, lead, and selenium. This work will continue under REM 32020.

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.

A site assessment was completed to delineate impacted media identified at the site. Residual petroleum hydrocarbon impacts were not identified as a result of the delineation assessment. Groundwater was encountered, confirming GSSL applicability. Nine (9) soil borings were completed as monitoring wells. Soil samples were collected from each boring for analysis of TPH (C6-C36), organics in soil per ECMC Table 915-1, barium, cadmium, lead, and selenium in accordance with approved Form 27 Doc. # 403498566. Five (5) background samples were also collected for barium, cadmium, lead, and selenium comparison. Analytical results show cadmium concentrations to be less than/consistent with local background comparisons. Additional backgrounds will be collected to further compare elevated barium, lead, and selenium concentrations observed during the assessment. Source excavation sampling/scheduling to address residual impacts in soil will be discussed in a supplemental Form 27, as needed. This work will continue under REM 32020.

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.

Nine (9) soil borings were completed as monitoring wells upon encountering groundwater during the delineation assessment. Each well will be sampled on a quarterly basis to monitor for natural attenuation and analyzed by a certified laboratory using ECMC approved laboratory methods. Elevated dissolved organic concentrations have not been identified in groundwater. Elevated dissolved inorganic concentrations have, however, been identified in three (3) monitoring wells. The inorganic parameters observed in up-gradient, unimpacted monitoring well MW-09 are used in the determination of local background levels for inorganic parameters in groundwater at the site. Source excavation sampling/scheduling to address residual impacts at the site will be discussed in a supplemental 27. This work will continue under REM 32020.

NFA will be considered when soil concentrations are compliant with ECMC Table 915-1 standards and dissolved concentrations are compliant with ECMC Table 915-1 for four (4) consecutive post-remediation quarters

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

_____ 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-09 will be sampled quarterly for BTEX, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 1-methylnaphthalene, 2-methylnaphthalene, benzo(a)anthracene, benzo(a)pyrene, and inorganic parameters per ECMC Table 915-1. This work will continue under REM 32020.

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 NFA: Administrative Closure, Remediation Continued on #32020 _____

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: \$ 0 _____

WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? _____

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? Yes _____

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? 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.

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. 03/10/2023

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. 10/12/2022

Actual Spill or Release date, or date of discovery. 03/24/2023

SITE INVESTIGATION DATES

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

Proposed site investigation commencement. 12/15/2022

Proposed completion of site investigation. 12/31/2023

REMEDIAL ACTION DATES

Proposed start date of Remediation. 01/01/2024

Proposed date of completion of Remediation. 06/30/2024

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

Previous form (#403937447) was denied 11/4/2024 due to the following reason per ECMC:
"Work on this project overlaps with Remediation #32020 Doc #403861640 Submitted 8/23/2024. Operator is directed to evaluate the projects and consolidate the work into a single cohesive remediation plan."

This Remediation #25946, for flowline removal and groundwater monitoring/spill, is requested to continue under Remediation #32020 with administrative closure to this existing Remediation.

All future work for Remediation #25946 will continue under Remediation #32020. All previous attachments under Remediation #25946 are appended and related forms are identified.

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

Signed: Abigail Sheehan

Title: Environmental Consultant

Submit Date: 01/14/2025

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: 25946

COA Type

Description

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
404043518	FORM 27-SUPPLEMENTAL-SUBMITTED
404056732	SITE MAP
404056733	MONITORING REPORT
404056734	MONITORING REPORT
404056736	SITE INVESTIGATION REPORT
404056737	MONITORING REPORT
404056738	SITE MAP
404056740	OTHER

Total Attach: 8 Files

General Comments

User Group	Comment	Comment Date
Environmental	ECMC has denied this Form 27 for data validation. Operator will provide laboratory analytical report(s) as a stand-alone attachment(s) on the replacement Supplemental Form 27. The Laboratory Report PDF(s) must be secured by the issuing laboratory; If there is a difference between the creation date and secured date of the PDF, Operator shall provide an explanation in the case narrative of the associated report. ECMC will not review combined PDFs with lab reports.	01/14/2025

Total: 1 comment(s)