

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404123076

Receive Date:

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 ECOM 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: <u>NOBLE ENERGY INC</u>	Operator No: <u>100322</u>	Phone Numbers
Address: <u>1099 18TH STREET SUITE 1500</u>		Phone: <u>(970) 313-5582</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>()</u>
Contact Person: <u>Jason Davidson</u>	Email: <u>jason.davidson@chevron.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 29994 Initial Form 27 Document #: 403417095

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

No Multiple Facilities

Facility Type: <u>WELL</u>	Facility ID: _____	API #: <u>123-30775</u>	County Name: <u>WELD</u>
Facility Name: <u>DERR 21-4</u>	Latitude: <u>40.431342</u>	Longitude: <u>-104.663468</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SENE</u>	Sec: <u>4</u>	Twps: <u>5N</u>	Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

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

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

Bald Eagle Roost 0.10mi S
Apparent freshwater pond(s) / gravel pit 0.34mi SW
Residential structures 0.08mi N and 0.18mi SE

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
UNDETERMINED	GROUNDWATER	NA	Lab analysis and field screening, 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.

Pursuant to Energy & Carbon Management Commission (ECMC) Rule 911, site assessment activities were conducted pertaining to the DERR #21-4 wellhead cut and cap and flowline removal. On September 6, 2023, initial characterization sampling was completed by Eagle Environmental Consulting (Eagle) at the wellhead on the day of cut and cap operations. Soil samples were collected for field screening from all four sidewalls and the base of the wellhead excavation and at surface locations to the N-E-S-W of the excavation. The excavation samples were submitted for laboratory analysis of ECMC Table 915-1 organic constituents of concern and Soil Suitability for Reclamation (SSR) constituents. One background sample was collected and submitted for analysis of pH. See the Site Investigation Report and Analytical Results attached to Form 27 Document 404137149 for details.

On November 10, 2023, initial flowline characterization sampling was completed by Fremont Environmental (Fremont) during the removal of approximately 1,264 feet of flowline. Soil samples were taken along the flowline at any points of material change and/or hammer unions and directional changes. Seven samples were collected for field screening and five were submitted for analysis of all Table 915-1 constituents. Two background samples were collected and submitted for analysis of all Table 915-1 inorganic constituents. See the attached Site Investigation Report and Analytical Results for details.

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):

Additional soil samples will be collected as needed to characterize the extent of potential soil impacts around the wellhead and flowline investigation areas. Soil samples will be submitted for analysis of all Table 915-1 soil constituents of concern. Background samples may be collected to characterize native levels of inorganic constituents at the Location. A proposed sampling map was submitted and approved via Form 27 Document 404137149.

Proposed Groundwater Sampling

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 will be collected and analyzed for all organic and inorganic compounds per ECMC Table 915-1.

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 wellhead and flowline areas occurred during cut and cap and removal activities. Field personnel field screened all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling was required.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 5
Number of soil samples exceeding 915-1 5
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 500

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 1.04
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
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?

On September 6 and November 10, 2023, a total of three background soil samples were collected from areas in the vicinity of the wellhead. Two of the samples appear to have been collected from areas potentially impacted by oil and gas development. One sample, (BKG01 4') collected by Fremont on November 10, 2023, was collected from an area outside of historical oil and gas development and was submitted for analysis of Table 915-1 inorganic constituents. The background soil sample analytical results were reported with elevated levels of pH and arsenic. The maximum background concentration for pH was observed to be 8.77. The maximum background concentrations with a 1.25x multiplier applied for arsenic and barium were calculated to be 2.26 milligrams per kilogram (mg/kg) and 76.4 mg/kg, respectively.

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?

As part of Chevron's data integrity review for projects associated with Eagle Environmental, the wellhead point of compliance samples will be recollected in accordance with the approved Form 27 investigation plan. Additional supplemental site investigation (SSI) activities will be conducted to recollect flowline investigation samples which indicated exceedances of inorganic constituents above Table 915-1 standards. All soil samples will be analyzed for all Table 915-1 constituents. Additional background samples will be collected and analyzed for all Table 915-1 inorganics. Details of the proposed SSI and a proposed sampling map are included in approved Form 27 Document 404137149.

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 has been 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.

On September 6, 2023, initial characterization sampling was completed by Eagle at the wellhead on the day of cut and cap operations. Soil samples were collected for field screening from all four sidewalls and the base of the wellhead excavation and at surface locations to the N-E-S-W of the excavation. The excavation samples were submitted for laboratory analysis of Table 915-1 organic constituents of concern and SSRs. Analytical results indicated compliance with Protection of Groundwater Soil Screening Levels (PGSSLs) and SSR standards except for pH in three samples. One background sample was collected and submitted for pH, however, due to the proximity to the wellhead, the sample will not be considered as a representative background sample. See the Site Investigation Report and Analytical Results attached to approved Form 27 Document 404137149 for details.

On November 10, 2023, initial flowline characterization sampling was completed by Fremont during the removal of approximately 1,264 feet of flowline. Soil samples were taken along the flowline at any points of material change and/or hammer unions and directional changes. Seven samples were collected for field screening and five were submitted for analysis of all Table 915-1 constituents. Analytical results indicated compliance with the applicable standards for all organic constituents. Exceedances above PGSSLs and SSR standards were detected for pH, arsenic, barium, and selenium. Two background samples were collected and submitted for analysis of all Table 915-1 inorganic constituents. Only one sample was collected from an area outside of historical oil and gas development; analytical results for that sample indicated elevated pH and arsenic levels. See the attached Site Investigation Report and Analytical Results for details.

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.

Groundwater was not encountered during decommissioning activities.

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 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 (policies MWZZ316714 and MWZX316724) 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?

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. 09/06/2023

Proposed date of completion of Reclamation. 10/31/2026

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. 05/16/2023

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

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 09/06/2023

Proposed site investigation commencement. 07/01/2023

Proposed completion of site investigation. 09/30/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 10/31/2025

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:

The implementation schedule has been changed due to the necessity for supplemental site investigation activities adjacent to the former DERR #21-4 wellhead and flowline.

OPERATOR COMMENT

This form has been submitted to provide a quarterly update for the DERR #21-4 (Remediation Project 29994). No work was conducted during the first quarter of 2025.

In response to ECMC Form 27 Comment dated February 17, 2025 (Document Number 403935766), Form 27 Document 404137149 was submitted as a replacement on March 26, 2025. A secured analytical data report pertaining to the wellhead investigation was attached to the form. However, a secured analytical data report pertaining to the the flowline investigation was not available at the time of submission.

Operator is submitting a secured laboratory report for the flowline data with this form. Based on currently available data, this project is not affected by data integrity irregularities and is not associated with Operator's data integrity review process and its Rule 525.e. Voluntary Disclosure. As part of its data integrity review process, Operator requested the lab protect the laboratory analytical reports from subsequent unauthorized modification by anyone outside the lab, which resulted in the lab reissuing the original report with additional protections (Reissued Report). The Reissued Report was received directly from the lab on April 3, 2025, which includes the application of a Digital ID/Verified Certification (lock) to support reissuance. The metadata associated with the Reissued Report also includes the lab representative's name, the date and time the laboratory reissued the report, and an explanation for the reissuance. The Reissued Report is attached to this submission as a stand alone document.

In the event additional responsive information is received or discovered that would suggest this project should be incorporated into the ongoing data integrity review process associated with Operator's Rule 525.e. Voluntary Disclosure, Operator will update and/or amend the statements in this submission and provide any new or revised data or other information responsive to ECMC's general comments responding to Operator's Form 27 submission found in Document Number 403935766.

Remediation and site investigation, previously directed by Fremont, is now under the direction of Confluence Compliance Companies LLC (Confluence). Pursuant to Rule 913.e., quarterly reporting will be conducted until closure criteria are achieved for the remediation project. The proposed SSI will be completed in accordance with the proposed implementation schedule and according to the Site Investigation Plan attached to Form 27 Document 404137149. The results will be submitted in 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: Amanda Baca

Title: Project Scientist

Submit Date: _____

Email: amanda.baca@confluence-cc.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: 29994

COA Type

Description

0 COA	
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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

404134900	SITE INVESTIGATION REPORT
404246289	ANALYTICAL RESULTS

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)