

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404606094

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 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: <u>NOBLE ENERGY INC</u>	Operator No: <u>100322</u>	Phone Numbers
Address: <u>1099 18TH STREET SUITE 1500</u>		Phone: <u>(970) 304-5000</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>()</u>
Contact Person: <u>Lauren Hoff</u>	Email: <u>RBUEUF27@chevron.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 31034 Initial Form 27 Document #: 403470894

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: <u>WELL</u>	Facility ID: _____	API #: <u>123-25082</u>	County Name: <u>WELD</u>
Facility Name: <u>CDOT F 1-10</u>	Latitude: <u>40.426156</u>	Longitude: <u>-104.609012</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWSE</u>	Sec: <u>1</u>	Twp: <u>5N</u>	Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>
Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>486273</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>UWRWE-A3472-ABN</u>	Latitude: <u>40.426254</u>	Longitude: <u>-104.608822</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NWSE</u>	Sec: <u>1</u>	Twp: <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 Cropland _____

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

Well Within Mule Deer Severe Winter Range HPH
Well Within Aquatic Native Species Conservation Water HPH
Residential 0.1mi NE
Farm Structure 0.09mi SW, 0.13mi NE
Commercial 0.11mi/ 0.14mi W, 0.13mi NE
Riverine 0.22mi NE, 0.08mi S, 0.04mi/ 0.06mi/ 0.08mi/ 0.13mi/ 0.17mi/SE
Freshwater Pond 0.17mi NE, 0.2mi N
Freshwater Emergent Wetland 0.09mi/ 0.22mi SW, 0.19mi/ 0.2mi E
Forested/Shrub Riparian 0.21mi SW, 0.07mi/ 0.09mi/ 0.22mi S, 0.08mi/ 0.09mi/ 0.1mi/ 0.13mi/ 0.23mi SE
Herbaceous Riparian 0.16mi SW, 0.1mi/ 0.19mi SE
No other potential receptors are located within ¼ mile of the Site.
Above distances are approximations.

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 or Field Screening, if encountered.
No	SOILS	No Impacts	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 ECMC Rule 911 a site investigation will be conducted pertaining to the CDOT F01-10 wellhead cut and cap and flowline removal. Approximately 126' of flowline was removed. The ECMC was updated in a supplemental Form 27 if a portion of the flowline is abandoned-in-place due to field constraints. The wellhead will be cut and capped per ECMC rules. Additionally, soil samples will be field screened at the N-E-S-W sides of the wellhead. Soil samples were taken along the flowline at any points of material change and/or hammer unions, directional changes, as well as at the bell holes on either side of a waterway. The Flowline Pre-Abandonment Notice Document number was included under Related Forms.

The Field Qualitative Criteria Checklist was utilized during flowline decommissioning activities and no visual and olfactory impacts were observed. Based on laboratory analytical data, a historical release was discovered on February 13, 2024, under F19 Document Number 403687071, for elevated Benzo (a)Anthracene at sample location FL02 3.

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):

A grab soil sample will be collected at the base of the excavation or the area showing the highest degree of impact during field screening activities at the wellhead excavation. Additionally, soil samples will be field screened at the N-E-S-W sides of the wellhead. Soil samples were taken along the flowline at any points of material change and/or hammer unions, directional changes, as well as at the bell holes on either side of a waterway. Soil samples were analyzed by a certified laboratory for the full extent of Table 915-1, including but not limited to: TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons) organic compounds in soil per ECMC Table 915-1, and EC, SAR, pH, metals, and boron. 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):

If groundwater is encountered during the site investigation a grab groundwater sample will be collected and analyzed for all organic compounds and inorganic parameters 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 along the flowline and at the wellhead and separator areas occurred during abandonment activities. Field personnel field screened all disturbed areas using a PID, visual, and olfactory senses to determine if laboratory confirmation sampling was required. The applicable ECMC Closure Checklists were utilized and filled out during the abandonment process. A photolog was attached.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 6
Number of soil samples exceeding 915-1 0
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 0.708
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 0

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?

Five background soil samples were collected on 1/12/2024 from an area not impacted by oil and gas development and at depths and lithologies (Clay – CL & Poorly Graded Sand - SP) comparable to those of the confirmation soil samples collected at the location. The samples were analyzed by a certified laboratory for Table 915-1 metals and SSR parameters using ECMC approved Methods. Based on the analytical results summarized below, these analytes are no longer considered contaminants of concern (metals listed in mg/kg):
pH: Max = 9.09
Arsenic: Max*1.25 = 9.11
Barium: Max*1.25 = 194
Cadmium: Max*1.25 = 0.734
Lead: Max*1.25 = 21.0
Selenium: Max*1.25 = 0.571

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?

Operator proposes to collect re-samples at sample locations N Wall 3 Ft, S Wall 3 Ft, W Wall 3 Ft, Floor 4 Ft, initially collected on 9/19/2024 during remedial excavation activities. Although reduced analyte collection for the excavation was approved per ECMC Supplemental Form 27 (Document No. 403686817), the Operator will perform re-sampling to obtain Table 915-1 analytes, including 1,2,4-TMBs, 1,3,5-TMBs, Naphthalene, TPHs (GRO, DRO, ORO), EC, SAR, Boron, and metals in soil concentrations. The re-samples will be analyzed by a certified laboratory for the full suite of Table 915-1 parameters. If concentrations are below their respective Table 915-1 standards, or below 1.25x maximum background concentrations, Operator will request an NFA for soils at the site.

Additionally, A supplemental site investigation (SSI) will be completed to collect additional background samples to determine if any future elevated levels of inorganics and metals are attributed to native soil conditions at the site. Background soil samples will be analyzed by a certified laboratory for analysis of metals per ECMC Table 915-1 and soil suitability for reclamation parameters including pH, EC, SAR, and boron. The results of the SSI will be submitted on a subsequent Form 27.

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.

The organic compound exceedances observed at sample location FL02 3Ft were removed through a remedial excavation. Remedial excavation confirmation soil samples collected on 9/19/2024 were collected and analyzed for BTEX, Polycyclic Aromatic Hydrocarbons (PAHs) and pH per ECMC COA provided on Doc. # 403686817. Additionally, remedial excavation confirmation soil sample E2 Wall 3FT collected on 12/10/2024 was collected and analyzed for full ECMC Table 915-1 constituents. The impacted soil was disposed of at an approved landfill as non-hazardous waste in accordance with Rules 905 and 906. Copies of the waste manifests are available upon request.

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.

Laboratory analytical results indicated a historical release had occurred at the location of soil sample FL02 3Ft and was reported as a historic release in Form 19 document number 403687071.

Excavation of impacted soil was completed on December 10, 2024 to address contamination identified at three feet below ground surface (bgs) at the FL02 3Ft sample location. Remedial excavation confirmation soil samples collected on 9/19/2024 were collected and analyzed for BTEX, Polycyclic Aromatic Hydrocarbons (PAHs) and pH per ECMC COA provided on Doc. # 403686817. Additionally, remedial excavation confirmation soil sample E2 Wall 3FT collected on 12/10/2024 was collected and analyzed for full ECMC Table 915-1 constituents. Groundwater was not encountered during remedial excavation activities.

Laboratory analytical results from the confirmation samples confirmed that all Table 915-1 organic impacts were removed based on analytes evaluated.

Elevated concentrations of metals and SSR constituents exceeding the Table 915-1 standards remain in situ in two of the six excavation confirmation sample locations.

Elevated levels of arsenic, barium, cadmium, selenium, and lead above Table 915-1 standards were observed in both excavation and background samples. Concentrations of arsenic, barium, cadmium, selenium, and lead in the E2 Wall 3 Ft sample were less than 125% of the maximum background concentrations for these constituents. Additionally, pH in the Floor 4 Ft sample was less than the maximum background concentration.

Based on these findings, the elevated metals and pH concentrations are proposed to be attributed to native soil conditions.

Soil Remediation Summary

<input type="checkbox"/> In Situ	<input checked="" type="checkbox"/> Ex Situ
_____ Bioremediation (or enhanced bioremediation)	Yes _____ Excavate and offsite disposal
_____ Chemical oxidation	_____ If Yes: Estimated Volume (Cubic Yards) _____ 53
_____ Air sparge / Soil vapor extraction	_____ Name of Licensed Disposal Facility or ECMC Facility ID # _____
_____ Natural Attenuation	No _____ 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 site investigation or excavation activities. If groundwater is encountered at the site, groundwater sampling will be conducted in accordance with the Proposed Groundwater Sampling section in this Form 27.

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 Timeline 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? 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 53

E&P waste (solid) description hydrocarbon impacted soil

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: Buffalo Ridge Landfill, Keenesburg, CO

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? Yes

Does the previous reply indicate consideration of background concentrations? Yes

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.

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. 03/31/2025

Proposed date of completion of Reclamation. 06/30/2027

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. 02/13/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/12/2024

Proposed site investigation commencement. 09/01/2023

Proposed completion of site investigation. 06/30/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 02/14/2024

Proposed date of completion of Remediation. 12/10/2024

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:

The 'proposed date of completion of remediation' section has been updated to reflect the actual date on which remedial excavation activities were completed. All organic impacts have since been removed. The 'proposed completion of site investigation' section has been updated due to the need to resample soil sample locations N Wall 3 Ft, S Wall 3 Ft, W Wall 3 Ft, and Floor 4 Ft at the CDOT F 1-10 wellhead riser excavation and additionally to collect additional local background samples.

OPERATOR COMMENT

This Form 27 is being submitted to include a 2Q 2026 timeline update for the CDOT F 1-10 wellhead and flowline (REM # 31034). The Operator will complete the additional site investigation as outlined in this proposed Site Investigation Report workplan prior to the Proposed completion of site investigation date detailed in the Implementation schedule. A qualified drilling crew is not immediately available but is expected to commence the work in Q2 2026. Pursuant to Rule 913.e, quarterly reporting will be conducted until closure criteria are achieved for the remediation project. The results of the supplemental site investigation will be submitted on 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: Jordan Suttles

Title: Environmental Consultant

Submit Date: _____

Email: jordans@fremontenv.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: 31034

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

--	--

Total Attach: 0 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
--	--	---------------------

Total: 0 comment(s)