

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404236735

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) 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 #: 32969 Initial Form 27 Document #: 403552570

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>123-24494</u>	County Name: <u>WELD</u>
Facility Name: <u>HOWARD USX A 9-13</u>	Latitude: <u>40.495090</u>	Longitude: <u>-104.562070</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWSW</u>	Sec: <u>9</u>	Twp: <u>6N</u>	Range: <u>64W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>488093</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Howard USX A09-13</u>	Latitude: <u>40.495090</u>	Longitude: <u>-104.562070</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWSW</u>	Sec: <u>9</u>	Twp: <u>6N</u>	Range: <u>64W</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? Yes _____

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 0.16mi N, 0.1/0.16/0.24mi NE, 0.05mi E, 0.11/0.20mi SE
Residential 0.17m SE, 0.08mi S, 0.17mi SW
Farm Structure 0.07/0.09/0.16/0.18/0.19/0.21/0.23mi SW
No other potential receptors are located within 1/4 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 if encountered
Yes	SOILS	Refer to Tables and Figures	Field Screening and 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 will be conducted pertaining to the HOWARD USX A09-13 wellhead cut and cap and flowline removal. Approximately 670' 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.

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 additional site assessment activities, a grab groundwater sample will be collected and analyzed for all organic compounds and inorganic parameters per 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 is attached.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 9
Number of soil samples exceeding 915-1 8
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 800

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 6.9
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 3

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
_____ 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 from an area not impacted by oil and gas development and at similar depths and lithologies as confirmation soil samples collected at the location and analyzed for Table 915-1 metals and SSR constituents. Background soil sample analytical results were reported with elevated levels of pH, Arsenic (As), Barium (Ba), Cadmium (Ca) and Lead (Pb).

Background Soil Sample Analysis (mg/kg)

pH @ 0.5ft: Max = 8.28
pH @ 2ft: Max = 8.39
pH @ 5ft: Max = 8.38
As @ 0.5ft: Max*1.25 = 8.10
As @ 2ft: Max*1.25 = 10.4
As @ 5ft: Max*1.25 = 2.44
Ba @ 0.5ft: Max*1.25 = 101
Ba @ 2ft: Max*1.25 = 41.3
Ba @ 5ft: Max*1.25 = 47.3
Ca @ 0.5ft: Max*1.25 = 0.411
Ca @ 2ft: Max*1.25 = 0.368
Ca @ 5ft: Max*1.25 = 0.261
Pb @ 0.5ft: Max*1.25 = 14.5
Pb @ 2ft: Max*1.25 = 14.4
Pb @ 5ft: Max*1.25 = 12.8

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 approved under Document No. 403916497, elevated inorganics and metals were identified in multiple locations along the Howard USX A09-13 flowline. Soil will be resampled and analyzed for the full Table 915-1 analyte suite at FL01 2FT, FL03 2FT, and FL05 2FT sample locations at the same depths where elevated concentrations were initially observed. If reanalyzed results fall within Table 915-1 standards, Noble will request a No Further Action (NFA) designation. Background samples will be used to justify elevated metals concentrations where applicable.

If results exceed standards and cannot be attributed to native soil conditions, at least five additional samples will be collected to delineate the magnitude and extent of elevated constituents.

Additionally, similar exceedances were also observed during remedial excavation at the FL02 2FT sample location. Soil will be resampled and analyzed at the N Wall-2FT, S Wall-2FT, E Wall-2FT, W Wall-2FT, and Floor-3FT sample locations, again at the original depth intervals. Additional local background samples will be collected to better characterize native soil conditions and support data evaluation. If the reanalyzed results meet Table 915-1 standards, Noble will request NFA. If results exceed standards and cannot be attributed to native soil conditions, at least five additional samples will be collected to delineate the magnitude and extent of elevated constituents.

Following delineation, Noble will submit a detailed reclamation plan to address elevated SSR constituents. This plan will include soil analysis from undisturbed adjacent areas, revegetation techniques, site stabilization measures, and seeding details. Noble will request NFA under Rule 915.b to leave elevated inorganics in situ. If elevated metals are not attributable to background and exceed Table 915-1 limits, remedial alternatives will be evaluated.

Refer to the attached Site Investigation Plan for proposed resample and background locations.

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 2FT were removed through a remedial excavation. Remedial excavation confirmation soil samples were collected and analyzed for full ECMC Table 915-1 constituents.

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 2FT and was reported as a historic release in Form 19 document number 403915406.

Excavation of impacted soil was conducted and completed on March 19, 2025 to address contamination identified at two feet below ground surface (bgs) at the FL02 2FT sample location. Following the excavation, confirmation soil samples were collected and analyzed for constituents outlined in ECMC Table 915-1 for organics and soil suitability for reclamation. These included Total Petroleum Hydrocarbons (TPH), BTEX, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Naphthalene, Polycyclic Aromatic Hydrocarbons (PAHs), pH, Sodium Adsorption Ratio (SAR), Electrical Conductivity (EC), and Boron. Samples were also analyzed for ECMC Table 915-1 metals. Groundwater was not encountered during remedial excavation activities.

For further details on the necessary remedial actions, please refer to the site investigation as outlined in the proposed Site Investigation Report work plan.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes _____ Excavate and offsite disposal

_____ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) _____ 10

_____ 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.

If groundwater is encountered during additional site assessment activities, a grab groundwater sample will be collected and analyzed for all organic compounds and inorganic parameters per Table 915-1.

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 Remedial Excavation Progress Report Submittal & Updated Supplemental Site Investigation Proposal

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 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:

No beneficial use

Volume of E&P Waste (solid) in cubic yards 10

E&P waste (solid) description Hydrocarbon impacted soil

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: North Weld Landfill, Ault, 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? 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 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. 10/31/2026

Proposed date of completion of Reclamation. 06/30/2028

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. 09/28/2023

Actual Spill or Release date, or date of discovery. 04/23/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/07/2024

Proposed site investigation commencement. 11/05/2023

Proposed completion of site investigation. 12/31/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 06/07/2024

Proposed date of completion of Remediation. 03/19/2025

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 "Proposed Date of Completion of Remediation" section of the implementation schedule has been updated to reflect the actual date of remedial excavation completion. Additionally, the "Proposed Completion of Site Investigation" section has been revised to account for the need to conduct supplemental site investigation activities in the area adjacent to the former Howard USX A09-13 flowline. The proposed site investigation will be completed following approval of this request. Refer to the Operator Comment section for additional details.

OPERATOR COMMENT

This Form 27 is submitted as a Q2 2025 timeline update for the former Howard USX A09-13 wellhead and flowline location. It incorporates the results of decommissioning and remedial excavation activities and proposes an additional supplemental site investigation.

The operator has not yet completed the supplemental soil resampling activities previously approved under ECMC Document No. 403916497. These activities remain a priority and are currently in progress. As outlined, soil resampling will be conducted at FL01 2FT, FL03 2FT, and FL05 2FT to verify the presence or absence of elevated inorganic and metal concentrations observed during the March 2024 decommissioning activities.

If results exceed standards and cannot be attributed to native soil conditions, at least five additional samples will be collected to delineate the magnitude and extent of elevated constituents.

In addition, Noble proposes to resample all excavation confirmation locations associated with the FL02 2FT remedial excavation, including N Wall-2FT, S Wall-2FT, E Wall-2FT, W Wall-2FT, and Floor-3FT, to confirm the presence or absence of inorganic and metal exceedances. As part of this investigation, additional local background samples will be collected to further characterize native soil conditions and support data evaluation.

If the reanalyzed results meet Table 915-1 standards, Noble will request a No Further Action (NFA) determination. If exceedances persist and cannot be attributed to background conditions, a minimum of five delineation samples will be collected to define the extent and magnitude of impacted areas.

Following delineation, Noble will submit a reclamation plan addressing elevated SSR constituents. The plan will include soil analysis from adjacent undisturbed lands, revegetation methods, site stabilization, and seeding details. NFA will be requested under Rule 915.b to leave inorganics in situ where appropriate. If elevated metals are not attributable to background and exceed applicable standards, remedial alternatives will be evaluated.

The proposed site investigation activities are described in the attached Site Investigation Report workplan. The operator will complete the approved resampling under Document No. 403916497 and, upon approval of this Form 27, proceed with the supplemental investigation as outlined.

Based on currently available data, this project is not affected by data integrity irregularities and is not associated with the operator's data integrity review process and its Rule 525.e. Voluntary Disclosure. As part of its data integrity review process, the 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 reports with additional protections (Reissued Reports). The Reissued Reports received directly from the lab on 4/16/2025 (Origins) and 3/31/2025 (Summit) include [if Origins] a watermark confirming both the laboratory representative who reissued the report and the date and time of the reissuance or [if Summit] the application of a Digital ID/Verified Certification (lock) to support reissuance. The metadata associated with this Reissued Reports also includes the lab representative's name, the date and time the laboratory reissued the reports, and an explanation for the reports reissuance. The Reissued Reports are attached to this submission.

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.

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: Jeff Griggs

Title: Consultant

Submit Date: _____

Email: jeffg@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: 32969

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

404236816	REMEDATION PROGRESS REPORT
404236817	ANALYTICAL RESULTS
404236825	SITE INVESTIGATION REPORT
404236826	ANALYTICAL RESULTS
404236883	SITE INVESTIGATION PLAN

Total Attach: 5 Files

General Comments

User Group

Comment

Comment Date

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)