

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404323418
Receive Date:
08/20/2025

Report taken by:
Abdul Elnajdi

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
Contact Person: Dan Peterson	Email: danpeterson@chevron.com	Mobile: ()

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 33881 Initial Form 27 Document #: 403666422

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: _____	Facility ID: _____	API #: _____	County Name: _____
Facility Name: _____	Latitude: _____	Longitude: _____	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: _____	Sec: _____	Twp: _____	Range: _____
		Meridian: _____	Sensitive Area? _____

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 Aquatic Native Species Conservation Waters HPH
Well Within Mule Deer Winter Concentration HPH
Well Within Mule Deer Severe Winter Range HPH
Well Within CPW State Wildlife Areas and State Parks HPH
Riverine 0.07mi SW
Freshwater Emergent Wetland 0.07mi SW, 0.14mi SE, 0.12mi N
Freshwater Forested/Shrub Wetland 0.08mi SW
Forested/Shrub Riparian 0.09mi NW
Apparent Pond 0.14/0.15mi SE
Residential 0.11mi SE, 0.14mi E
Farm Structure 0.09/0.11mi SE, 0.16mi E

DENIED

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- E&P Waste Other E&P Waste Non-E&P Waste
- Produced Water Workover Fluids
- Oil Tank Bottoms
- Condensate Pigging Waste
- Drilling Fluids Rig Wash
- Drill Cuttings Spent Filters
- Pit Bottoms
- 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 ECMC Rule 911 a site investigation was conducted pertaining to the Nakagawa PMB 13-16 wellhead cut and cap. The wellhead was cut and capped per ECMC rules. Laboratory analysis indicated a historical release occurred at the decommissioned wellhead and was reported as a historic release in Form 19 document number 403797712. The hydrocarbon impacted material at the wellhead was removed and hauled to a permitted disposal facility in accordance with Rules 905 and 906.

Approximately 2081' of flowline will be removed, however was temporarily abandoned in place due to field constraints. To not disturb the area of field constraints, soil samples were taken at the start and endpoint of the flowline where the area exists. Soil samples will also be taken along the flowline 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 abandonment verification Form 44 number is 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):

Confirmation soil samples were taken from sidewalls and base of the final extents of the excavation at the wellhead. Soil samples will also be taken along the flowline 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/will be 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. Background soil samples were analyzed by a certified laboratory for analysis of metals per ECMC Table 915-1 and soil suitability parameters including pH, EC, SAR, and boron. All samples collected were/will be 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, a grab groundwater sample will be collected and analyzed for all organic and inorganic compounds per ECMC Table 915-1; this sample analysis includes, but is not limited to BTEX, naphthalene, 1,2,4-trimethylbenzene (TMB), and 1,3,5-TMB, chloride and sulfate anions and total dissolved solids (TDS).

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 of the flowline areas will occur during abandonment activities. Field personnel will field screen all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling is required. The ECMC Flowline Closure Checklist will be utilized and filled out during the abandonment process. A photolog will be submitted on the subsequent Supplemental Form 27.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 5
Number of soil samples exceeding 915-1 3
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 224

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 0.53
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 8

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?

Six site specific background soil samples were collected from approximately 4 ft., and 8 ft-bgs from three soil borings (BKG01 through BKG03) in areas away from oil and gas infrastructure from similar depths and soil horizons as confirmation soil samples and were submitted for analysis of pH, EC, SAR, and total metals (Table 915-1 List) by ECMC approved methods. Refer to the operator comments for additional information.

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?

Noble is currently in the process of evaluating residual inorganic concentrations at the wellhead.

The flowline was temporarily abandoned in place due to crops. Flowline decommissioning activities will be completed by another consultant and will be summarized in a subsequent Supplemental Form 27 submittal. Noble will complete the decommissioning of the site infrastructure as outlined in the approved Initial Form 27 (Document Number 403666422).

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.

On March 24, 2025, excavation was conducted to remove the impacted soil at the former Nakagawa PMB13-16 wellhead. Four confirmation soil samples (EX02 through EX05) were collected from the sidewalls of the excavation from approximately 4 ft-bgs and one confirmation soil sample (EX01) was collected from the floor of the excavation from approximately 8 ft-bgs. The final extent of the excavation was approximately 15 feet by 15 feet to a total depth of 8 ft-bgs. Approximately 67 cubic yards of presumably impacted soil were removed and hauled off site for disposal under Noble manifest to Waste Management's North Weld Landfill in Ault, Colorado 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.

The impacted soil was excavated and hauled offsite to a permitted disposal facility. Please refer to the Operator Comments section of this Form 27 for additional discussion.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes _____ Excavate and offsite disposal

_____ Chemical oxidation

_____ If Yes: Estimated Volume (Cubic Yards) _____ 67

_____ 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 initial decommissioning of the wellhead and flowline or during source mass removal at the wellhead.

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 3Q25 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 67

E&P waste (solid) description Hydrocarbon impacted soils

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: Waste Management's North Weld Landfill in Ault, Colorado

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 reseeded 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? No

If YES, does the seed mix comply with local soil conservation district recommendations? _____

Did the local soil conservation district provide the seed mix? No

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 05/06/2024

Proposed date of completion of Reclamation. 05/06/2026

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. 05/20/2024

Actual Spill or Release date, or date of discovery. 05/20/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/06/2024

Proposed site investigation commencement. 05/06/2024

Proposed completion of site investigation. 10/31/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 03/24/2025

Proposed date of completion of Remediation. 04/06/2025

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 at the former wellhead and along the flowline.

OPERATOR COMMENT

This form is being submitted as a third quarter 2025 timeline update for the Nakagawa PMC13-16 wellhead and flowline.

Initial facility closure activities and confirmation soil sampling at the wellhead occurred on May 6, 2024. Hydrocarbon impacted soils were identified at the wellhead during facility closure activities and excavation was conducted and the identified impacted soil was removed and transported offsite for disposal at a properly permitted waste facility and was summarized in the pending Supplemental Form 27 Document Number 404209941.

The flowline was temporarily abandoned in place due to crops and initial flowline decommissioning activities were summarized in the approved Supplemental Form 27 Document Number 403904755. Flowline decommissioning activities will be completed by another consultant and will be summarized in a subsequent Supplemental Form 27 submittal. Noble will complete the decommissioning of the site infrastructure as outlined in the approved Initial Form 27 (Document Number 403666422).

Noble is in the process of evaluating the residual inorganic concentrations from the final extents of the excavation. The results of the evaluation will be summarized in a subsequent quarterly Supplemental Form 27.

Pursuant to Rule 913.e, quarterly reporting will continue for the location until data indicates no further action is warranted. \

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

Signed: Chelsea Veryser

Title: Project Geologist

Submit Date: 08/20/2025

Email: cveryser@entradainc.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: 33881

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

404323418	FORM 27-SUPPLEMENTAL-SUBMITTED
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Total Attach: 1 Files

General Comments

User Group

Comment

Comment Date

Environmental	<p>ECMC has denied this form without technical review as Operator has provided no analytical or site investigation data showing progress of remediation of impacts documented at this location.</p> <p>Per Rule 912.a.(1-2): Immediately upon discovering any Spills or Releases of E&P Waste, produced Fluids, or unauthorized Releases of natural gas that meet the criteria of Rules 912.b.(1).H, I, or J, regardless of size or volume, Operators will control and contain the Spill or Release to protect and minimize adverse impacts to public health, safety, welfare, the environment, and wildlife resources. Operators will investigate, clean up, and document impacts resulting from Spills and Releases as soon as the impacts are discovered. Operator shall not delay execution of remedial or investigative actions while waiting for ECMC approval and should request expedited review if necessary.</p> <p>Operator shall conduct work in compliance with previously approved workplans and the 900 Series Rules. In accordanc</p>	10/27/2025
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Total: 1 comment(s)