

State of Colorado
Energy & Carbon Management Commission

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403997666

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Report taken by:
Nick Cholas

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

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 19598 Initial Form 27 Document #: 402771632

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>SPILL OR RELEASE</u>	Facility ID: <u>480186</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Hayes Federal 31-8H5</u>	Latitude: <u>40.357388</u>	Longitude: <u>-104.699701</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SENE</u>	Sec: <u>31</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 CL Most Sensitive Adjacent Land Use Non-Cropland

Is domestic water well within 1/4 mile? Yes Is surface water within 1/4 mile? No

Is groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

Wetlands - 915' east
Occupied building - 251' SE
Household water well - Permit #224201 - 225' east
Domestic water well - Permit # 34204 - 960' SE
Livestock - 1500' ESE
Platte River - 1870' NNW

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
No	GROUNDWATER	NA	Laboratory Analytical
Yes	SOILS	60' X 30' X 2' bgs	Laboratory Analytical

INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

During reclamation of the Hayes Federal 31-8H5 location, historical impacts were discovered. The extent of the impacts was determined through an environmental assessment.

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):

Five initial grab soil samples were collected for Table 915-1 TPH and organics analysis during the initial assessment. Ten additional soil samples were collected for Table 915-1 TPH, organics, and inorganics analysis during delineation activities. SB-05@0-2' was also analyzed for Table 915-1 metals for waste characterization. A background sample was collected for analysis of SAR, Arsenic, and Chromium (VI).

Proposed Groundwater Sampling

Will groundwater samples be collected as part of this investigation? (Number, analyses, and locations of samples):

Two groundwater samples were collected from temporary monitoring wells for analysis of BTEX, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene.

If groundwater is encountered during supplemental site investigations, a grab sample will be collected and analyzed for organic and inorganic compounds per ECOM 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):

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 16

Number of soil samples exceeding 915-1 7

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 1800

NA / ND

ND Highest concentration of TPH (mg/kg) _____

-- Highest concentration of SAR 10.6

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 2

Groundwater

Number of groundwater samples collected 2

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 2

Number of groundwater monitoring wells installed 2

Number of groundwater samples exceeding 915-1 0

ND Highest concentration of Benzene (µg/l) _____

ND Highest concentration of Toluene (µg/l) _____

ND Highest concentration of Ethylbenzene (µg/l) _____

ND Highest concentration of Xylene (µg/l) _____

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 was collected from native soils off the oil and gas location for analysis of SAR, arsenic, and chromium (VI). Residual metals at the site are in compliance with ECMC Table 915-1 regulatory limits and/or background comparisons. Additional backgrounds (3+) will be collected from native soils unimpacted by oil and gas activities for analysis of inorganic compounds and metals per ECMC Table 915-1.

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 to collect confirmation soil samples from previous soil boring locations to confirm the presence of elevated SAR (SB-02, SB-04, SB-07, SB-10) and petroleum hydrocarbon impacts (SB-06, SB-09, SB-10). Previous soil boring samples (SB-09, SB-10) that identified petroleum hydrocarbon impacts will be delineated to investigate the extent of impacts.

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.

A limited site assessment was completed to delineate residual historical impacts observed at the site during reclamation activities. Soil samples were collected for Table 915-1 TPH, organics, and inorganics - a waste characterization sample for metals was also collected. Residual SAR and petroleum hydrocarbon impacts were observed. Groundwater was encountered, confirming the applicability of Table 915-1 GSSLs. Confirmation samples will be collected to confirm the presence of residual petroleum hydrocarbon impacts at the site and delineate the extents of impacts that may have migrated and/or diluted while the site was inaccessible. Source excavation activities will be completed to remove residual SAR and petroleum hydrocarbon impacts at the site. Noble proposes soil samples be collected for analysis of full ECMC Table 915-1 TPH analytical suites.

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.

Confirmation samples will be collected to confirm the presence of residual petroleum hydrocarbon impacts at the site, delineate the extents of impacts, and/or determine if impacts have decreased while the site was inaccessible.

Source excavation activities to remove residual SAR and petroleum hydrocarbon impacts at the site are tentatively scheduled to be completed by the third quarter of 2025. Soil samples will be collected to confirm compliance with ECMC Table 915-1 regulatory limits. If groundwater is encountered during the excavation, a grab groundwater sample will be collected for analysis of organic and inorganic compounds per ECMC Table 915-1. Following completion of source removal activities, monitoring wells will be installed to monitor dissolved phase impacts to groundwater. Groundwater samples will be collected on a quarterly basis for analysis of organic and inorganic compounds per ECMC Table 915-1. No further action will be considered when soil and groundwater concentrations at the site are in compliance with ECMC Table 915-1 regulatory limits.

Excavation activities have continued to be delayed due to limited site accessibility due to wildlife, site saturation, and landowner consultation. Excavation activities are tentatively scheduled to be completed by the end of 3Q25. An updated implementation schedule will be provided in a supplemental Form 27, as needed.

Soil Remediation Summary

In Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

_____ Other _____

Ex Situ

_____ Excavate and offsite disposal

_____ If Yes: Estimated Volume (Cubic Yards) _____

_____ Name of Licensed Disposal Facility or ECMC Facility ID # _____

_____ Excavate and onsite remediation

_____ 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 the excavation, a grab groundwater sample will be collected for analysis of organic and inorganic compounds per ECMC Table 915-1. Following completion of source removal activities, monitoring wells will be installed, and groundwater samples will be collected on a quarterly basis for analysis of organic and inorganic compounds per ECMC Table 915-1. Additional monitoring may be proposed in a supplemental Form 27, as needed.

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/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 (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: \$ 85000

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? 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.

Post-remediation, reclamation will be in accordance with ECMC 1000 Series Rules.

Is the described reclamation complete? No

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. 06/14/2021

Proposed date of completion of Reclamation. 10/31/2028

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. 06/19/2021

Actual Spill or Release date, or date of discovery. 06/18/2021

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/14/2021

Proposed site investigation commencement. 06/14/2021

Proposed completion of site investigation. 07/06/2021

REMEDIAL ACTION DATES

Proposed start date of Remediation. 06/03/2024

Proposed date of completion of Remediation. 12/30/2026

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:

Source excavation activities delayed due to ongoing wildlife and landowner consultation. Site accessibility limited. Implementation schedule updated to reflect the projected timeline to complete source removal and subsequent groundwater monitoring.

OPERATOR COMMENT

Confirmation samples will be collected to confirm the presence of residual SAR and residual petroleum hydrocarbon impacts at the site and delineate the extents of impacts that may have migrated and/or diluted while the site was inaccessible. Additional backgrounds (3+) will be collected to further compare inorganic compounds and metals per ECMC Table 915-1

Source excavation activities to remove residual SAR and petroleum hydrocarbon impacts at the site are tentatively scheduled to be completed by the third quarter of 2025.

Following completion of source removal activities, monitoring wells will be installed to monitor dissolved phase impacts to groundwater and will be sampled quarterly.

Source excavation activities have been delayed due to ongoing wildlife and landowner consultation. Site accessibility limited. Implementation schedule updated to reflect the projected timeline to complete source removal and subsequent groundwater monitoring.

This form is being submitted to serve as a quarterly update. A quarterly reporting schedule will be adhered to moving forward.

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

Signed: William Schoff

Title: Environmental Consultant

Submit Date: 12/20/2024

Email: cvxform@eagle-enviro.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: Nick Cholas

Date: 02/26/2025

Remediation Project Number: 19598

COA Type

Description

	ECMC has processed this form as an update; no analytical was attached thus approval of this form does not imply any agreement with comments on completion of site investigation. All ongoing/unaddressed comments/COAs from previous Forms remain applicable.
1 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

403997666	FORM 27-SUPPLEMENTAL-SUBMITTED
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Total Attach: 1 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)