

State of Colorado Energy & Carbon Management Commission

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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: NOBLE ENERGY INC	Operator No: 100322	Phone Numbers
Address: 1099 18TH STREET SUITE 1500		Phone: (303) 597-6847
City: DENVER State: CO Zip: 80202		Mobile: ()
Contact Person: Phillip Porter	Email: rbueuf27@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 16768 Initial Form 27 Document #: 402601460

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: Tank Battery Closure

SITE INFORMATION

No Multiple Facilities

Facility Type: WELL	Facility ID:	API #: 123-19807	County Name: WELD
Facility Name: DINNER 6-34	Latitude: 40.335807	Longitude: -104.594951	
** correct Lat/Long if needed: Latitude: 40.333754		Longitude: -104.591044	
QtrQtr: SESW	Sec: 6	Twp: 4N	Range: 64W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

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

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

Is groundwater less than 20 feet below ground surface? No

Riverine to the W

SITE INVESTIGATION PLAN**TYPE OF WASTE:**☒ **E&P Waste** ☐ **Other E&P Waste** ☒ **Non-E&P Waste**☒ Produced Water ☐ Workover Fluids no waste generated☒ 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	Not encountered
No	SOILS	NA	Laboratory 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 was conducted pertaining to the Dinner #6-34 Tank Battery.

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):

Four (4) soil samples were initially collected at Dinner #6-34 from the produced water vault (2), the AST (1), and the flowline connection to the separator (1).
 Soil samples were analyzed by a certified laboratory for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons), organic compounds in soil per ECMC Table 915-1, EC, SAR, pH, and boron. All samples collected were analyzed by a certified laboratory using approved ECMC laboratory analysis methods.

Additional soil samples were field screened along the dumpline path from the separator to the water vault, as well as the meter house.

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

If groundwater is encountered, a groundwater sample will be collected and analyzed for full ECMC Table 915-1 organic and inorganic analysis.

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 23

Number of soil samples exceeding 915-1 1

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

Approximate areal extent (square feet) 64

NA / ND

ND Highest concentration of TPH (mg/kg)

-- Highest concentration of SAR 0.69

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 1

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

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?

One (1) background sample was collected near the storage tanks and analyzed for pH during the initial site investigation.

Fifteen (15) additional background samples were collected and analyzed for pH during the supplemental site investigation.

Additional background samples (3+) will be collected from similar lithologic material not impacted by oil and gas activity and analyzed for pH, EC, SAR, boron, and ECMC Table 915-1 metals for further comparison.

☐ 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?

Additional samples (3+) will be collected from locations previously occupied by the tank batteries and water vault and analyzed for all ECMC Table 915-1 analytical suites.

Additional background samples (3+) will be collected from similar lithologic material not impacted by oil and gas activity and analyzed for pH, EC, SAR, boron, and ECMC Table 915-1 metals for further comparison.

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 source was generated.

Additional background samples (3+) will be collected from similar lithologic material not impacted by oil and gas activity and analyzed for pH, EC, SAR, boron, and ECMC Table 915-1 metals for further comparison.

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.

Samples (3+) will be collected and analyzed for full ECMC Table 915-1 analysis. Additional background samples (3+) will be collected from similar lithologic material not impacted by oil and gas activity and analyzed for pH, EC, SAR, boron, and ECMC Table 915-1 metals for further comparison. The supplemental site investigation will be conducted within 90 days of approval of this form. NFA will be considered when all soil and groundwater (if encountered) samples are in compliance with local background or ECMC Table 915-1 concentrations.

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.

Groundwater was not encountered during initial or supplemental site investigations.

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

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: \$ 3000

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.

Reclamation will be in accordance with ECMC 1000 Series Rules. A confirmation sample was collected at the location and depth of the sample previously exceeding ECMC Table 915-1 regulatory limits for pH, TB-SS-06. Residual pH was not observed as still present. Soil samples were collected to laterally and vertically define the previous pH exceedance. Based upon the depth and level of soil suitability impacts and the compliant confirmation sampling results, the risk to vegetation is likely negligible. Based upon this and the use of inspections to monitor future growth, no additional assessment or remediation of pH appears necessary.

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. 09/18/2023

Proposed date of completion of Reclamation. 12/31/2027

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. 11/10/2020

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

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/05/2021

Proposed site investigation commencement. 04/05/2021

Proposed completion of site investigation. 03/30/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. _____

Proposed date of completion of Remediation. _____

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:

Implementations schedule is being updated to reflect current analysis requirements. Samples will be collected and analyzed for all ECMC Table 915-1 analytical suites prior to requesting NFA. The supplemental site investigation will be conducted within 90 days of approval of this form.

OPERATOR COMMENT

Pursuant to ECMC Rule 911 a site investigation was conducted pertaining to the Dinner #6-34 Tank Battery. A confirmation sample was collected at the location and depth of the sample previously exceeding ECMC Table 915-1 regulatory limits for pH, TB-SS-06. Residual pH was not observed as still present. Soil samples were collected to laterally and vertically define the previous pH exceedance. Based upon the depth and level of soil suitability impacts and the compliant confirmation sampling results, the risk to vegetation is likely negligible. Based upon this and the use of inspections to monitor future growth, no additional assessment or remediation of pH appears necessary.

Additional samples (3+) will be collected and analyzed for all ECMC Table 915-1 analytical suites. Additional background samples (3+) will be collected from similar lithologic material not impacted by oil and gas activity and analyzed for pH, EC, SAR, boron, and ECMC Table 915-1 metals for further comparison.

A thorough validation of all analytical data has been conducted and the laboratory results have been attached separately.

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: _____

Email: cvxeform@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: _____

Date: _____

Remediation Project Number: 16768

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**

404031049	ANALYTICAL RESULTS
404031050	ANALYTICAL RESULTS
404031051	ANALYTICAL RESULTS
404031053	ANALYTICAL RESULTS
404031054	ANALYTICAL RESULTS
404032575	SITE INVESTIGATION REPORT

Total Attach: 6 Files

General Comments**User Group****Comment****Comment Date**

		Stamp Upon Approval
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Total: 0 comment(s)