

State of Colorado
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203
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Document Number:

403716137

Receive Date:

03/12/2024

Report taken by:

Krystal Heibel

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 Phone: (970) 730-7281 Mobile: ()
Address: 1099 18TH STREET SUITE 1500		
City: DENVER	State: CO Zip: 80202	
Contact Person: Dan Peterson	Email: rbueuf27@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 30574 Initial Form 27 Document #: 403464932

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: LOCATION	Facility ID: 310894	API #: _____	County Name: WELD
Facility Name: KEHN USX AA-66N63W 1NWNW	Latitude: 40.521033	Longitude: -104.391932	
	** correct Lat/Long if needed: Latitude: 40.519114	Longitude: -104.389921	
QtrQtr: NWNW	Sec: 1	Twp: 6N	Range: 63W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

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

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

Other Potential Receptors within 1/4 mile

Facility within Pronghorn Winter Concentration Area
NA

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	Lab analysis if encountered
No	SOILS	NA	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.

A site investigation was conducted pursuant to ECMC Rule 911 at the KEHN USX T6N-R63W-S1 L03 Facility and Tank Battery location.

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):

Grab confirmation soil samples will be collected from the produced water vessel(s) excavation, beneath the ground oil tank(s), and at the risers for the flowline(s) and dumpline(s) of any separator(s). Soil samples 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 COGCC Table 915-1, and EC, SAR, pH, metals, and boron. All samples collected will be analyzed by a certified laboratory using approved COGCC 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 will be collected and analyzed for all organic compounds per COGCC 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 at the tank battery area 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 COGCC Tank Battery and Produced Water Vessel Closure Checklists will be utilized and filled out during the abandonment process. A photolog will be submitted on the Subsequent Form 27.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 5
Number of soil samples exceeding 915-1 5
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 0

NA / ND

-- Highest concentration of TPH (mg/kg) 210
-- Highest concentration of SAR 0.583
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 0

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?

Fifteen background samples were collected from an area not impacted by oil and gas development at similar depths and lithologies as confirmation samples collected at the location and analyzed for ECMC Table 915-1 metals and soil suitability for reclamation standards (pH, EC, SAR, and Boron). Background soil sample analytical results were exceeded the ECMC Table 915-1 standards arsenic, barium, and pH.

☐ 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?

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.

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.

NA

Soil Remediation Summary

☐ In Situ

☐ Ex Situ

Bioremediation (or enhanced bioremediation)

Excavate and offsite disposal

_____ Chemical oxidation
_____ Air sparge / Soil vapor extraction
_____ Natural Attenuation
_____ Other _____

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.

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 COGCC rules. Records are available on the COGCC's website.

Operator anticipates the remaining cost for this project to be: \$

WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation?

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?

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?

Does the previous reply indicate consideration of background concentrations?

Does Groundwater meet Table 915-1 standards?

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 COGCC 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. _____

Proposed date of completion of Reclamation. _____

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. 07/10/2023

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

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/10/2023

Proposed site investigation commencement. 08/11/2023

Proposed completion of site investigation. 11/10/2023

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:

OPERATOR COMMENT

The Operator proposes to attribute elevated concentrations of metals and pH to native soil conditions based on concentrations in the background samples being greater than concentrations of the same constituents observed in the confirmation sample. Since lab analysis and AVO observations show no evidence to support a the occurrence of a spill or release at the location since all organic and inorganic constituents (beside pH) were in compliance with the Table 915-1 concentration standards. Further VOC and SVOC concentrations were all in compliance and/or "non detect". Therefore outstanding concentrations are unlikely to be related to oil and gas production activities.

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

Signed: Ethan Black

Title: Consultant

Submit Date: 03/12/2024

Email: ethanb@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: Krystal Heibel

Date: 08/12/2024

Remediation Project Number: 30574

COA Type**Description**

	Operator shall provided analytical data in table format, comparing the data to SSLs, within the next submittal.
	Closure request removed. Operator shall provide justification for use of Residential SSL including but not limited to depth to groundwater and the local lithology.
	If groundwater is encountered, Operator will analyze groundwater samples for Table 915-1 Groundwater Inorganic Parameters (total dissolved solids, sulfate, chloride) and organic compounds in groundwater.
3 COAs	

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**

403716137	INVESTIGATION/REMEDATION WORKPLAN (SUPPLEMENTAL)
403805194	SITE INVESTIGATION REPORT
403886224	FORM 27-SUPPLEMENTAL-SUBMITTED

Total Attach: 3 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)