

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

403970898

Receive Date:

11/06/2024

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 ECOM 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) 313-5582 Mobile: ()
Address: 1099 18TH STREET SUITE 1500		
City: DENVER State: CO Zip: 80202		
Contact Person: Jason Davidson	Email: Jason.Davidson@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 29270 Initial Form 27 Document #: 403395718

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: WELL	Facility ID: _____	API #: 123-18038	County Name: WELD
Facility Name: MONFORT GILCREST K 8-9		Latitude: 40.324626	Longitude: -104.794475
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: NESE	Sec: 8	Twp: 4N	Range: 66W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

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

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

Mule Deer Severe Winter Range, Mule Deer Migration Corridor, Bald Eagle Roost Site
Palustrine Wetlands 0.19mi NW, Emergent Wetland 0.18mi W, 0.22mi E, 0.23mi SE, Intermittent Riverine Wetlands 0.03mi S (Union Ditch Ext), Freshwater
Pond 0.25mi NE
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	Not Impacted	Grab Groundwater Sample
Yes	SOILS	IOs only Refer to Tables 4-5 & Fig2	Confirmation Soil Sampling

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 MONFORT GILCREST K08-09 wellhead cut and cap. The wellhead was cut and capped per COGCC rules. Additionally, soil samples were field screened at the N-E-S-W sides of the wellhead. Pursuant to ECMC Rule 911 a site investigation was conducted pertaining to the MONFORT GILCREST K08-09 flowline removal. Approximately 875' of flowline will be removed, however a portion of the flowline will be abandoned-in-place. So as to not disturb the areas of conflict with DCP gas lines, soil samples will only be taken at the start and endpoint of the flowline where the conflict exists. Additionally, soil samples will be collected 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 ECMC will be updated in a supplemental Form 27 if a portion of the flowline is abandoned-in-place due to field constraints.

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 was 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 were field screened at the N-E-S-W sides of the wellhead. Soil samples will be 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 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):

Groundwater was encountered during the site investigation a grab groundwater and was 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 by EPA Method 8260, chloride and sulfate anions by EPA Method 300.0, and total dissolved solids (TDS) by Method SM 2540C.

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 wellhead occurred during abandonment activities. Field personnel field screened all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling was required. The COGCC Wellhead Closure Checklist were utilized and filled out during the abandonment process. A photolog was submitted on the Subsequent Form 27.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

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

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 0.815
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 4

Groundwater

Number of groundwater samples collected 1
Was extent of groundwater contaminated delineated? No
Depth to groundwater (below ground surface, in feet) 4
Number of groundwater monitoring wells installed 0
Number of groundwater samples exceeding 915-1 1

ND Highest concentration of Benzene (µg/l) _____
-- Highest concentration of Toluene (µg/l) 1.55
-- Highest concentration of Ethylbenzene (µg/l) 1.67
-- Highest concentration of Xylene (µg/l) 5.66
NA 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?

☐ 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 pH and arsenic concentrations in the soil at the wellhead and plans to conduct background soil sampling via hand auger from at least three boring locations at similar depths and soil horizons as confirmation soil samples, in areas away from oil and gas infrastructure.

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 impacted soils or groundwater were discovered during wellhead cut and cap activities. Based on site investigation activities and laboratory analytical results of confirmation soil and groundwater samples collected from the southern sidewall of the wellhead, removal of soil is not needed. The material excavated during the cut and cap operations was used as backfill for the excavations.

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.

Based on site investigation activities and laboratory analytical results for confirmation soil and groundwater samples collected from the southern sidewall of the wellhead, a remediation plan is not needed.

Soil Remediation Summary

☐ In Situ

☐ Ex Situ

_____ Bioremediation (or enhanced bioremediation)
_____ Chemical oxidation
_____ Air sparge / Soil vapor extraction
_____ Natural Attenuation
_____ Other _____

_____ 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 encountered at approximately 4 feet below ground surface (ft-bgs) during excavation of the wellhead for cut and cap activities and one grab groundwater sample (GW01) was collected from the wellhead floor. Additional information is provided in the Operator Comments section.

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 Supplemental Form 27

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.

- Facility closure activities and confirmation soil and groundwater sampling were conducted at the Monfort Gilcrest K08-09 wellhead on August 12, 2024. Flowline decommissioning activities have been completed by another consultant and will be summarized in a subsequent Supplemental Form 27 submittal.

- Noble is currently in the process of evaluating residual pH and arsenic concentrations in the soil at the wellhead. Background soil samples will be collected in areas away from oil and gas infrastructure.

Operator anticipates the remaining cost for this project to be: \$ 15000

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? _____

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.

Following facility closure activities at the wellhead, the location was backfilled, compacted, and re-contoured to match pre-existing conditions. The location will be reclaimed in accordance with the ECMC 1000 series.

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. 09/01/2025

Proposed date of completion of Reclamation. 08/31/2028

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. 06/27/2023

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

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/12/2024

Proposed site investigation commencement. 08/12/2024

Proposed completion of site investigation. 02/28/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 03/01/2025

Proposed date of completion of Remediation. 08/31/2025

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:

Site investigation dates have been updated based on the dates field activities were completed.

OPERATOR COMMENT

Facility closure activities and confirmation soil and groundwater sampling were conducted at the Monfort Gilcrest K08-09 wellhead on August 12, 2024.

One facility closure confirmation soil sample was submitted for analysis. The soil sample was collected from the southern sidewall of the wellhead (WH01-S@4). The soil sample was submitted to Origins Laboratory, Inc. in Denver, Colorado for analysis of the full Table 915-1 parameters.

All analytical results for the soil samples submitted for analysis are compliant with their respective Table 915-1 Protection of Groundwater Soil Screening Levels (GWSSLs), except for pH (8.37) and arsenic in soil sample WH01-S@4 (0.922 mg/kg). All organics were reported as below their respective Table 915-1 GWSSLs. Groundwater was encountered at approximately 4 ft-bgs during excavation of the wellhead during cut and cap activities. One grab groundwater sample (GW01) was collected and submitted to Origins for analysis of Table 915-1 parameters. All analytical results for the groundwater sample submitted for analysis are compliant with their respective Table 915-1 Screening Levels except for TDS (1020 mg/L). All organics were reported as below the laboratory detection limits.

Noble is currently in the process of evaluating residual pH and arsenic concentrations in the soil at the wellhead and plans to conduct background soil sampling via hand auger from at least three boring locations at similar depths and soil horizons as confirmation soil samples, in areas away from oil and gas infrastructure. All organic concentrations were reported to be below their respective Table 915-1 screening levels in both soil and groundwater. Therefore, the inorganic concentrations in the groundwater are considered representative of natural site conditions and are unlikely to be due to oil and gas operations.

Please refer to the attached site investigation assessment for a detailed description of activities conducted during wellhead decommissioning.

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: 11/06/2024

Email: chevronfr@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: Nick Cholas

Date: 11/22/2024

Remediation Project Number: 29270

COA Type

Description

	Operator will continue quarterly reporting until the site investigation is complete and Table 915-1 standards are met within the remediation area.
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

403970898	FORM 27-SUPPLEMENTAL-SUBMITTED
403970936	ANALYTICAL RESULTS
403970937	OTHER
403970938	SITE MAP
403970939	SOIL SAMPLE LOCATION MAP
403970942	PHOTO DOCUMENTATION
403970945	ANALYTICAL RESULTS

Total Attach: 7 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
--	--	---------------------

Total: 0 comment(s)