

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404191220

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 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
Address: 1099 18TH STREET SUITE 1500		Phone: (970) 939-1929
City: DENVER State: CO Zip: 80202		Mobile: (970) 939-1929
Contact Person: Jason Davidson	Email: jason.davidson@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 29728 Initial Form 27 Document #: 403418767

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: WELL	Facility ID: _____	API #: 123-33669	County Name: WELD
Facility Name: DONALDSON USX EE29-06D	Latitude: 40.549550	Longitude: -104.695090	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SWNW	Sec: 29	Twp: 7N	Range: 65W Meridian: 6 Sensitive Area? Yes
Facility Type: WELL	Facility ID: _____	API #: 123-33671	County Name: WELD
Facility Name: CALVARY USX EE29-03D	Latitude: 40.549550	Longitude: -104.695170	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SWNW	Sec: 29	Twp: 7N	Range: 65W Meridian: 6 Sensitive Area? Yes

Facility Type: WELL Facility ID: API #: 123-33673 County Name: WELD
 Facility Name: CALVARY USX EE29-04D Latitude: 40.549550 Longitude: -104.695250
 ** correct Lat/Long if needed: Latitude: Longitude:
 QtrQtr: SWNW Sec: 29 Twp: 7N Range: 65W Meridian: 6 Sensitive Area? Yes

Facility Type: WELL Facility ID: API #: 123-33674 County Name: WELD
 Facility Name: DONALDSON USX EE29-12D Latitude: 40.549550 Longitude: -104.695330
 ** correct Lat/Long if needed: Latitude: Longitude:
 QtrQtr: SWNW Sec: 29 Twp: 7N Range: 65W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE Facility ID: 484759 API #: County Name: WELD
 Facility Name: Calvary USX EE29-03D Latitude: 40.549550 Longitude: -104.695170
 ** correct Lat/Long if needed: Latitude: Longitude:
 QtrQtr: SWNW Sec: 29 Twp: 7N Range: 65W Meridian: 6 Sensitive Area? Yes

Facility Type: SPILL OR RELEASE Facility ID: 485162 API #: County Name: WELD
 Facility Name: Donaldson USX EE29-06D Latitude: 40.549520 Longitude: -104.695093
 ** correct Lat/Long if needed: Latitude: Longitude:
 QtrQtr: SWNW Sec: 29 Twp: 7N Range: 65W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

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

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

Freshwater ponds, characterized as wetlands, are present 0.16mi SSE and 0.24mi SW of the Location. Residential areas are 0.13/0.14/0.16/0.19/0.21mi SW and a commercial building is 0.12mi W of the Location.

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 or 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 Energy & Carbon Management Commission (ECMC) Rule 911, site investigations were conducted pertaining to the CALVARY USX #EE29-03D, CALVARY USX #EE29-04D, DONALDSON USX #EE29-06D, and DONALDSON USX #EE29-12D flowline and wellhead decommissioning. On June 26 and 27, 2023, initial wellhead characterization sampling was completed by Eagle Environmental following cut and cap operations at the four wellheads. At each wellhead excavation, soil samples were collected for field screening from the base and four sidewalls. Eight additional surface samples were collected for field screening adjacent to the wells. For the CALVARY USX #EE29-03D all five soil samples were submitted for laboratory analysis. For the CALVARY USX #EE29-04D, the DONALDSON USX #EE29-06D, and the DONALDSON USX #EE29-12D, the base sample only was submitted for analysis. The samples were submitted for analysis of ECMC Table 915-1 organic constituents and Soil Suitability for Reclamation (SSR) parameters. One sidewall sample from the CALVARY USX #EE29-03D excavation was also analyzed for Table 915-1 metals. Additionally two background samples were collected; both were analyzed for pH and one was also analyzed for Table 915-1 metals. See the attached Site Investigation Reports for details.

On September 14, 2023, flowline characterization sampling was completed by Fremont Environmental following removal operations. Field screening samples were collected along each of the removed flowline corridors and one analytical soil sample was collected from each of the flowline connections to the wellheads and submitted for analysis of all Table 915-1 constituents. Four background soil samples were also collected and analyzed for all Table 915-1 inorganics. See the Site Investigation Reports associated with Document 403704019 for details. An aggregated table containing all data collected for the remediation project to date is also attached.

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):

As part of Chevron's data integrity review for projects associated with Eagle Environmental, all wellhead point of compliance samples will be recollected in accordance with the approved Form 27 investigation plan and analyzed for full Table 915-1. Additional supplemental site investigation (SSI) activities will also be conducted to characterize the extent of soil impacts identified by initial investigation activities. Characterization soil samples will be collected and analyzed for all Table 915-1 constituents. Background samples will be collected and analyzed for all Table 915-1 inorganics.

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 sample will be collected and analyzed for all organic and inorganic compounds per 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 wellhead and flowline areas occurred during removal activities. All disturbed areas were field screened using visual and olfactory senses to determine if laboratory confirmation sampling was required.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 8

Number of soil samples exceeding 915-1 8

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet) 200

NA / ND

-- Highest concentration of TPH (mg/kg) 2997

-- Highest concentration of SAR 4.98

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 6

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?

On September 14, 2023, four background soil samples were collected and analyzed for SSR constituents and metals. See the Site Investigation Reports associated with Document 403704019 for details. On June 26, 2023, two background samples were collected; both were analyzed for pH and one was also analyzed for Table 915-1 metals. See the attached Site Investigation Reports for details.

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?

As part of Chevron's data integrity review for projects associated with Eagle Environmental, all point of wellhead compliance samples will be recollected in accordance with the approved Form 27 investigation plan and analyzed for full Table 915-1. Additional SSI activities will also be conducted to characterize the extent of soil impacts identified by initial investigation activities. Characterization soil samples will be collected and analyzed for all Table 915-1 constituents. Background samples will be collected and analyzed for all Table 915-1 inorganics.

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.

Noble is in the process of determining the extent of impacts associated with the project. Once impacts are delineated, Noble will prepare a remediation plan to remove source material within the investigation area.

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.

On June 26 and 27, 2023, initial wellhead characterization sampling was completed by Eagle Environmental following cut and cap operations at the four wellheads. For the CALVARY USX #EE29- 03D five soil samples were submitted for laboratory analysis. For the CALVARY USX #EE29-04D, the DONALDSON USX #EE29-06D, and the DONALDSON USX #EE29-12D, the base sample only was submitted for analysis. The samples were submitted for analysis of Table 915-1 organic constituents and SSR parameters. One sidewall sample from the CALVARY USX #EE29- 03D excavation was also analyzed for Table 915-1 metals. Exceedances of the Protection of Groundwater Soil Screening Levels (PGSSLs) or SSR standards were detected for total petroleum hydrocarbons (TPH), 1-methylnaphthalene, pH, arsenic, and barium at the CALVARY USX #EE29- 03D well. Analytical results for the other three wells indicated compliance with the applicable standards, with the exception of one elevated pH value. Both background samples indicated compliant pH values; one background sample indicated exceedances of arsenic and barium.

On September 14, 2023, flowline characterization sampling was completed by Fremont Environmental following removal operations. One analytical soil sample was collected from each of the flowline connections to the wellheads and submitted for analysis of all Table 915-1 constituents. Analytical results for all four flowlines indicated exceedances of the applicable standards for certain inorganic constituents, including arsenic and barium. Analytical results for the DONALDSON #EE29-06D, also indicated exceedances of organic constituents. Four background soil samples indicated native concentrations of arsenic, barium, and cadmium elevated above PGSSLs. See the Site Investigation Reports associated with Document 403704019 for details. An aggregated table containing all data collected for the remediation project to date is also attached.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Excavate and offsite disposal

_____ Chemical oxidation

_____ If Yes: Estimated Volume (Cubic Yards) _____

_____ 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 decommissioning activities.

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 Update SSIP

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? 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.

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? _____

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. 05/31/2027

Proposed date of completion of Reclamation. 10/31/2027

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. 04/19/2023

Actual Spill or Release date, or date of discovery. 07/10/2023

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/26/2023

Proposed site investigation commencement. 07/05/2023

Proposed completion of site investigation. 08/01/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/01/2025

Proposed date of completion of Remediation. 09/30/2026

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:

The implementation schedule has been changed due to the decommissioning of the CALVARY USX EE29-03D, CALVARY USX EE29-04D, DONALDSON USX EE29-06D, and DONALDSON USX EE29-12D flowlines and necessity for supplemental site investigation activities adjacent to the flowlines. Additional site investigation to recharacterize potential impacts identified during initial site investigation will be completed by August 1, 2025.

OPERATOR COMMENT

This form has been submitted to provide a quarterly update for the CALVARY USX #EE29- 03D, CALVARY USX #EE29-04D, DONALDSON USX #EE29-06D, and DONALDSON USX #EE29-12D wellheads and flowlines (Remediation Project 29728), and to submit wellhead assessment data. No work has been conducted since Q3 2023. See the Site Investigation Reports associated with Document 403704019 for details of the flowline investigations. In response to the COA issued with Form 27 Document 403906262, details of the wellhead decommissioning assessments, including Site Investigation Reports and analytical reports, are attached. Additionally, an aggregate data summary table is attached containing all data collected for the remediation project to date.

Based on currently available data, this project is not affected by data integrity irregularities and is not associated with Operator's data integrity review process and its Rule 525.e. Voluntary Disclosure. As part of its data integrity review process, Operator requested the lab protect the laboratory analytical reports from subsequent unauthorized modification by anyone outside the lab, which resulted in the lab reissuing the original reports with additional protections (Reissued Reports). The Reissued Reports were received directly from the lab on February 13, 2025, which includes a watermark confirming both the laboratory representative who reissued the report and the date and time of the reissuance. The metadata associated with this Reissued Report also includes the lab representative's name, the date and time the laboratory reissued the report, and an explanation for the report reissuance. The Reissued Report is attached to this submission.

In the event additional responsive information is received or discovered that would suggest this project should be incorporated into the ongoing data integrity review process associated with Operator's Rule 525.e. Voluntary Disclosure, Operator will update and/or amend the statements in this submission and provide any new or revised data or other information."

An SSI will be completed to recollect all wellhead point of compliance samples and to delineate the extent of impacts identified by initial investigation activities. The SSI is scheduled to occur by August 2025. Pursuant to Rule 913.e., quarterly reporting will be conducted until closure criteria are achieved for the remediation project.

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

Signed: Miranda Beard

Title: Project Scientist

Submit Date: _____

Email: miranda.beard@gmail.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with ECOMC Rules and applicable orders and is hereby approved.

ECMC Approved: _____

Date: _____

Remediation Project Number: 29728

COA Type

Description

<u>COA Type</u>	<u>Description</u>
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

404194772	ANALYTICAL DATA SUMMARY TABLE(S)
404194782	SITE INVESTIGATION REPORT
404194783	SITE INVESTIGATION REPORT
404194784	SITE INVESTIGATION REPORT
404194785	SITE INVESTIGATION REPORT
404194794	ANALYTICAL RESULTS
404194795	ANALYTICAL RESULTS
404194796	ANALYTICAL RESULTS
404194797	ANALYTICAL RESULTS
404194798	ANALYTICAL RESULTS
404196187	SITE INVESTIGATION PLAN
404198017	ANALYTICAL RESULTS

Total Attach: 12 Files

General Comments

User Group

Comment

Comment Date

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)