

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404141816

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 #: 27419 Initial Form 27 Document #: 403293514

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 #: 123-12032	County Name: WELD
Facility Name: MCBAIN (BAINBRIDGE) 1	Latitude: 40.361790	Longitude: -104.680280	
** correct Lat/Long if needed: Latitude: 40.361784		Longitude: -104.680276	
QtrQtr: NENE	Sec: 32	Twp: 5N	Range: 65W Meridian: 6 Sensitive Area? Yes
Facility Type: SPILL OR RELEASE	Facility ID: 484539	API #: _____	County Name: _____
Facility Name: _____	Latitude: 0.000000	Longitude: 0.000000	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: _____	Sec: _____	Twp: _____	Range: _____ Meridian: _____ Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications CL

Most Sensitive Adjacent Land Use Rangeland

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? Yes

Other Potential Receptors within 1/4 mile

Freshwater Emergent Wetland 0.09mi N, 0.22mi NE, 0.14mi E, 0.02mi S, 0.19mi NW
Riverine 0.12mi NW, 0.12mi E, 0.22mi SW, 0.19mi S
Residential 0.19/0.23/0.24mi NW, 0.08mi NE, 0.09mi E, 0.18/0.20/0.22/0.24/0.25mi SE, 0.24mi S
Farm Structures 0.17/0.19/0.20/0.21/0.22/0.23mi NW, 0.07/0.09mi NE, 0.21mi S, 0.23mi SE

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste | <input type="checkbox"/> Other E&P Waste | <input type="checkbox"/> Non-E&P Waste |
| <input checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids | _____ |
| <input checked="" type="checkbox"/> Oil | <input type="checkbox"/> Tank Bottoms | |
| <input checked="" type="checkbox"/> Condensate | <input type="checkbox"/> Pigging Waste | |
| <input type="checkbox"/> Drilling Fluids | <input type="checkbox"/> Rig Wash | |
| <input type="checkbox"/> Drill Cuttings | <input type="checkbox"/> Spent Filters | |
| | <input type="checkbox"/> Pit Bottoms | |
| | <input type="checkbox"/> Other (as described by EPA) | _____ |

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	GROUNDWATER	TBD	Lab analysis
Yes	SOILS	TBD	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.

Pursuant to ECMC Rule 911 a site investigation was conducted pertaining to the MCBAIN (BAINBRIDGE) #1 wellhead cut and cap. The wellhead was cut and capped per ECMC rules. The flowline was previously abandoned on 6/20/2018, and the ECMC was notified on a Form 44.

Four (4) grab confirmation soil samples were collected at the wellhead excavation. Soil samples were analyzed by a certified laboratory for full Table 915-1 compound list. A grab groundwater sample was collected and analyzed for BTEX, naphthalene, 1,2,4-TMB, and 1,3,5-TMB.

Additional investigation activities included installing soil borings near the abandoned wellhead and in the four cardinal directions around the wellhead. Soil borings were converted to five (5) monitoring wells. Groundwater and soil samples were collected for the analysis of ECMC Table 915-1 compounds for soil and water compliance and results screened against Residential Soil, and Protection of Groundwater Soil, and Groundwater screening levels.

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):

Proposed Groundwater Sampling

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

Groundwater samples will be collected from the five (5) monitoring wells on a quarterly basis and analyzed for ECMC 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 0
Number of soil samples exceeding 915-1 _____
Was the areal and vertical extent of soil contamination delineated? _____
Approximate areal extent (square feet) _____

NA / ND

-- Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR _____
BTEX > 915-1 _____
Vertical Extent > 915-1 (in feet) _____

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?

Backgrounds samples for SSR compounds and Table 915-1 Metals analysis were collected.

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 current source was generated.

REMEDATION 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.

A site assessment was conducted to delineate impacted media identified at the wellhead. Confirmation soil samples were collected from each soil boring collected for analysis of TPH (C6-C36), Table 915-1 organics in soil, SAR, pH, arsenic, barium, lead, and selenium in accordance with approved Form 27 Doc. # 403418237. Upon encountering groundwater, each soil boring was completed as a monitoring well. Monitoring wells will be sampled on a quarterly basis. A source excavation will be scheduled to address residual lead identified in soil during delineation of residual impacts. In the absence of petroleum hydrocarbon impacts identified during the delineation assessment, The Operator proposes an amended sampling plan to include analysis lead in soil per ECMC 915-1. Excavation results will be provided in a supplemental Form 27. NFA will be considered when soil is in compliance with ECMC Table 915-1 regulatory limits and groundwater concentrations are in compliance with ECMC Table 915-1 regulatory limits for a minimum of four (4) consecutive post-remediation quarters.

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
- _____ No Land Treatment
- _____ No Bioremediation (or enhanced bioremediation)
- _____ No Chemical oxidation
- _____ Yes Other Source Excavation _____

Groundwater Remediation Summary

- _____ Bioremediation (or enhanced bioremediation)
- _____ Chemical oxidation
- _____ Air sparge / Soil vapor extraction
- Yes _____ 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.

Monitoring wells MW-01 through MW-05 will be sampled on a quarterly basis. Groundwater samples will be submitted to a certified laboratory for analysis of ECMC Table 915-1. Any monitoring wells destroyed during source excavation activities will be replaced. Replacement wells will be added to the approved sampling plan.

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.

The Operator intends to directly address the costs of remediation at the locations as part of our asset retirement obligation process and operations. The Operator 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: \$ 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? No _____

Does the previous reply indicate consideration of background concentrations? _____

Does Groundwater meet Table 915-1 standards? No _____

Is additional groundwater monitoring to be conducted? Yes

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? 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. 04/25/2023

Proposed date of completion of Reclamation. 10/31/2029

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. 12/08/2022

Actual Spill or Release date, or date of discovery. 05/03/2023

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 04/25/2023

Proposed site investigation commencement. 02/01/2023

Proposed completion of site investigation. 08/31/2023

REMEDIAL ACTION DATES

Proposed start date of Remediation. 09/01/2023

Proposed date of completion of Remediation. 12/31/2026

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:

OPERATOR COMMENT

In response to ECMC Form-27 comment dated February 17, 2025 (Document Number 404037175), the Operator has requested analytical lab reports associated with this remediation number (project) be protected from unauthorized modification by anyone outside the certified laboratory. As a result, the associated lab(s) reissued the original reports for this project with additional security measures (Reissued Reports).

The reissued reports associated with the site investigation were received directly from Origins/Enthalpy laboratory on 2/13/2025 and 4/17/2025 and include a watermark confirming both the laboratory representative who reissued the report and the date and time of the reissuance. The Reissued Reports are attached to this submission.

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.

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, the Operator will update and/or amend the statements in this submission and provide any new or revised data to ECMC.

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

Signed: Tamara Yerkes

Title: Environmental Consultant

Submit Date: _____

Email: cvxform27@erm.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: 27419

COA Type**Description**

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**

404169445	ANALYTICAL RESULTS
404169446	ANALYTICAL RESULTS
404169449	ANALYTICAL RESULTS
404169451	ANALYTICAL RESULTS
404169453	ANALYTICAL RESULTS
404169455	ANALYTICAL RESULTS
404169457	ANALYTICAL RESULTS
404169458	ANALYTICAL RESULTS
404169461	ANALYTICAL RESULTS
404169464	ANALYTICAL RESULTS
404169469	ANALYTICAL RESULTS
404169472	ANALYTICAL RESULTS
404169476	ANALYTICAL RESULTS
404169482	ANALYTICAL RESULTS
404169484	ANALYTICAL RESULTS
404169492	ANALYTICAL RESULTS
404170140	ANALYTICAL RESULTS

Total Attach: 17 Files

General Comments

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

Total: 0 comment(s)