

State of Colorado
Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



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404336898

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 Phone: (832) 349-0757 Mobile: (832) 349-0757
Address: 1099 18TH STREET SUITE 1500		
City: DENVER	State: CO	Zip: 80202
Contact Person: Lauren Hoff	Email: Lauren.Hoff@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 21787 Initial Form 27 Document #: 402936052

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 #: 123-22625	County Name: WELD
Facility Name: STEPHENSON 6-31	Latitude: 40.513070	Longitude: -104.594650	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NESW	Sec: 6	Twp: 6N	Range: 64W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SC Most Sensitive Adjacent Land Use Crop Land

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

Riverine 0.13mi N, 0.16mi NE, 0.17mi NE, 0.25mi SW
Manmade Pond 0.22mi NW

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
UNDETERMINED	GROUNDWATER	NA	Lab Analysis and 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 ECMC Rule 911 a site investigation was conducted pertaining to the STEPHENSON 06-31 wellhead cut and cap and flowline removal. A preliminary site investigation soil sampling was conducted from the wellhead excavation on 03/08/2022 and from the flowline on 03/09/2023. Sampling results indicated that two samples along the flowline exceeded the ECMC Table 915-1 Protection of Groundwater Soil Screening Levels for petroleum hydrocarbons. Groundwater was not encountered at the wellhead or along the flowline. Form 19 Doc. #403350466 for both organic exceedances were submitted on 03/20/2023 and Spill ID 484081 was assigned.

Delineation sampling was conducted on December 12, 2024. Twenty-five soil samples were collected to delineate exceedances identified along the flowline including one sample collected at the flowline terminus. Soil samples were field screened prior to collection. Samples were submitted to a certified laboratory and analyzed for the full extent of Table 915-1 compounds for soil. Elevated PID readings were not identified in the soil samples collected. Analytical results from soil samples collected indicate exceedances of barium, cadmium and lead in multiple samples collected from the site. Delineation sampling results were submitted with supplemental form 27 document number 404228165.

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):

Operator will conduct supplemental source mass removal (SSMR) excavation activities and will sample bottom and side wall samples until standards are met. Grab confirmation soil samples (a minimum of one floor sample and four sidewall samples) will be collected once the proposed excavation boundaries are achieved. Samples will be field screened and analyzed for all ECMC Table 915-1 compounds. All samples collected will be analyzed by a certified laboratory using approved ECMC 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 samples will be collected and analyzed for full Table 915-1 constituents.

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 21
Number of soil samples exceeding 915-1 11
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 1100

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 12.2
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 5

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?

Background soil samples will be obtained sufficiently away from the investigation areas to reflect native conditions not impacted by oil and gas activity, and from similar depths and lithologic materials for comparison to confirmation soil sample results. Background samples will be analyzed for ECMC Table 915-1 SSR parameters and metals. Maximum background concentrations for compounds that exceed ECMC Table 915-1 in soil samples collected for closure assessment include: pH (8.76 SU, 3 ft bgs), conductivity (12.2 mmhos/cm, 3 ft bgs), soil absorption ratio (12.2, 3 ft bgs) arsenic max X 1.25 (7.84 mg/kg, 3ft bgs), barium max X 1.25 (336.25 mg/kg, 3 ft bgs), cadmium max X 1.25 (0.49 mg/kg, 4 ft bgs), lead max X 1.25 (15.5 mg/kg, 3 ft bgs) and selenium max X 1.25 (0.46 mg/kg, 2 ft bgs).

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?

Confirmation samples will be collected from the excavation until analytical results are below standards. Additional investigation may be required pending remedial activities and compliance with Soil Reclamation standards. Additional background samples will be collected from native, undisturbed areas from corresponding sample depths and analyzed for ECMC Table 915-1 SSR / metals for comparison, as necessary.

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.

Operator will conduct supplemental source mass removal (SSMR) excavation activities and sample both the floor and sidewalls. Collected soil samples will be analyzed by a certified laboratory using approved ECMC laboratory analysis methods. Please refer to the attached proposed Remedial Action Plan.

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.

Laboratory analysis from the flowline sampling conducted on 03/09/2023 indicated that two samples along the flowline exceeded the ECMC Table 915-1 Protection of Groundwater Soil Screening Levels. Sample FL-SS-01 @ 3' exceeded soil screening levels for 1-Methylnaphthalene, benzo(a)-anthracene, naphthalene, arsenic, barium and lead. Sample FL-SS-05 @ 3' exceeded soil screening levels for benzo(a)-anthracene. These exceedances will be removed through two supplemental source mass removal (SSMR) excavations of approximately 20' x 20' x 4' (1,600 cubic feet each, 3,200 cubic feet total, or approximately 119 cubic yards) centered on boring locations FL-SS-01 @ 3' and FL-SS-05 @ 3'. The proposed excavations are depicted on the attached figures. Excavated soils will be field screened with a PID and visual/olfactory senses to determine the extent of the excavation boundary. A minimum of one (1) floor and four (4) sidewall confirmation soil samples will be collected from the excavation (If the sidewalls extend beyond 40 linear feet, or the floor of the excavation is larger than 500 square feet, then additional samples will be collected). A grab groundwater sample will be collected if encountered. All samples collected will be analyzed for ECMC Table 915-1 constituents. The analytical results of the remedial excavation will be submitted on a subsequent Form 27.

Source excavation activities are anticipated to commence at the site in Q4 2025. NFA will be considered when soil and/or groundwater (if encountered) concentrations are in compliance with ECMC Table 915-1 standards. All samples collected will be analyzed for full ECMC Table 915-1 constituents. The analytical results of the remedial excavation will be submitted on a subsequent Form 27. SSMR activities at the site are currently being scheduled.

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 the initial decommissioning event or subsequent supplemental site investigation activity.

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 and SSMR

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? 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.

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. 03/08/2022

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. 11/03/2021

Actual Spill or Release date, or date of discovery. 03/09/2023

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/08/2022

Proposed site investigation commencement. 02/15/2022

Proposed completion of site investigation. 12/31/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 10/01/2025

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:

The implementation schedule has been changed due to the necessity for remedial excavation activities associated with organic impacts. Excavation is scheduled to commence in Q4 2025. Operator will notify ECMC on a subsequent form submittal if the proposed excavation activities are delayed from the proposed schedule, the reasoning, and an updated timeline.

OPERATOR COMMENT

This supplemental form 27 serves as a 3Q25 quarterly update, and submittal of the remedial action plan for excavation activities and associated confirmation sampling for the STEPHENSON 6-31 wellhead and flowline abandonment (REM # 21787).

The initial wellhead and flowline sampling and abandonment activities were conducted in March 2023, and the sampling results were included with the submission of supplemental form 27 Doc.#s 403904080 and 404018714. The analytical results indicate exceedances 1-Methylnaphthalene, benzo(a)-anthracene, naphthalene, arsenic, barium and lead in sample FL-SS-01 @ 3' and an exceedance of benzo(a)-anthracene in sample FL-SS-05 @ 3'.

Delineation sampling was conducted in December 2024 the areas surrounding sample locations FL-SS-01 @ 3' and FL-SS-05 @ 3'. Analytical results from soil samples collected indicate exceedances of barium, cadmium and lead in multiple samples collected from the site. No additional petroleum hydrocarbon exceedances were identified. The site investigation results were submitted with the submission of supplemental form 27 Doc.# 404228165.

Supplemental source mass removal via mechanical excavation will be completed at the wellhead to address petroleum hydrocarbon exceedances identified at sample locations FL-SS-01 @ 3' and FL-SS-05 @ 3'. Post-excavation confirmatory samples will be collected until Table 915-1 standards are met. Operator is in the process of scheduling excavation activities and estimates the remedial activities to begin in Q4 2025.

Pursuant to Rule 913.e, quarterly reporting will be conducted until closure criteria are achieved for the remediation project. Results of the source mass removal activities will be submitted on a subsequent Form 27.

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

Signed: Michael LeFrancois _____

Title: Environmental Consultant _____

Submit Date: _____

Email: michael.lefrancois@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: 21787

COA Type

Description

0 COA	
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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

404337198	REMEDIAL ACTION PLAN
404337201	REMEDIAL ACTION PLAN

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)