

State of Colorado  
Energy & Carbon Management Commission

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Document Number:  
404329935

Receive Date:

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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: <u>NOBLE ENERGY INC</u>	Operator No: <u>100322</u>	<b>Phone Numbers</b>
Address: <u>1099 18TH STREET SUITE 1500</u>		Phone: <u>(832) 349-0757</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>( )</u>
Contact Person: <u>Lauren Hoff</u>	Email: <u>lauren.hoff@chevron.com</u>	

**PROJECT, PURPOSE & SITE INFORMATION**

**PROJECT INFORMATION**

Remediation Project #: 30922 Initial Form 27 Document #: 403490531

**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: <u>WELL</u>	Facility ID: _____	API #: <u>123-26950</u>	County Name: <u>WELD</u>
Facility Name: <u>STROH D 07-31</u>	Latitude: <u>40.243450</u>	Longitude: <u>-104.603190</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NENE</u>	Sec: <u>12</u>	Twps: <u>3N</u>	Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

**SITE CONDITIONS**

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

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**

Farming Structures 0.20/0.21mi S; 0.21mi SE  
Residential Structures 0.18mi S; 0.20mi SE

**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 and Field Screening if Encountered
Yes	SOILS	Refer to Figures and Tables	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 STROH D07-31 flowline removal. In October 2023 approximately 923' of flowline was removed; approximately 608' of flowline was abandoned in place and the ECMC was notified on Form 44 Document Number 403628340.

The portion of the flowline that is partially abandoned in place was common trenched with wellhead STROH H12-07 Remediation Number 18960 which received a NFA in approved ECMC document number 403199686 on November 11 2022. The directional turn for this portion of the flowline is associated with this remediation number.

During October 2023 flowline removal and closure activities, soil along the flowline was field screened at the cut points for removal (2) , directional changes (2) , and terminus (2) at the wellhead and the terminus at the separator. Four (4) grab soil sample were collected by a previous consultant at the flowline terminuses (2) at the wellhead and separator, flowline directional change (2). Soil samples were analyzed by a certified laboratory for the full extent of Table 915-1 using approved ECMC laboratory analysis methods. Exceedances of ECMC Table 915-1 arsenic and selenium were present in all four flowline grab soil samples.

During April 2025, during a site investigation with the associated Tank Battery Location STROH D-63N65W 12NENE Remediation Number 30666, a confirmation soil sample was collected at the flowline connection at the separator (SEP02-FL@4.5') for analysis by a certified laboratory for the full extent of Table 915-1. Per in-process SF27 document number 404209062, these analytical results are pending.

**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 ):

Confirmation soil samples will be collected along the flowline at minimum of every 250' along the flowline, at the flowline terminus at the wellhead, and at flowline directional changes for analysis of the full extent of ECMC Table 915-1. 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. Proposed confirmation soil sample and background soil sample locations are shown on the Site Investigation Plan attached to this form 27.

**Proposed Groundwater Sampling**

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

If encountered during Site investigation activities, a grab groundwater sample 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 ):

Visual inspection of the flowline occurred during flowline abandonment and removal activities. Field personnel field screened all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling is required. The ECMC Flowline Closure Checkline was utilized and filled out during the abandonment process.

**SITE INVESTIGATION REPORT**

**SAMPLE SUMMARY**

**Soil**

Number of soil samples collected 4  
Number of soil samples exceeding 915-1 4  
Was the areal and vertical extent of soil contamination delineated? Yes  
Approximate areal extent (square feet) 400

**NA / ND**

ND Highest concentration of TPH (mg/kg) \_\_\_\_\_  
-- Highest concentration of SAR 1.64  
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 0

**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?

A background sample was collected for arsenic and selenium analysis. Background data collected by previous consultant will not be utilized in the site background determination/compliance evaluation process.

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 soil sampling will be conducted along the flowline at all previous flowline closure grab sample locations, including collection of soil samples at minimum of every 250' along the flowline and at all flowline directional changes for the full extent of Table 915-1.

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.

**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 material caused by oil and gas operations was identified at this time.

**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

\_\_\_\_\_ 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 initial flowline decommissioning sampling.

# 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, Site Investigation Plan

## 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. 10/02/2023

Proposed date of completion of Reclamation. 10/31/2028

## 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. 07/20/2023

Actual Spill or Release date, or date of discovery. \_\_\_\_\_

### **SITE INVESTIGATION DATES**

Date of Initial Actions described in Site Investigation Plan (start date). 10/02/2023

Proposed site investigation commencement. 10/15/2023

Proposed completion of site investigation. 12/31/2025

### **REMEDIAL ACTION DATES**

Proposed start date of Remediation. 12/31/2025

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:

Implementation schedule updated to reflect the schedule to complete the supplemental site investigation. The ECMC will be updated on a subsequent Form 27 with the results of the supplemental site investigation, or if the schedule is changed due to site access constraints.

**OPERATOR COMMENT**

This is a quarterly update and propose site investigation plan for STROH D07-31.

In October 2023 approximately 923' of flowline was removed; approximately 608' of flowline was abandoned in place.

Four (4) grab soil sample were collected at the flowline terminuses (2) at the wellhead and separator , flowline directional change (2). Soil samples were analyzed by a certified laboratory for the full extent of Table 915-1 using approved ECMC laboratory analysis methods. Exceedances of ECMC Table 915-1 arsenic and selenium were present in all four flowline grab soil samples.

Confirmation soil sampling will be conducted along the flowline at all previous flowline closure grab sample locations, including collection of soil samples at minimum of every 250' along the flowline and at all flowline directional changes for the full extent of Table 915-1.

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.

Proposed confirmation soil samples and background soil samples are shown on the attached proposed Site Investigation Plan.

Pursuant to Rule 913.e, quarterly reporting will continue for the location until data indicates no further action is warranted.

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: 30922

**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**

404353962	SITE INVESTIGATION PLAN
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Total Attach: 1 Files

**General Comments**

**User Group**

**Comment**

**Comment Date**

		Stamp Upon Approval
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Total: 0 comment(s)