

State of Colorado
Energy & Carbon Management Commission

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



Document Number:
404141320

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: <u>NOBLE ENERGY INC</u>	Operator No: <u>100322</u>	Phone Numbers
Address: <u>1099 18TH STREET SUITE 1500</u>		Phone: <u>(970) 313-5582</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>()</u>
Contact Person: <u>Jason Davidson</u>	Email: <u>jason.davidson@chevron.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 34770 Initial Form 27 Document #: 403703611

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>123-30608</u>	County Name: <u>WELD</u>
Facility Name: <u>ARENS G 26-19</u>	Latitude: <u>40.286500</u>	Longitude: <u>-104.635360</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWNW</u>	Sec: <u>26</u>	Twps: <u>4N</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? 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

Aquatic Native Species Conservation Waters HPH 0.14mi W
Freshwater Emergent Wetland 0.1mi E, 0.23mi W, 0.25mi NE
Freshwater Pond 0.19mi NW, 0.22mi SW
Residential 0.22mi W
Farm Structure 0.21/0.22mi W

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 or field screening, if encountered
Yes	SOILS	10' x 10' x 6'	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 by Entrada Consulting Group pertaining to the ARENS G26-19 wellhead cut and cap. The wellhead was cut and capped per ECMC 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 ARENS G26-19 flowline removal and partial abandonment by Tasman Inc. on 08/07/2024. Approximately 670' of flowline was removed, however, approximately 2295' of the flowline was abandoned-in-place due to field constraints. The Form 44 document number associated with the flowline abandonment (#403975459) is included under Related Forms. The ECMC will be updated in a supplemental Form 27 if the abandoned portion is able to be removed. So as to not disturb the area of field constraint, soil samples were taken at the start and endpoint of the flowline where the area exists. Soil samples will also 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 sample SEP01-FL@3' was collected during the decommissioning of the associated facility, Beebe Draw T432 R65W S26 L04 (Remediation #34682), to serve as the flowline-separator riser sample.

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 by Entrada Consulting Group at the base of the excavation or the area showing the highest degree of impact during field screening activities at the wellhead excavation (WH01@6' and FLR01@4'). Additionally, soil samples were field screened at the N-E-S-W sides of the wellhead (WH01-N@4', WH01-S@4', and WH01-W@4'). Soil samples were taken by Tasman Inc. at the start and endpoint of the flowline (FL01-04@4' and FL01-05@2'). Soil samples were analyzed for the full extent of Table 915-1, including but not limited to: TPH, organic compounds in soil per ECMC Table 915-1, and EC, SAR, pH, metals, and boron. All samples collected were analyzed by a certified laboratory using approved ECMC laboratory analysis methods. The confirmation soil samples collected during wellhead cut and cap activities were determined to be outside of the required temperature preservation range when delivered to the laboratory. Resampling will be conducted.

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 will be 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 and flowline occurred during abandonment activities. Field personnel field screened all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling was required. A detailed summary of wellhead and flowline decommissioning activities, including field notes, site photos, figures, and laboratory analytical results, was attached to the previously submitted Form 27, document number 404036384.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 5

Number of soil samples exceeding 915-1 1

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

Approximate areal extent (square feet) 100

NA / ND

ND Highest concentration of TPH (mg/kg) _____

-- Highest concentration of SAR 11.2

BTEX > 915-1 No

Vertical Extent > 915-1 (in feet) 4

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 08/07/2024, three background samples were collected from one discrete location (BKG01) during decommissioning adjacent to the flowline. On 02/07/2025, nine background soil samples were collected from three discrete locations (BKG02-BKG04) during remedial excavation activities at soil sample location FL01R-W@2'. Background soil samples were collected from depths ranging between 2 to 5 feet below ground surface (ft bgs) and analyzed for metals in soil per ECMC Table 915-1, pH, EC, SAR and boron. The maximum background concentration with a 1.25x multiplier applied for arsenic was calculated to be 2.11 mg/kg.

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?

Following flowline removal activities and concurrently with the remedial excavation proposed in the Remedial Action Plan section of this Form 27, additional background samples will be collected to determine if elevated arsenic is attributed to native soil conditions at the site. Proposed background soil sample locations are shown on the attached proposed excavation map. The confirmation soil samples collected during wellhead cut and cap activities were determined to be outside of the required temperature preservation range when delivered to the laboratory. Re-sampling will be conducted at the WH01@6' sample location. As the flowline endpoint sample SEP01-FL@3' was collected under the Beebe Draw T4N R65W S26 L04 Tank Battery, all further site investigation to address the pH exceedance observed at sample location SEP01-FL@3' will proceed under Remediation #34682.

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.

The benzo(a)anthracene exceedance observed at sample location FL01R-W@2' during decommissioning was removed through remedial excavation. Remedial excavation samples were collected and analyzed for full ECMC Table 915-1 constituents.

Following flowline removal, the benzo(a)anthracene exceedance observed at sample location FL01-04@4' will be removed through a remedial excavation.

REMIATION 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.

Pursuant to the FL01R-W@2' release area, a total of approximately 30 cubic yards of impacted material were removed for off-site disposal at the North Weld Landfill in Ault, Colorado under signed Noble waste manifest. A total of approximately 30 cubic yards of imported clean fill was used to backfill the excavation. The final remedial excavation extent measured approximately 10 ft. by 10 ft. by 4 feet below ground surface (ft. bgs).

Remedial excavation confirmation soil samples for the proposed remedial excavation at sample location FL01-04@4' will be collected and analyzed for full ECMC Table 915-1 constituents. The results of the remedial excavation will be submitted on a subsequent Form 27.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes _____ Excavate and offsite disposal

_____ Chemical oxidation

_____ If Yes: Estimated Volume (Cubic Yards) _____ 30

_____ 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 and remedial excavation 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 Remedial Excavation Sample Summary and Supplemental Site Investigation Proposal

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? Yes

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

No beneficial use has been determined at this time.

Volume of E&P Waste (solid) in cubic yards 30

E&P waste (solid) description Soil

ECMC Disposal Facility ID #, if applicable: _____

Non-ECMC Disposal Facility: North Weld Landfill

Volume of E&P Waste (liquid) in barrels 0

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. 05/17/2024

Proposed date of completion of Reclamation. 12/25/2026

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. 02/29/2024

Actual Spill or Release date, or date of discovery. 08/14/2024

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/17/2024

Proposed site investigation commencement. 06/25/2025

Proposed completion of site investigation. 12/25/2025

REMEDIAL ACTION DATES

Proposed start date of Remediation. 06/25/2025

Proposed date of completion of Remediation. 06/25/2026

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 completion of the February 2025 remedial excavation at the Arens G26-19 Flowline and necessity for additional remedial excavation activities adjacent to the flowline. The proposed remedial excavation will be completed following the removal of the abandoned-in-place portion of the flowline.

OPERATOR COMMENT

This Form 27 is being submitted to include the results from the remedial excavation at FL01R-W@4' sample location and propose source removal activities at the Arens G26-19 flowline location. A proposal to excavate the benzo(a)anthracene exceedance observed at sample location FL01-04@4' during decommissioning, following flowline removal activities, is presented in the Remedial Action Plan section of this Form 27. A comprehensive data packet summarizing remedial excavation activities is attached to this Form 27, and a detailed summary of the previously completed remedial excavation activities is presented in the Remedial Action Plan sections and below.

The attached Summit Scientific lab report (2502132) is a reissued report. The difference in the created and modified dates indicated in the document properties needs to be addressed or the Form will be denied. Please include the following statement prior to the final paragraph, "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 report from subsequent unauthorized modification by anyone outside the lab, which resulted in the lab reissuing the original report with additional protections (Reissued Report). The Reissued Report was received directly from the lab on March 28, 2025, which includes the application of a Digital ID/Verified Certification (lock) to support 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.

Pursuant to the FL01R-W@2' release area, a total of approximately 30 cubic yards of impacted material were removed for off-site disposal at the North Weld Landfill in Ault, Colorado under signed a Noble waste manifest. A total of approximately 30 cubic yards of imported clean fill was used to backfill the excavation. The final remedial excavation extent measured approximately 10 ft. by 10 ft. by 4 feet below ground surface (ft. bgs).

Remedial excavation confirmation soil samples for the proposed remedial excavation at sample location FL01-04@4' will be collected and analyzed for full ECMC Table 915-1 constituents. Alongside the remedial excavation, background soil samples will be collected to determine if the arsenic exceedance at SS04@2' is attributed to native soil conditions at the site. The results of the remedial excavation will be submitted on a subsequent Form 27.

Previously submitted Supplemental Form 27 Document #403889526 was denied because confirmation soil samples collected during wellhead cut and cap activities were determined to be outside of the required temperature preservation range when delivered to the laboratory. Re-sampling will be conducted at the WH01@6' sample location.

On 08/07/2024, three background samples were collected (BKG01) and on 02/07/2025, nine background soil samples were collected (BKG02-BKG04). A detailed summary of background results is presented in the Site Investigation Report section of this Form 27.

Pursuant to Rule 913.e, quarterly reporting will be conducted until closure criteria are achieved for the remediation project. The results of the upcoming remedial excavation for the beno(a)anthracene exceedance observed at sample location FL01-04@4' 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: Andy Sagen

Title: Environmental Consultant

Submit Date: _____

Email: asagen@tasman-geo.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: 34770

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

404259389	ANALYTICAL RESULTS
404259391	ANALYTICAL RESULTS
404264856	SITE INVESTIGATION PLAN
404268474	SITE INVESTIGATION REPORT

Total Attach: 4 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)