

State of Colorado
Energy & Carbon Management Commission

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Document Number:
404321970

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: <u>NOBLE ENERGY INC</u>	Operator No: <u>100322</u>	Phone Numbers
Address: <u>1099 18TH STREET SUITE 1500</u>		Phone: <u>(970) 786-0202</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>()</u>
Contact Person: <u>Kristofer Shepherd</u>	Email: <u>Kristofer.Shepherd@chevron.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 29002 Initial Form 27 Document #: 403359407

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>123-18692</u>	County Name: <u>WELD</u>
Facility Name: <u>WIEST 28-11H6</u>	Latitude: <u>40.368217</u>	Longitude: <u>-104.786966</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>NESW</u>	Sec: <u>28</u>	Twps: <u>5N</u>	Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

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

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

Dry creek ~0.05 mi S
Dwelling ~0.08 mi N

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
No	GROUNDWATER	Refer to Tables and Figures	Laboratory analysis and field screening
Yes	SOILS	Refer to Tables and Figures	Laboratory 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 WIEST 28-11H6 flowline removal. On 08/16/2023 and 08/17/2023, approximately 1200' of flowline was removed; however, an approximately 100' portion of flowline, was abandoned-in-place (ABIP) due to field constraints. This ABIP portion of the line was returned to and removed in 2023 per Form 44 #403650448, submitted 01/10/2024. During decommissioning, grab soil sample was collected at the base of the excavation or the area showing the highest degree of impact during field screening activities. Additionally, soil samples were collected at the flowline risers at the wellhead and separator (FL01-A@4' and FL01-B@4', respectively), any points of material change and/or hammer unions, directional changes (FL01-E@4' and FL01-K@4'), bell holes on either side of a waterway, bell holes where groundwater was present (FL01-D@4'), and were field screened along the flowline location to confirm the presence or absence of impacts (FL01-C@4', and FL01-F@4' through FL01-J@4').

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):

Soils were collected as described in the Initial Action Summary of this Supplemental Form 27. Soil samples were analyzed by a certified laboratory for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons) organic compounds in soil per ECMC Table 915-1, and EC, SAR, pH, and boron. All samples collected were 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):

Groundwater was encountered during the August 2023 decommissioning activities and a grab groundwater sample was collected and analyzed for organic compounds per ECMC Table 915-1 (GW01@4').

Groundwater was encountered during the April 2025 site investigation and one grab groundwater sample BH01/GW01 was collected and submitted for analysis for all organic and inorganic compounds per 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):

Visual inspection of the flowline areas occurred during abandonment activities. Field personnel screened all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling was required. A detailed summary of decommissioning activities, including field notes, site photos, figures, and laboratory analytical results, is attached to a previous Supplemental Form 27 (ECMC Document #403604318).

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 5
Number of soil samples exceeding 915-1 2
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 200

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 1.2
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 4

Groundwater

Number of groundwater samples collected 1
Was extent of groundwater contaminated delineated? Yes
Depth to groundwater (below ground surface, in feet) 6
Number of groundwater monitoring wells installed 0
Number of groundwater samples exceeding 915-1 1

ND Highest concentration of Benzene (µg/l) _____
ND Highest concentration of Toluene (µg/l) _____
ND Highest concentration of Ethylbenzene (µg/l) _____
ND Highest concentration of Xylene (µg/l) _____
NA Highest concentration of Methane (mg/l) _____

Surface Water

0 Number of surface water samples collected
0 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 04/14/2025, fifteen background soil samples were collected from five discrete locations (BKG02-BKG06) adjacent to the flowline and analyzed for metals in soil per ECMC Table 915-1, pH, EC, SAR and boron. Background soil samples were collected from depths ranging between 0 to 5 feet below ground surface (ft bgs). The maximum background concentrations with a 1.25x multiplier applied for the following metals were calculated to be: 12.25 mg/kg for arsenic; 445 mg/kg for barium; 0.288 mg/kg for cadmium; and 0.363 mg/kg for selenium. All site arsenic and barium concentrations observed were below 1.25x the maximum background level. Selenium and cadmium concentrations remain above background levels.

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?

A supplemental site investigation (SSI) will be completed to resample FL01-D@4' to confirm the elevated selenium concentration and FL01-E@4' to confirm the elevated cadmium concentration encountered during initial decommissioning. A proposed SSI map is attached to this Form 27. During the SSI, soil samples will be collected and analyzed for full ECMC Table 915-1 constituents. Concurrently with the SSI, additional background samples will be collected to determine if elevated selenium and cadmium are attributed to native soil conditions at the site. The SSI will be completed in accordance with the proposed implementation schedule, and the results of the SSI will be submitted on a subsequent Form 27.

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.

On 04/14/2025, a Site Assessment was conducted in which five soil borings were advanced (BKG02-BKG06) to collect background soil samples from native material adjacent to the flowline. Additionally, a soil boring (BH01) was advanced to 10 ft bgs at the location groundwater was encountered during initial decommissioning (GW01@4') to collect a groundwater sample for all organic and inorganic compounds per ECMC Table 915-1. Groundwater was encountered at approximately 6 ft. bgs, and one grab groundwater sample BH01/GW01 was collected and submitted for analysis for all organic and inorganic compounds per ECMC Table 915-1. All organic compounds were below ECMC Table 915-1 screening levels for groundwater. Additionally, chloride concentrations were not detected above the ECMC Table 915-1 limits in the groundwater sample. Given the absence of EC and SAR impacts in soil at the BH01/GW01 location during decommissioning (FL01-D@4') and the absence of organic detections in soil, the sulfate and TDS concentrations observed in groundwater are not indicative of impacts from oil and gas operations. Based on the groundwater analytical results, no further groundwater investigation is necessary at this time.

An SSI will be completed to resample FL01-D@4' to confirm the elevated selenium and FL01-E@4' to confirm the elevated cadmium encountered during initial decommissioning. A proposed SSI map is attached to this Form 27. During the SSI, soil samples will be collected and analyzed for full ECMC Table 915-1 constituents. Concurrently with the SSI, additional background samples will be collected to determine if elevated selenium and cadmium are attributed to native soil conditions at the site.

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 encountered and sampled during initial decommissioning activities. One groundwater sample (GW01@4') was collected along the former flowline location and was submitted for laboratory analysis of all organic compounds per ECMC Table 915-1. Analytical results indicated organic compounds were undetected above laboratory reporting limits.

During site investigation activities on 04/14/2025, a soil boring (BH01) was advanced to 10 ft bgs at the location groundwater was encountered during initial decommissioning (GW01@4'). Groundwater was encountered at approximately 6 ft. bgs, and one grab groundwater sample BH01/GW01 was collected and submitted for analysis for all organic and inorganic compounds per ECMC Table 915-1. All organic compounds were below ECMC Table 915-1 screening levels for groundwater. Additionally, chloride concentrations were not detected above the ECMC Table 915-1 limits in the groundwater sample. Given the absence of EC and SAR impacts in soil at the BH01/GW01 location during decommissioning (FL01-D@4') and the absence of organic detections in soil, the sulfate and TDS concentrations observed in groundwater are not indicative of impacts from oil and gas operations. Based on the groundwater analytical results, no further groundwater investigation is necessary at this time.

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 SSI Summary and SSI 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? 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. 08/16/2023

Proposed date of completion of Reclamation. 06/30/2027

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. 12/06/2021

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/16/2023

Proposed site investigation commencement. 03/23/2026

Proposed completion of site investigation. 03/23/2026

REMEDIAL ACTION DATES

Proposed start date of Remediation. 03/23/2026

Proposed date of completion of Remediation. 09/23/2026

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 to reflect the April 2025 supplemental site investigation at the WIEST 28-11H6 flowline and necessity for additional SSI activities adjacent to the flowline. The proposed site investigation will be completed following the approval of this form and is tentatively scheduled for 03/23/2026.

OPERATOR COMMENT

This Form 27 is being submitted to include the April 2025 supplemental site investigation (SSI) results and propose additional site investigation activities for the Wiest 28-11H6 Flowline location (Rem # 29002).

On 04/14/2025, a Site Assessment was conducted in which five soil borings were advanced (BKG02-BKG06) to collect background soil samples from native material adjacent to the flowline. Additionally, a soil boring (BH01) was advanced to 10 ft bgs at the location groundwater was encountered during initial decommissioning (GW01@4') to collect a groundwater sample for all organic and inorganic compounds per ECMC Table 915-1. Groundwater was encountered at approximately 6 ft. bgs, and one grab groundwater sample BH01/GW01 was collected and submitted for analysis for all organic and inorganic compounds per ECMC Table 915-1. All organic compounds were below ECMC Table 915-1 screening levels for groundwater. Additionally, chloride concentrations were not detected above the ECMC Table 915-1 limits in the groundwater sample. Given the absence of EC and SAR impacts in soil at the BH01/GW01 location during decommissioning (FL01-D@4') and the absence of organic detections in soil, the sulfate and TDS concentrations observed in groundwater are not indicative of impacts from oil and gas operations. Based on the groundwater analytical results, no further groundwater investigation is necessary at this time.

During the April 2025 SSI, fifteen background soil samples were collected from five discrete locations (BKG02-BKG06) adjacent to the flowline and analyzed for metals in soil per ECMC Table 915-1, pH, EC, SAR and boron. Background soil samples were collected from depths ranging between 0 to 5 feet below ground surface (ft bgs). The maximum background concentrations with a 1.25x multiplier applied for the following metals were calculated to be: 12.25 mg/kg for arsenic; 445 mg/kg for barium; 0.288 mg/kg for cadmium; and 0.363 mg/kg for selenium. All site arsenic and barium concentrations observed were below 1.25x the maximum background level. Selenium and cadmium concentrations remain above background levels.

An SSI will be completed to resample FL01-D@4' to confirm the elevated selenium and FL01-E@4' to confirm the elevated cadmium encountered during initial decommissioning. A proposed SSI map is attached to this Form 27. During the SSI, soil samples will be collected and analyzed for full ECMC Table 915-1 constituents. Concurrently with the SSI, additional background samples will be collected to determine if elevated selenium and cadmium are attributed to native soil conditions at the site. The proposed site investigation will be completed following the approval of this form and is tentatively scheduled for 03/23/2026.

Pursuant to Rule 913.e, quarterly reporting will be conducted until closure criteria are achieved for the remediation project. The results of the SSI 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 Liston

Title: Environmental Consultant

Submit Date: _____

Email: mliston@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: 29002

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

404322273	SITE INVESTIGATION REPORT
404322274	SITE INVESTIGATION PLAN
404322276	LABORATORY ANALYTICAL REPORT

Total Attach: 3 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)