

State of Colorado  
Energy & Carbon Management Commission

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404229700  
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Report taken by:  
Abdul Elnajdi

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	<b>Phone Numbers</b>
Address: 1099 18TH STREET SUITE 1500		Phone: (970) 313-5582
City: DENVER State: CO Zip: 80202		Mobile: ( )
Contact Person: Jason Davidson	Email: jason.davidson@chevron.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 36410 Initial Form 27 Document #: 403812730

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 #: 123-21508	County Name: WELD
Facility Name: LUCCI B 1-23	Latitude: 40.424910	Longitude: -104.493610	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: CSE	Sec: 1	Twp: 5N	Range: 64W Meridian: 6 Sensitive Area? Yes
Facility Type: SPILL OR RELEASE	Facility ID: 488096	API #: _____	County Name: WELD
Facility Name: Lucci B 01-23	Latitude: 40.424893	Longitude: -104.493587	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWSE	Sec: 1	Twp: 5N	Range: 64W Meridian: 6 Sensitive Area? Yes

**SITE CONDITIONS**

General soil type - USCS Classifications SW \_\_\_\_\_

Most Sensitive Adjacent Land Use Grassland \_\_\_\_\_

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**

Within Mule Deer Severe Winter Range HPH  
Well Within Freshwater Emergent Wetland



# 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 Lucci B 01-23 wellhead cut and cap. Wellhead decommissioning activities and confirmation soil sampling at the Lucci B 01-23 wellhead occurred on August 16, 2024. The wellhead was cut and capped per ECMC rules. The Field Qualitative Criteria Checklist was utilized during decommissioning activities and no visual and olfactory impacts were observed. Based on laboratory analytical data, a historical release was reported on September 17, 2024, under F19 Document Number 403923513, for elevated naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene for the Eastern wall of the wellhead excavation. Supplemental source mass removal activities occurred on March 21, 2025.

For further information on the flowline assessment, refer to work completed under Remediation Number 30908.

## 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 at the base of the excavation or the area showing the highest degree of impact during field screening activities at the wellhead excavation. A grab confirmation soil sample was collected at the wellhead excavation, and soil samples were field screened at the N-E-S-W sides of the wellhead. Soil samples were analyzed by a certified laboratory for the full extent of Table 915-1, including but not limited to: TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons) organic compounds in soil per ECMC Table 915-1, and EC, SAR, pH, metals, and boron. Five soil samples were collected on March 21, 2025 from the N-E-S-W sides of the wellhead and 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 site investigation and one grab groundwater sample was collected from the excavation and analyzed for all organic compounds and inorganic parameters 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 wellhead area occurred during abandonment activities. Field personnel field screened all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling was required. The ECMC Wellhead Closure Checklist was utilized and filled out during the abandonment process. A detailed summary of source mass removal activities, including field notes, site photos, figures, and laboratory analytical results, are attached to this Form 27.

# 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 8.61  
BTEX > 915-1 No  
Vertical Extent > 915-1 (in feet) 6

### Groundwater

Number of groundwater samples collected 1  
Was extent of groundwater contaminated delineated? No  
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?

Three background soil samples were collected near the wellhead and analyzed for Table 915-1 metals in soil and Soil Suitability for Reclamation parameters per ECMC Table 915-1. The background soil samples were collected from a depth of 5.5 feet below ground surface (ft bgs). The lithology between the site and background locations was observed to be well graded sands and clayey sands. The maximum background concentrations for pH and SAR were 8.92 and 38.2, respectively. All pH and SAR concentrations observed during source mass removal activities were below background levels. The maximum background concentrations with a 1.25x multiplier applied for arsenic was calculated to be 2.74 mg/kg at 5.5' bgs. All arsenic concentrations observed during source mass removal activities were below background levels. As such, arsenic, pH, and SAR should be considered resolved. Additional background samples will be collected to determine site specific background concentrations of lead.

Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) 40 Volume of liquid waste (barrels) 0

Is further site investigation required?

A supplemental site investigation (SSI) will be completed to collect additional background samples to determine if elevated levels of lead are attributed to native soil conditions at the site. The proposed background sample locations are included in the attached Site Map. Background soil samples will be analyzed by a certified laboratory for analysis of metals per ECMC Table 915-1 and soil suitability parameters including pH, EC, SAR, and boron. 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.

On March 21, 2025, 40 cubic yards of impacted material at the wellhead was removed and hauled to a permitted disposal facility, North Weld Landfill. Confirmation samples collected after excavation were analyzed for the full Table 915-1 suite, and results indicated all organic impacts have been removed. Refer to the Remediation Summary and Operator Comment sections for additional work planned to address remaining inorganic impacts.

### 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.

Wellhead decommissioning activities and confirmation soil sampling at the Lucci B 01-23 wellhead occurred on August 16, 2024. Two confirmation soil samples were collected and a historic release in Form 19 document number 403923513. Supplemental source mass removal activities occurred on March 21, 2025.

A supplemental site investigation (SSI) will be completed to collect additional background samples to determine if elevated levels of lead are attributed to native soil conditions at the site. The proposed background sample locations are included in the attached Site Map. Background soil samples will be analyzed by a certified laboratory for analysis of metals per ECMC Table 915-1 and soil suitability parameters including pH, EC, SAR, and boron. 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.

### Soil Remediation Summary

In Situ

Ex Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

Yes \_\_\_\_\_ Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 40

\_\_\_\_\_ 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 site investigation activities. One grab groundwater sample (GW01 at 6' bgs) was collected at the former wellhead location and was submitted for laboratory analysis of BTEX, TMBs, chloride, sulfate and TDS. Analytical results indicated organic compounds were undetected, and an investigation of background inorganics in groundwater will be completed via the proposed 3 monitoring wells, which will be installed in Quarter 3.



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 reseeded 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. 08/16/2024

Proposed date of completion of Reclamation. 10/31/2026

## 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. 09/17/2024

Actual Spill or Release date, or date of discovery. 09/16/2024

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/16/2024

Proposed site investigation commencement. 08/12/2025

Proposed completion of site investigation. 12/12/2025

### REMEDIAL ACTION DATES

Proposed start date of Remediation. 08/12/2025

Proposed date of completion of Remediation. 12/12/2025

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 decommissioning of the LUCCI B 01-23 wellhead and necessity for supplemental site investigation activities adjacent to the wellhead. The proposed site investigation will be completed following the approval of this form.

**OPERATOR COMMENT**

This Form 27 is being submitted to include a 2Q 2025 update for the LUCCI B 01-23 wellhead (REM #36410) and the supplemental source mass removal results at the former wellhead location. A supplemental site investigation (SSI) will be completed to collect additional background samples to determine if elevated levels of lead 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.

On March 21, 2025, source mass removal was conducted and 40 cubic yards of impacted material at the wellhead was removed and hauled to a permitted disposal facility. Confirmation samples collected after excavation were analyzed for the full Table915-1 suite, and results indicated all organic impacts have been removed.

Three background soil samples were collected near the wellhead and analyzed for Table 915-1 metals in soil and Soil Suitability for Reclamation parameters per ECMC Table 915-1. The background soil samples were collected from a depth of 5.5 feet below ground surface (ft bgs). The lithology between the site and background locations was observed to be well graded sands and clayey sands. The maximum background concentrations for pH and SAR were 8.92 and 38.2, respectively. All pH and SAR concentrations observed during source mass removal activities were below background levels. The maximum background concentrations with a 1.25x multiplier applied for arsenic was calculated to be 2.74 mg/kg at 5.5' bgs. All arsenic concentrations observed during source mass removal activities were below background levels. As such, arsenic, pH, and SAR should be considered resolved. Additional background samples will be collected to determine site specific background concentrations of lead.

Groundwater was encountered and sampled during site investigation activities. One grab groundwater sample (GW01 at 6' bgs) was collected at the former wellhead location and was submitted for laboratory analysis of BTEX, TMBs, chloride, sulfate and TDS. Analytical results indicated organic compounds were undetected, and an investigation of background inorganics in groundwater will be completed via the proposed 3 monitoring wells, which will be installed in Quarter 3.

Pursuant to Rule 913.e, quarterly reporting will be conducted until closure criteria are achieved for the remediation project. The results of the supplemental site investigation 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: Kayla White, P.E.

Title: Environmental Consultant

Submit Date: 06/08/2025

Email: kwhite@cdhconsult.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: 36410

**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**

404229700	FORM 27-SUPPLEMENTAL-SUBMITTED
404229878	LABORATORY ANALYTICAL REPORT
404232834	SITE INVESTIGATION REPORT

Total Attach: 3 Files

**General Comments**

**User Group**

**Comment**

**Comment Date**

Environmental	Laboratory analytical indicates that a subset of the samples were analyzed outside of the hold time required by the analytical method(s).  Operator voluntarily disclosed this information in accordance with Rule 525.e. As discussed with ECMC Staff, Operator shall submit a replacement Form 27 with a revised lab report flagging the out of hold time data and revised workplan.	07/03/2025
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Total: 1 comment(s)