

# State of Colorado Oil and Gas Conservation Commission

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Document Number:

402601867

Receive Date:

02/17/2021

Report taken by:

BOB CHESSON

## Site Investigation and Remediation Workplan (Initial 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 COGCC 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.

Refer to Rules 340, 905, 906, 907, 908, 909, and 910

### OPERATOR INFORMATION

Name of Operator: NOBLE ENERGY INC	Operator No: 100322	<b>Phone Numbers</b>
Address: 1001 NOBLE ENERGY WAY		Phone: (970) 3045329
City: HOUSTON State: TX Zip: 77070		Mobile: ( )
Contact Person: Jacob Evans	Email: jacob.evans@nblenergy.com	

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 16772

Initial Form 27 Document #: 402601867

#### PURPOSE INFORMATION

- |  |  |
|--|--|
| <input type="checkbox"/> 901.e. Sensitive Area Determination                                       | <input type="checkbox"/> 909.c.(5), Rule 910.b.(4): Remediation of impacted ground water                   |
| <input type="checkbox"/> 909.c.(1), Rule 905: Pit or PW vessel closure                             | <input type="checkbox"/> Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b. |
| <input type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation                            | <input type="checkbox"/> Rule 909.e.(2)B.: Closure of remediation project                                  |
| <input type="checkbox"/> 909.c.(3), Rule 907.e.: Land treatment of oily waste                      | <input type="checkbox"/> Rule 906.c.: Director request   |
| <input type="checkbox"/> 909.c.(4), Rule 908.g.: Centralized E&P Waste Management Facility closure | <input checked="" type="checkbox"/> Other Well head cut/cap, flowline removal                              |

#### SITE INFORMATION

Y Multiple Facilities ( in accordance with Rule 909.c. )

Facility Type: WELL	Facility ID:	API #: 123-23726	County Name: WELD
Facility Name: LIAM D 34-12	Latitude: 40.180309	Longitude: -104.544639	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: NWSW	Sec: 34	Twp: 3N	Range: 64W Meridian: 6 Sensitive Area? Yes
Facility Type: FLOWLINE SYSTEM	Facility ID: 469881	API #:	County Name:
Facility Name:	Latitude:	Longitude:	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr:	Sec:	Twp:	Range: Meridian: Sensitive Area? Yes

#### SITE CONDITIONS

General soil type - USCS Classifications SW

Most Sensitive Adjacent Land Use Range Land

Is domestic water well within 1/4 mile? Yes

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

NA

# SITE INVESTIGATION PLAN

## TYPE OF WASTE:

<input type="checkbox"/> E&P Waste	<input type="checkbox"/> Other E&P Waste	<input checked="" type="checkbox"/> Non-E&P Waste
<input type="checkbox"/> Produced Water	<input type="checkbox"/> Workover Fluids	No waste generated
<input type="checkbox"/> Oil	<input type="checkbox"/> Tank Bottoms	
<input 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 if encountered
UNDETERMINED	SOILS	NA	Lab analysis

## 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 COGCC Rule 911 a site investigation will be conducted pertaining to the LIAM D34-12 wellhead cut and cap and flowline removal. Approximately 1080' of flowline will be removed. The COGCC will be updated in a supplemental Form 27 if a portion of the flowline is abandoned-in-place due to field constraints. The wellhead will be cut and capped per COGCC rules. The Form 44 Document number will be supplied at closure.

## 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 will be 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 will be collected at the wellhead excavation. Soil samples will be analyzed by a certified laboratory for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons) organic compounds in soil per COGCC Table 915-1, and EC, SAR, pH, and boron. All samples collected will be analyzed by a certified laboratory using approved COGCC 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 during the site investigation a grab groundwater will be collected and analyzed for all organic compounds per COGCC 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 and flowline areas will occur during abandonment activities. Field personnel will field screen all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling is required. The COGCC Flowline Closure and Wellhead Closure Checklists will be utilized and filled out during the abandonment process. A photolog will be submitted on the Subsequent Form 27.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected \_\_\_\_\_ 0  
Number of soil samples exceeding 910-1 \_\_\_\_\_  
Was the areal and vertical extent of soil contamination delineated? \_\_\_\_\_  
Approximate areal extent (square feet) \_\_\_\_\_

### NA / ND

\_\_\_\_\_ Highest concentration of TPH (mg/kg) \_\_\_\_\_  
\_\_\_\_\_ Highest concentration of SAR \_\_\_\_\_  
\_\_\_\_\_ BTEX > 910-1 \_\_\_\_\_  
\_\_\_\_\_ Vertical Extent > 910-1 (in feet) \_\_\_\_\_

### 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 910-1 \_\_\_\_\_

\_\_\_\_\_ 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 910-1  
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?

☐ 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?

# REMEDIAL ACTION PLAN

## SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

No source was generated

## 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

- \_\_\_\_\_ Bioremediation ( or enhanced bioremediation )
- \_\_\_\_\_ Chemical oxidation
- \_\_\_\_\_ Air sparge / Soil vapor extraction
- \_\_\_\_\_ Natural Attenuation
- \_\_\_\_\_ Other \_\_\_\_\_

### ☐ Ex Situ

- \_\_\_\_\_ Excavate and offsite disposal
- \_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_
- \_\_\_\_\_ Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_
- \_\_\_\_\_ Excavate and onsite remediation
- \_\_\_\_\_ 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.

## REMEDIATION PROGRESS UPDATE

### PERIODIC REPORTING

**Frequency:** ☐ Quarterly ☐ Semi-Annually ☐ Annually ☒ Other One time within 90 days of laboratory analytical receipt

**Report Type:** ☐ Groundwater Monitoring ☐ Land Treatment Progress Report ☐ O&M Report  
☒ Other closure report

### 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 \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_

E&P waste (liquid) description \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

## 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 COGCC 1000 Series Rules.

Is the described reclamation complete? No

Does the reclamation described herein constitute interim or final reclamation of the Oil and Gas Location?

☐ Interim?

☐ Final?

Did the Surface Owner approve the seed mix? \_\_\_\_\_

If NO, does the seed mix comply with local soil conservation district recommendations? \_\_\_\_\_

## IMPLEMENTATION SCHEDULE

### PRIOR DATES

Date of Surface Owner notification/consultation, if required. 11/16/2020

Actual Spill or Release date, if known. \_\_\_\_\_

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/17/2021

Date of commencement of Site Investigation. \_\_\_\_\_

Date of completion of Site Investigation. \_\_\_\_\_

### REMEDIAL ACTION DATES

Date of commencement of Remediation. \_\_\_\_\_

Date of completion of Remediation. \_\_\_\_\_

### SITE RECLAMATION DATES

Date of commencement of Reclamation. \_\_\_\_\_

Date of completion of Reclamation. \_\_\_\_\_

### OPERATOR COMMENT

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

Signed: Lauren Hoff

Title: HSE Reg Affairs Coord

Submit Date: 02/17/2021

Email: DenverRegulatory@nblenergy.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: BOB CHESSON

Date: 02/18/2021

Remediation Project Number: 16772

### COA Type

### Description

	Upon discovery of flowline release during removal, the operator must investigate the extent of release and provide a supplemental form 27 with proposed investigation sample sites for COGCC staff approval.
	Operator shall submit a Form 27 Supplemental Report within 90 days of performing this environmental investigation.

### Attachment Check 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

402601867	FORM 27-INITIAL-SUBMITTED
402601900	SITE MAP

Total Attach: 2 Files

### General Comments

### User Group

### Comment

### Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)