

State of Colorado  
Oil and Gas Conservation Commission

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402280397  
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01/08/2020

Report taken by:  
Candice (Nikki) Graber

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 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 INFORMATON

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 #: 14201 Initial Form 27 Document #: 402180608

**PURPOSE INFORMATION**

<input type="checkbox"/> 901.e. Sensitive Area Determination	<input checked="" 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 checked="" 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 type="checkbox"/> Other

**SITE INFORMATION** N Multiple Facilites ( in accordance with Rule 909.c. )

Facility Type: SPILL OR RELEASE	Facility ID: 466637	API #: _____	County Name: WELD
Facility Name: Frank 1-13	Latitude: 40.317882	Longitude: -104.618770	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NWNW	Sec: 13	Twp: 4N	Range: 65W Meridian: 6 Sensitive Area? Yes

**SITE CONDITIONS**

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

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? Yes

**Other Potential Receptors within 1/4 mile**

Occupied building 1216'

# 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
Yes	GROUNDWATER	15' X 15'	Laboratory Analytical
Yes	SOILS	15' X 15' X 5'bgs	Laboratory Analytical

## INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

During cut and cap operations at the Frank 1-13 wellhead crews discovered soil and water impacts in the vicinity the wellhead due to a historical release.

## 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 ):

Four grab soil samples was collected by Fremont Environmental above the phreatic zone for analysis of TPH-DRO by EPA Method 8015 , TPH-GRO, BTEX, and Naphthalene by EPA Method 8260b.

### Proposed Groundwater Sampling

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

One grab groundwater sample was collected by Fremont Environmental at the base of the excavation for analysis of BTEX by EPA Method 8260b.

### 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 ):

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 4  
Number of soil samples exceeding 910-1 1  
Was the areal and vertical extent of soil contamination delineated? No  
Approximate areal extent (square feet) 225

### NA / ND

-- Highest concentration of TPH (mg/kg) 1150  
NA Highest concentration of SAR           
BTEX > 910-1 No  
Vertical Extent > 910-1 (in feet) 5

### 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 910-1 1

-- Highest concentration of Benzene (µg/l) 20  
-- Highest concentration of Toluene (µg/l) 120  
-- Highest concentration of Ethylbenzene (µg/l) 37  
-- Highest concentration of Xylene (µg/l) 470  
NA 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?

A groundwater investigation will be scheduled prior to March 15, 2020.

# 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 source was be removed through excavation of impacted material from October 15-16, 2019. Fremont Environmental was on location to guide the excavation and collect grab soil samples above the phreatic zone for analysis of TPH-DRO, TPH-GRO, BTEX, and Naphthalene.

## 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.

A groundwater site assessment will be scheduled prior to March 15, 2020.

## Soil Remediation Summary

In Situ

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

Ex Situ

Yes \_\_\_\_\_ Excavate and offsite disposal  
If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 40  
Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_  
No \_\_\_\_\_ 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  
Yes \_\_\_\_\_ Other \_\_\_\_\_ A groundwater amendment was placed at the base of the excavation \_\_\_\_\_

## 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.

A groundwater site investigation will be scheduled.

## REMEDIATION PROGRESS UPDATE

### PERIODIC REPORTING

Frequency:  Quarterly  Semi-Annually  Annually  Other \_\_\_\_\_  
Report Type:  Groundwater Monitoring  Land Treatment Progress Report  O&M Report  
 Other Excavation Report \_\_\_\_\_

### 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

Volume of E&P Waste (solid) in cubic yards \_\_\_\_\_ 40

E&P waste (solid) description E&P solid waste derived from  
excavation activities \_\_\_\_\_

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

Non-COGCC Disposal Facility: Waste Management/Buffalo Ridge \_\_\_\_\_

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_ 1

E&P waste (liquid) description E&P liquid waste derived from the  
base of the excavation \_\_\_\_\_

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

Non-COGCC Disposal Facility: NGL #1 \_\_\_\_\_

## REMEDIATION COMPLETION REPORT

### REMEDIATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? No \_\_\_\_\_

Do all soils meet Table 910-1 standards? Yes \_\_\_\_\_

Does the previous reply indicate consideration of background concentrations? No \_\_\_\_\_

Are the only residual soil impacts pH, SAR, or EC at depths greater than 3 feet below ground surface? \_\_\_\_\_

Does Groundwater meet Table 910-1 standards? No \_\_\_\_\_

Is additional groundwater monitoring to be conducted? Yes \_\_\_\_\_

## 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 1004 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. \_\_\_\_\_

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

## SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 08/09/2019

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

Date of completion of Site Investigation. 08/09/2019

## REMEDIAL ACTION DATES

Date of commencement of Remediation. 10/15/2019

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

## SITE RECLAMATION DATES

Date of commencement of Reclamation. 08/09/2019

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

## OPERATOR COMMENT

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

Signed: Jacob Evans

Title: Environmental Coordinator

Submit Date: 01/08/2020

Email: jacob.evans@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: Candice (Nikki) Graber

Date: 01/09/2020

Remediation Project Number: 14201

## COA Type

## Description

<u>COA Type</u>	<u>Description</u>

## **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

402280397	FORM 27-SUPPLEMENTAL-SUBMITTED
402280406	REMEDICATION PROGRESS REPORT

Total Attach: 2 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)