

State of Colorado  
Oil and Gas Conservation Commission

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



Document Number:  
401369779  
Receive Date:  
08/09/2017

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 INFORMATON

Name of Operator: NOBLE ENERGY INC	Operator No: 100322	<b>Phone Numbers</b>
Address: 1625 BROADWAY STE 2200		Phone: (970) 3045329
City: DENVER State: CO Zip: 80202		Mobile: ( )
Contact Person: Jacob Evans	Email: jacob.evans@nblenergy.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 10360 Initial Form 27 Document #: 401369779

PURPOSE INFORMATION

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

SITE INFORMATION

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

Facility Type: LOCATION	Facility ID: 322951	API #: _____	County Name: WELD
Facility Name: GOODNER G-64N65W 6NESW	Latitude: 40.339840	Longitude: -104.708440	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: NESW	Sec: 6	Twp: 4N	Range: 65W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SW 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? No

Other Potential Receptors within 1/4 mile

Occupied building

# 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 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
Yes	SOILS	10' X 10' X 10' 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.

Produced water vessel sampling per COGCC Rule 905b.

## 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 ):

Soil samples were collected and analyzed for TPH-DRO, TPH-GRO, BTEX, Naphthalene, EC, SAR, and pH.

### Proposed Groundwater Sampling

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

### 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 7

Number of soil samples exceeding 910-1 2

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 100

### NA / ND

--        Highest concentration of TPH (mg/kg) 740

--        Highest concentration of SAR 0.16

BTEX > 910-1 Yes

Vertical Extent > 910-1 (in feet) 10

### 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.

During water vessel removal the floor and the south wall exceeded Table 910-1 standards. An additional 20 cubic yards were removed and confirmatio soil samples were collected, which were below COGCC Table 910-1 standards.

## REMEDICATION 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.

No further remediation necessary.

## 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) \_\_\_\_\_ 20  
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  
 \_\_\_\_\_ 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.

# REMEDATION PROGRESS UPDATE

## PERIODIC REPORTING

Frequency:  Quarterly  Semi-Annually  Annually  Other \_\_\_\_\_  
Report Type:  Groundwater Monitoring  Land Treatment Progress Report  O&M Report  
 Other Water Vessel Closure 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 Resuse

Volume of E&P Waste (solid) in cubic yards \_\_\_\_\_ 20

E&P waste (solid) description Impacted soil above COGCC Table 910-1 standards

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

Non-COGCC Disposal Facility: Buffalo Ridge Landfill

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

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 of this location will be in accordance with COGCC 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 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). 03/16/2017

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

Date of completion of Site Investigation. 03/17/2017

### REMEDIAL ACTION DATES

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

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

### SITE RECLAMATION DATES

Date of commencement of Reclamation. 03/17/2017

Date of completion of Reclamation. 03/17/2017

### OPERATOR COMMENT

Water Vessel Closure

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: 08/09/2017

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: BOB CHESSON

Date: 08/11/2017

Remediation Project Number: 10360

### 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

401369779	FORM 27-INITIAL-SUBMITTED
401369805	SITE INVESTIGATION 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)