

**State of Colorado**  
**Oil and Gas Conservation Commission**

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Document Number:  
401842011

Receive Date:  
11/15/2018

Report taken by:  
RICK ALLISON

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

**PROJECT, PURPOSE & SITE INFORMATION**

<b>PROJECT INFORMATION</b>	
Remediation Project #: <u>12140</u>	Initial Form 27 Document #: <u>401842011</u>
<b>PURPOSE INFORMATION</b>	
<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 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 _____
<b>SITE INFORMATION</b> <u>N</u> Multiple Facilites ( in accordance with Rule 909.c. )	
Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>455000</u> API #: _____    County Name: <u>WELD</u>
Facility Name: <u>Wells Ranch AE32</u>	Latitude: <u>40.444000</u> Longitude: <u>-104.355200</u>
** correct Lat/Long if needed: Latitude: _____ Longitude: _____	
QtrQtr: <u>SWNW</u> Sec: <u>32</u> Twp: <u>6N</u> Range: <u>62W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>	
<b>SITE CONDITIONS</b>	
General soil type - USCS Classifications <u>SW</u>	Most Sensitive Adjacent Land Use <u>Non-Crop Land</u>
Is domestic water well within 1/4 mile? <u>No</u>	Is surface water within 1/4 mile? <u>No</u>
Is groundwater less than 20 feet below ground surface? <u>No</u>	
<b>Other Potential Receptors within 1/4 mile</b>	

# 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	TBD	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 production at the Wells Ranch AE30 tank battery, an unintentional release occurred from a produced water dumpline. The site was shut in.

## 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 ):

Nine soil samples were collected during the initial site assessment of the location. The soil samples were analyzed by a certified laboratory for TPH-DRO, TPH-GRO, BTEX, and Naphthalene by EPA Methods 8015 and 8260B.

### 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 ):

An additional site assessment will be scheduled prior to February 1, 2019.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 9

Number of soil samples exceeding 910-1 5

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet) 1000

### NA / ND

--            Highest concentration of TPH (mg/kg) 11610

NA            Highest concentration of SAR           

BTEX > 910-1 Yes

Vertical Extent > 910-1 (in feet) 9

### 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.

The source area will be delineated vertically and laterally through an environmental site assessment. The source area will be treated in place using Soil Vapor Extraction Technology.

## 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.

A Soil Vapor Extraction system will be implemented post assessment.

## Soil Remediation Summary

In Situ

Ex Situ

No Bioremediation ( or enhanced bioremediation )

Yes Excavate and offsite disposal

No Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) 25

Yes Air sparge / Soil vapor extraction

Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_

Yes Natural Attenuation

No Excavate and onsite remediation

No 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.

# REMEDIATION PROGRESS UPDATE

## PERIODIC REPORTING

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

## 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 \_\_\_\_\_ 0

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

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

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

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_ 60

E&P waste (liquid) description Hydro-Excavated Slurry

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

Non-COGCC Disposal Facility: Republic Landfill

## 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? 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). 05/09/2018

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**

Wells Ranch AE30 Econode

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: ` 11/15/2018 \_\_\_\_\_

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: RICK ALLISON \_\_\_\_\_

Date: 11/29/2018 \_\_\_\_\_

Remediation Project Number: 12140 \_\_\_\_\_

**COA Type****Description**

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**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**

401842011	FORM 27-INITIAL-SUBMITTED
401842046	SITE INVESTIGATION REPORT

Total Attach: 2 Files

**General Comments****User Group****Comment****Comment Date**

		Stamp Upon Approval
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Total: 0 comment(s)