

State of Colorado
Oil and Gas Conservation Commission

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Document Number:

401890820

Receive Date:

01/02/2019

Report taken by:

Candice (Nikki) Graber

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: <u>NOBLE ENERGY INC</u>	Operator No: <u>100322</u>	Phone Numbers
Address: <u>1001 NOBLE ENERGY WAY</u>		Phone: <u>(970) 3045014</u>
City: <u>HOUSTON</u> State: <u>TX</u> Zip: <u>77070</u>		Mobile: <u>(970) 2034238</u>
Contact Person: <u>Howard Aamold</u>	Email: <u>howard.aamold@nblenergy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 12271 Initial Form 27 Document #: 401890820

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 checked="" 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 type="checkbox"/> Other _____ |

SITE INFORMATION

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

Facility Type: <u>LOCATION</u>	Facility ID: <u>311348</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>MENONI-65N64W 30SESE</u>	Latitude: <u>40.364610</u>	Longitude: <u>-104.585510</u>	
	** correct Lat/Long if needed: Latitude: <u>40.363184</u>	Longitude: <u>-104.583486</u>	
QtrQtr: <u>SESE</u> Sec: <u>30</u> Twp: <u>5N</u> Range: <u>64W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>			
Facility Type: <u>LOCATION</u>	Facility ID: <u>311508</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>CONAGRA B-65N64W 30SESE</u>	Latitude: <u>40.364464</u>	Longitude: <u>-104.585497</u>	
	** correct Lat/Long if needed: Latitude: <u>40.363210</u>	Longitude: <u>-104.583490</u>	
QtrQtr: <u>SESE</u> Sec: <u>30</u> Twp: <u>5N</u> Range: <u>64W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>			
Facility Type: <u>LOCATION</u>	Facility ID: <u>318993</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>BOHLENDER-63N65W 14SESE</u>	Latitude: <u>40.220670</u>	Longitude: <u>-104.625010</u>	
	** correct Lat/Long if needed: Latitude: <u>40.220360</u>	Longitude: <u>-104.625640</u>	
QtrQtr: <u>SESE</u> Sec: <u>14</u> Twp: <u>3N</u> Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>			

Facility Type: LOCATION	Facility ID: 332402	API #:	County Name: WELD
Facility Name: BOULTER-65N65W 34NENW	Latitude: 40.361780	Longitude: -104.652410	
** correct Lat/Long if needed: Latitude: 40.361331		Longitude: -104.649570	
QtrQtr: NENW	Sec: 34	Twp: 5N	Range: 65W Meridian: 6 Sensitive Area? Yes
Facility Type: TANK BATTERY	Facility ID: 440948	API #:	County Name: WELD
Facility Name: Bliss, Glendenning	Latitude: 40.423520	Longitude: -104.656210	
** correct Lat/Long if needed: Latitude: 40.423500		Longitude: -104.656160	
QtrQtr: SESW	Sec: 3	Twp: 5N	Range: 65W Meridian: 6 Sensitive Area? Yes
Facility Type: TANK BATTERY	Facility ID: 447567	API #:	County Name: WELD
Facility Name: BAINBRIDGE 1	Latitude: 40.362026	Longitude: -104.685039	
** correct Lat/Long if needed: Latitude: 40.361980		Longitude: -104.685030	
QtrQtr: NWNE	Sec: 32	Twp: 5N	Range: 65W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SW Most Sensitive Adjacent Land Use Various

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

Various

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- E&P Waste Other E&P Waste Non-E&P Waste
- Produced Water Workover Fluids _____
- Oil Tank Bottoms
- Condensate Pigging Waste
- Drilling Fluids Rig Wash
- Drill Cuttings Spent Filters
- Pit Bottoms
- Other (as described by EPA) _____

DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
No	GROUNDWATER	NA	Laboratory Analytical
No	SOILS	NA	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, SAR, EC, and pH. See attachments for sample locations.

Proposed Groundwater Sampling

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

Groundwater samples were collected and analyzed for BTEX.

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 11
Number of soil samples exceeding 910-1 0
Was the areal and vertical extent of soil contamination delineated? No
Approximate areal extent (square feet) 0

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 0.75
BTEX > 910-1 No
Vertical Extent > 910-1 (in feet) 0

Groundwater

Number of groundwater samples collected 2
Was extent of groundwater contaminated delineated? No
Depth to groundwater (below ground surface, in feet) 3'
Number of groundwater monitoring wells installed 0
Number of groundwater samples exceeding 910-1 0

-- Highest concentration of Benzene (µg/l) 1.79
ND Highest concentration of Toluene (µg/l) _____
ND Highest concentration of Ethylbenzene (µg/l) _____
-- Highest concentration of Xylene (µg/l) 3.1
ND 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.

There was no E&P Waste generated.

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.

Between October 4,2018 and October 30,2018 six locations were sampled to investigate for potential impacts subsequent to a produced water vessel removal, in accordance with COGCC Rule 905b. All samples collected were below COGCC Table 910-1 standards.

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.

REMEDATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: Quarterly Semi-Annually Annually Other _____
Report Type: Groundwater Monitoring Land Treatment Progress Report O&M Report
 Other Produced water vessel removal. _____

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? 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). 10/04/2018

Date of commencement of Site Investigation. _____

Date of completion of Site Investigation. 10/30/2018

REMEDIAL ACTION DATES

Date of commencement of Remediation. _____

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. 10/04/2018

Date of completion of Reclamation. 10/30/2018

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: ` Howard Aamold _____

Title: Environmental Coordinator _____

Submit Date: ` 01/02/2019 _____

Email: howard.aamold@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: 01/04/2019 _____

Remediation Project Number: 12271 _____

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**

401890820	FORM 27-INITIAL-SUBMITTED
401890865	ANALYTICAL RESULTS
401890870	ANALYTICAL RESULTS
401890871	ANALYTICAL RESULTS
401890873	ANALYTICAL RESULTS
401890875	ANALYTICAL RESULTS

Total Attach: 6 Files

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

Environmental	Operator may submit a Form 27 Supplemental - Remediation Complete and request closure of this investigation.	01/04/2019
Environmental	Changed facility ID 331875 to Tank Battery ID 440948	01/04/2019

Total: 2 comment(s)