

State of Colorado
Oil and Gas Conservation Commission

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Document Number:
401255281
Receive Date:
04/10/2017

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 INFORMATION

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

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 10133 Initial Form 27 Document #: 401255281

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 checked="" 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>306406</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>VALCAR-USX A-66N64W 3SESW</u>	Latitude: <u>40.509286</u>	Longitude: <u>-104.539134</u>	
	** correct Lat/Long if needed: Latitude: <u>40.509505</u>	Longitude: <u>-104.545111</u>	
QtrQtr: <u>SESW</u> Sec: <u>3</u> Twp: <u>6N</u> Range: <u>64W</u> Meridian: <u>6</u>	Sensitive Area? <u>Yes</u>		
Facility Type: <u>LOCATION</u>	Facility ID: <u>310499</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>FOSS-66N64W 14NESE</u>	Latitude: <u>40.484920</u>	Longitude: <u>-104.510480</u>	
	** correct Lat/Long if needed: Latitude: <u>40.483812</u>	Longitude: <u>-104.508105</u>	
QtrQtr: <u>NESE</u> Sec: <u>14</u> Twp: <u>6N</u> Range: <u>64W</u> Meridian: <u>6</u>	Sensitive Area? <u>Yes</u>		
Facility Type: <u>LOCATION</u>	Facility ID: <u>319087</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>SCHAEFER-66N66W 22SWSE</u>	Latitude: <u>40.468449</u>	Longitude: <u>-104.761303</u>	
	** correct Lat/Long if needed: Latitude: <u>40.468109</u>	Longitude: <u>-104.761118</u>	
QtrQtr: <u>SWSE</u> Sec: <u>22</u> Twp: <u>6N</u> Range: <u>66W</u> Meridian: <u>6</u>	Sensitive Area? <u>Yes</u>		

Facility Type: LOCATION	Facility ID: 327949	API #:	County Name: WELD
Facility Name: GEIS-64N65W 5NWSW	Latitude: 40.339810	Longitude: -104.694200	
** correct Lat/Long if needed: Latitude: 40.341451		Longitude: -104.695357	
QtrQtr: NWSW	Sec: 5	Twp: 4N	Range: 65W Meridian: 6 Sensitive Area? Yes
Facility Type: LOCATION	Facility ID: 336589	API #:	County Name: WELD
Facility Name: UPRC-65N66W 23SWNE	Latitude: 40.386640	Longitude: -104.744410	
** correct Lat/Long if needed: Latitude: 40.378244		Longitude: -104.745432	
QtrQtr: SWNE	Sec: 23	Twp: 5N	Range: 66W Meridian: 6 Sensitive Area? Yes
Facility Type: TANK BATTERY	Facility ID: 449999	API #:	County Name: WELD
Facility Name: McDaniel TB 449999	Latitude: 0.000000	Longitude: 0.000000	
** correct Lat/Long if needed: Latitude: 40.488055		Longitude: -104.527153	
QtrQtr: SWNE	Sec: 15	Twp: 6N	Range: 64W Meridian: 6 Sensitive Area? Yes
Facility Type: TANK BATTERY	Facility ID: 450000	API #:	County Name: WELD
Facility Name: VALCAR-USX 450000	Latitude: 0.000000	Longitude: 0.000000	
** correct Lat/Long if needed: Latitude: 40.483812		Longitude: -104.508105	
QtrQtr: SESW	Sec: 3	Twp: 6N	Range: 64W Meridian: 6 Sensitive Area? Yes
Facility Type: TANK BATTERY	Facility ID: 450001	API #:	County Name: WELD
Facility Name: GEIS Tank Battery 450001	Latitude: 0.000000	Longitude: 0.000000	
** correct Lat/Long if needed: Latitude: 40.509500		Longitude: -104.545285	
QtrQtr: NWSW	Sec: 5	Twp: 4N	Range: 65W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

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

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

various

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
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 in accordance with 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, pH,EC, and SAR

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 16

Number of soil samples exceeding 910-1 0

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

Approximate areal extent (square feet) 0

NA / ND

-- Highest concentration of TPH (mg/kg) 131.8

-- Highest concentration of SAR 2.92

BTEX > 910-1 No

Vertical Extent > 910-1 (in feet) 0

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 0'

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 910-1 0

NA Highest concentration of Benzene (µg/l)

NA Highest concentration of Toluene (µg/l)

NA Highest concentration of Ethylbenzene (µg/l)

NA Highest concentration of Xylene (µg/l)

NA Highest concentration of Methane (mg/l)

Surface Water

0 Number of surface water samples collected

0 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 EP Waste 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.

Between December 15, 2016 and March 21, 2017 seven (7) 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 for TPH-DRO, TPH-GRO, BTEX, Naphthalene, EC, SAR, and pH.

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

- No Bioremediation (or enhanced bioremediation)
- No Chemical oxidation
- No Air sparge / Soil vapor extraction
- No Natural Attenuation
- No 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.

NA

REMEDATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: Quarterly Semi-Annually Annually Other Water Vessel Closure

Report Type: Groundwater Monitoring Land Treatment Progress Report O&M Report

Other Water Vessel Closure

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.

The locations will be reclaimed and recontoured where needed to match pre-existing conditions

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). 12/15/2016

Date of commencement of Site Investigation. _____

Date of completion of Site Investigation. 03/21/2017

REMEDIAL ACTION DATES

Date of commencement of Remediation. _____

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. 12/15/2016

Date of completion of Reclamation. 03/21/2017

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: ` 04/10/2017 _____

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: 04/13/2017 _____

Remediation Project Number: 10133 _____

COA Type**Description**

	Operator shall submit a Form 27 Supplemental Report - Remediation Complete to close this project.
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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**

401255281	FORM 27-INITIAL-SUBMITTED
401255365	SITE INVESTIGATION REPORT
401255369	SITE INVESTIGATION REPORT
401255371	SITE INVESTIGATION REPORT
401255373	SITE INVESTIGATION REPORT
401255375	SITE INVESTIGATION REPORT
401255377	SITE INVESTIGATION REPORT
401255378	SITE INVESTIGATION REPORT

Total Attach: 8 Files

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

Environmental	<p>COGCC created the following tank battery IDs for produced water vaults at locations remote from the wellhead:</p> <ol style="list-style-type: none"> 1. Facility ID 449999 - MCDaniel 32,42-15 2. Facility ID 450000 - Valcar USX A 3-14 3. Facility ID 450005 - Foss 14-41,42,43,44 4. Facility ID 450001 - Geis 5-12 5. Facility ID 450006 - Dinges 3-33, Egge 3-32 6. Facility ID 450007 - UPRC 23-7H6, UPV 23-2H6,8H6 <p>The Schaefer 1,2-22 tank battery is location on the 1-22 wellpad and no additional facility was created.</p>	04/13/2017
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Total: 1 comment(s)