

State of Colorado Oil and Gas Conservation Commission

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Document Number:

401445508

Receive Date:

10/31/2017

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 INFORMATION

Name of Operator: NOBLE ENERGY INC	Operator No: 100322	Phone Numbers
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 #: 10662 Initial Form 27 Document #: 401445508

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: LOCATION	Facility ID: 302728	API #: _____	County Name: WELD
Facility Name: WAHLERT AC-67N63W 33SWSW	Latitude: 40.524380	Longitude: -104.448569	
** correct Lat/Long if needed: Latitude: 40.523274		Longitude: -104.449160	
QtrQtr: SWSW	Sec: 33	Twp: 7N	Range: 63W Meridian: 6 Sensitive Area? Yes
Facility Type: LOCATION	Facility ID: 305634	API #: _____	County Name: WELD
Facility Name: LUPPENS-66N64W 19SWNW	Latitude: 40.472720	Longitude: -104.600220	
** correct Lat/Long if needed: Latitude: 40.476772		Longitude: -104.598040	
QtrQtr: SWNW	Sec: 19	Twp: 6N	Range: 64W Meridian: 6 Sensitive Area? Yes
Facility Type: LOCATION	Facility ID: 322961	API #: _____	County Name: WELD
Facility Name: Wolfpack B02-62-1HN Eco	Latitude: 40.422460	Longitude: -104.524940	
** correct Lat/Long if needed: Latitude: 40.422678		Longitude: -104.524693	
QtrQtr: SWSW	Sec: 2	Twp: 5N	Range: 64W Meridian: 6 Sensitive Area? Yes

Facility Type:	LOCATION	Facility ID:	323162	API #:		County Name:	WELD
Facility Name:		ARNBRECHT-66N66W 27NWSE		Latitude:	40.457645	Longitude:	-104.761964
				** correct Lat/Long if needed: Latitude:	40.458559	Longitude:	-104.757603
QtrQtr:	NWSE	Sec:	27	Twp:	6N	Range:	66W
				Meridian:	6	Sensitive Area?	Yes

Facility Type:	LOCATION	Facility ID:	427919	API #:		County Name:	WELD
Facility Name:		Wake E24-77HN Tank		Latitude:	40.476180	Longitude:	-104.620610
				** correct Lat/Long if needed: Latitude:	40.476396	Longitude:	-104.620478
QtrQtr:	NWNW	Sec:	24	Twp:	6N	Range:	65W
				Meridian:	6	Sensitive Area?	Yes

Facility Type:	LOCATION	Facility ID:	447559	API #:		County Name:	WELD
Facility Name:		LORENZ FMS 22-5B,6B,19		Latitude:	40.386939	Longitude:	-104.658248
				** correct Lat/Long if needed: Latitude:	40.386921	Longitude:	-104.658268
QtrQtr:	SWNW	Sec:	22	Twp:	5N	Range:	65W
				Meridian:	6	Sensitive Area?	Yes

SITE CONDITIONS

General soil type - USCS Classifications	SW	Most Sensitive Adjacent Land Use	Various
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Is domestic water well within 1/4 mile?	Yes	Is surface water within 1/4 mile?	Yes
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Is groundwater less than 20 feet below ground surface?	Yes
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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	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.

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 12

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) 110

-- Highest concentration of SAR 0.844

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) \

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.

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 September 11, 2017 and September 26, 2017 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). 09/11/2017

Date of commencement of Site Investigation. _____

Date of completion of Site Investigation. 09/26/2017

REMEDIAL ACTION DATES

Date of commencement of Remediation. _____

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. 09/11/2017

Date of completion of Reclamation. 09/26/2017

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: ` 10/31/2017 _____

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: RICK ALLISON _____

Date: 11/09/2017 _____

Remediation Project Number: 10662 _____

COA Type**Description**

	<p>Based on the information presented, it appears that no further action is necessary at this time and the COGCC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards or if ground water is found to be impacted, then further investigation and/or remediation activities may be required. In addition, the surface area disturbed by the remediation activity shall be reclaimed in accordance with the 1000 Series Reclamation Rules.</p> <p>The Operator is directed to submit a Form 27 Supplemental Report to request closure of this remediation project.</p>
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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**

401445508	FORM 27-INITIAL-SUBMITTED
401445537	ANALYTICAL RESULTS
401445539	ANALYTICAL RESULTS
401445541	ANALYTICAL RESULTS
401445544	ANALYTICAL RESULTS
401445546	ANALYTICAL RESULTS
401445547	ANALYTICAL RESULTS

Total Attach: 7 Files

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

Environmental	Changed Location No. 332023 to 447559 where the removed PWV was located; Changed Location No. 423743 to 427919 where the removed PWV was located	11/09/2017
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Total: 1 comment(s)