

State of Colorado Oil and Gas Conservation Commission

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Document Number:

401889751

Receive Date:

01/02/2019

Report taken by:

Candice (Nikki) Graber

Site Investigation and Remediation Workplan (Supplemental 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 #: 9134 Initial Form 27 Document #: 2314760

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 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

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

Facility Type: SPILL OR RELEASE	Facility ID: 441063	API #:	County Name: WELD
Facility Name: SPILL/RELEASE POINT	Latitude: 40.358040	Longitude: -104.647700	
** correct Lat/Long if needed: Latitude:		Longitude:	
QtrQtr: SWNE	Sec: 34	Twp: 5N	Range: 65W Meridian: 6 Sensitive Area? Yes

SITE CONDITIONS

General soil type - USCS Classifications SP Most Sensitive Adjacent Land Use IRRIGATED

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

Irrigation well 0.04 miles SE, unnamed ditch to Lower Latham Reservoir 0.07 miles NW.

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
Yes	GROUNDWATER	1200 square feet	Site assess grndwater samp results
Yes	SOILS	700 square feet	Site assessment soil sample results

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 routine maintenance activities, a flow line leak was discovered and impacted soil was observed.

The production equipment was shut in and blown down. Please refer to Form 19 submitted

December 8, 2014 (COGCC document #400808146).

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 during site assessment activities. SB02 exceeded COGCC Table 910-1 for TPH-DRO, TPH-GRO, and Total Xylenes. A confirmation soil sample will be collected at location SB02 prior to a request for closure to confirm soil impacts have been remediated.

Proposed Groundwater Sampling

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

Groundwater samples were collect from SB01-SB12 to determine the extent and magnitude of BTEX concentrations. Sample locations and analytical are attached.

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 1

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

Approximate areal extent (square feet) 1600

NA / ND

-- Highest concentration of TPH (mg/kg) 11100

NA Highest concentration of SAR

BTEX > 910-1 Yes

Vertical Extent > 910-1 (in feet) 5

Groundwater

Number of groundwater samples collected 12

Was extent of groundwater contaminated delineated? Yes

Depth to groundwater (below ground surface, in feet) 4'

Number of groundwater monitoring wells installed 12

Number of groundwater samples exceeding 910-1 1

-- Highest concentration of Benzene (µg/l) 13

ND Highest concentration of Toluene (µg/l)

ND Highest concentration of Ethylbenzene (µg/l)

ND Highest concentration of Xylene (µg/l)

ND 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?

Groundwater monitoring will continue until four consecutive quarters of laboratory analytical results

indicate compliance with applicable WQCC Reg 41 standards.

REMEDIAL ACTION PLAN

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? No _____

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Source material was removed via excavation of impacted soil.

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.

No further remediation is necessary.

Soil Remediation Summary

☒ In Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

Yes _____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

_____ Other _____

☒ Ex Situ

Yes _____ Excavate and offsite disposal

_____ If Yes: Estimated Volume (Cubic Yards) _____ 45

_____ 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

Yes _____ 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.

Groundwater monitoring wells (SB01 through SB12) have been installed to delineate the potential extent of dissolved-phase

petroleum hydrocarbon impact. Groundwater monitoring will continue on a quarterly basis and temporary groundwater monitoring wells SB02, SB04, SB06, and SB07 will be sampled while SB01, SB03, SB05, SB08, SB09, SB10, SB11, and SB12 will be removed. The current attached groundwater analytical was collected during static conditions of the AS/SVE remediation system. The AS/SVE system has been reactivated to reduce the concentrations of benzene in SB02. Groundwater monitoring will be conducted on a quarterly basis to document the performance of

the future remediation efforts. Groundwater monitoring for benzene, toluene, ethylbenzene, and total xylenes will continue until

four consecutive quarters of laboratory analytical results indicate compliance with applicable standards established by the

CDPHE-Water Quality Control Commission Regulation 41-The Basic Standards for Ground Water (WQCC Reg 41).

REMEDATION PROGRESS UPDATE

PERIODIC REPORTING

Frequency: ☐ Quarterly ☐ Semi-Annually ☐ Annually ☐ Other _____

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

☒ Other NFA Request _____

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 _____ 45

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

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: Waste Management _____

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

E&P waste (liquid) description _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

REMEDATION COMPLETION REPORT

REMEDATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? Yes _____

Do all soils meet Table 910-1 standards? Yes _____

Does the previous reply indicate consideration of background concentrations? No _____

Are the only residual soil impacts pH, SAR, or EC at depths greater than 3 feet below ground surface? _____

Does Groundwater meet Table 910-1 standards? Yes _____

Is additional groundwater monitoring to be conducted? No _____

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 rule.

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. 03/11/2015

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). _____

Date of commencement of Site Investigation. 03/11/2015

Date of completion of Site Investigation. _____

REMEDIAL ACTION DATES

Date of commencement of Remediation. 04/10/2015

Date of completion of Remediation. 04/17/2018

SITE RECLAMATION DATES

Date of commencement of Reclamation. 04/18/2018

Date of completion of Reclamation. 04/18/2018

OPERATOR COMMENT

Brantner 1 NFAR

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: 01/02/2019

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: Candice (Nikki) Graber

Date: 01/02/2019

Remediation Project Number: 9134

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>For locations with active ongoing oil and gas operations, comply with Rule 1003 interim reclamation requirements.</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**

401889751	FORM 27-SUPPLEMENTAL-SUBMITTED
401889768	MONITORING REPORT
401889770	MONITORING REPORT
401889771	MONITORING REPORT
401889774	MONITORING REPORT
401889777	MONITORING REPORT

Total Attach: 6 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)