

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

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received 04/26/2016  
Project 9625  
Spill 443066  
Document 2526120

**SITE INVESTIGATION AND REMEDIATION WORKPLAN**

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

OGCC Employee:

Spill       Complaint

Inspection       NOAV

Tracking No: \_\_\_\_\_

**CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED**

Spill or Release     Plug & Abandon     Central Facility Closure     Site/Facility Closure     Other (describe): \_\_\_\_\_

OGCC Operator Number: <u>100322</u>	Contact Name and Telephone: <u>Jacob Evans</u>
Name of Operator: <u>Noble Energy, Inc.</u>	No: <u>970-304-5329</u>
Address: <u>1625 Broadway, Suite 2200</u>	Fax: <u>303-228-4286</u>
City: <u>Denver</u> State: <u>CO</u> Zip: <u>80202</u>	

API Number: <u>05-123-16529</u> <b>443066</b>	County: <u>Weld</u>
Facility Name: <u>Noffsinger-64N66W /15SESE</u>	Facility Number: <u>328861</u>
Well Name: <u>Noffsinger</u>	Well Number: <u>44-15</u>
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>SESE SEC.15 T4N R66W</u>	Latitude: <u>40.304814</u> Longitude: <u>-104.755111</u>

**TECHNICAL CONDITIONS**

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Produced Water

Site Conditions: Is location within a sensitive area (according to Rule 901e)?     Y     N    If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Agricultural

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Julesburg sandy loam, 0-1% slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Retention Pond ~75' E; Domestic Well #218438 ~268' NE;

Commercial Well #296632 ~789'SE; Domestic Well #31396 ~820'SW; Domestic Well #267497 ~827'SW; Domestic Well #88567-A ~1055'W; Irrigation Well #12737-R ~1057' NE; Domestic Well #259741-A ~1150'S

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>21' E-W x 22' N-S x 6.5' bgs</u>	<u>Laboratory Confirmation Samples</u>
<input type="checkbox"/> Vegetation	_____	_____
<input checked="" type="checkbox"/> Groundwater	<u>Further Assessment Required</u>	<u>Lab analyticals - grab sample</u>
<input type="checkbox"/> Surface Water	_____	_____

**REMEDIAL WORKPLAN**

Describe initial action taken (if previously provided, refer to that form or document):

All production equipment was shut in and removed.  
Refer to Doc # 400894906 and 400894624 for Spill #443066

Describe how source is to be removed:

The impacted soil was removed via excavation activities completed on September 14, 2015. The dissolved benzene groundwater impacts exceeding the COGCC Table 910-1 Regulatory Limits will be removed using an insitu technology. Additional groundwater assessment is required. Impacted groundwater will be delineated by monitoring wells and monitored for natural attenuation.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

The soil source was removed during excavation activities. Laboratory analytical results indicated that soil clean up levels comply with COGCC Table 910-1. Groundwater was encountered at approximately 5.5 feet below grade surface. Impacted groundwater will be assessed and a remedial approach will be determined based on dissolved concentrations.



Tracking Number: Name of Operator: OGCC Operator No: Received Date: Well Name & No: Noffsinger 44-15 Facility Name & No: Noffsinger-64N66W /15SESE 328861

REMEDIATION WORKPLAN (Cont.)

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If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Six (6) initial monitoring wells are proposed to define dissolved water impacts. The proposed monitoring wells will be installed following tank battery rebuild. Additional monitoring wells will be installed as needed to obtain point of compliance. Groundwater samples will be collected from the monitoring wells on a quarterly schedule. Groundwater will be analyzed for BTEX following EPA Method 8260c.

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. Use additional sheet for description if required.

The excavation was backfilled with clean fill to grade. The tank battery will be rebuilt. No reclamation is required at this time.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? [X] Y [ ] N If yes, describe:

Dissolved BTEX impacts will be defined with soil boring advancement/permanent monitoring well installation at the site.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

Soil removed from the excavation was disposed of at Buffalo Ridge Landfill, operated by Waste Management, located in Keenesburg, CO. All groundwater impacts will be treated in-situ, therefore no additional E&P waste will be disposed of.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 9/14/15 Date Site Investigation Completed: TBD Date Remediation Plan Submitted: 4/26/2016 Remediation Start Date: 9/14/15 Anticipated Completion Date: TBD Actual Completion Date: TBD

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Jacob Evans

Signed: Jacob Evans

Digitally signed by Jacob Evans DN: cn=Jacob Evans, o=Noble Energy, Inc., ou, email=jevans@nobleenergyinc.com, c=US Date: 2016.04.26 10:50:50 -06'00'

Title: Senior Environmental Specialist

Date:

OGCC Approved:

Peter Gintautas

Digitally signed by Peter Gintautas DN: cn=Peter Gintautas, o=COGCC, ou=Environmental Protection Specialist, email=peter.gintautas@state.co.us, c=US Date: 2016.04.26 13:15:27 -06'00'

Date:

Submit reports of site investigation and progress of remediation including results of sampling and analysis on an annual basis or more often until remediation is closed.