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## State of Colorado

## Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109



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02 2011

COGCC

OGCC Employee

☐ Spill ☐ Complaint  
☐ Inspection ☐ NOAV

Tracking No: Rem #5465

## 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.

## CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

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

OGCC Operator Number: 10120

Name of Operator: Noble Energy, Inc.

Address: 804 Grand Avenue

City: Platteville State: CO Zip: 80651

Contact Name and Telephone:

Marty Faraguna

No: 970-785-5000

Fax: 970-785-5099

API Number: 05-123-15139

County: Weld

Facility Name: Lorenz F22-1,2 Tank Battery

Facility Number:

Well Name: Lorenz F22

Well Number: 2

Location: (QtrQtr, Sec, Twp, Rng, Meridian): NENE, 22, 5N, 65W, 6 Latitude: 40.389965 Longitude: -104.646478

## TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): Crude oil

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.): pasture

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Aquolls and aquents, gravelly substratum

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Ditch 30 ft., water well 750 ft.

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

Impacted Media (check):

☒ Soils☐ Vegetation☒ Groundwater☐ Surface Water

Extent of Impact:

Described in Excavation Report (January 2011)

Described in Site Assessment Report (12/10/10)

How Determined:

## REMEDIAL WORKPLAN

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

Production was ceased to assess and remediate the impacted soils and groundwater. Cone of depression was excavated and water/oil totalling (107 bbls) was removed via vacuum truck and transported to Conquest Disposal facility.

Describe how source is to be removed:

Impacted soil and groundwater was removed via excavation and a groundwater amendment was applied, as described in Excavation Report (January 2011).

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.:

During excavation activities, a groundwater amendment was applied to the base of the excavation to aid in groundwater remediation. Some soils were left in place due to the presence of a DCP Midstream pipeline. DCP Midstream was notified on 1/27/11 of the release location and the possibility of the accumulation of volatile organic constituents in the utility corridor. Passive Soil Vapor Extraction wells will be installed to treat the remaining soil impact per the attached Figure 1. A groundwater amendment will be injected to treat groundwater impacts in the SS08 location (Figure 2). Post-remediation well installation will be conducted to assess the performance of the remedial methods.





Tracking Number: Rem # 5465  
Name of Operator: Noble Energy  
OGCC Operator No: 10120  
Received Date: 2/2/11  
Well Name & No: Lorenz F22 2  
Facility Name & No: Lorenz F22-1,2 Tank Battery

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**REMEDIAL 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.):

Groundwater will be monitored until four consecutive quarters of results in compliance with COGCC standards are achieved.

**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.

After excavating impacted soil, clean fill dirt was brought in after groundwater amendment was applied. The fill dirt was contoured to match existing topography.

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? ☒ Y ☐ N If yes, describe:

Groundwater monitoring wells will be installed to assess the potential for residual groundwater impacts.

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

Impacted groundwater (107 bbls.) was removed via vacuum truck and transported to Conquest Disposal, Weld County, CO. Impacted soils will be removed and transported to Buffalo Ridge Landfill, Weld County, CO.

**IMPLEMENTATION SCHEDULE**

Date Site Investigation Began: <u>11/19/2010</u>	Date Site Investigation Completed: <u>11/29/2010</u>	Date Remediation Plan Submitted: <u>2/1/2011</u>
Remediation Start Date: <u>2/1/2011</u>	Anticipated Completion Date: <u>4/1/2011</u>	Actual Completion Date: <u>TBD</u>

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

Print Name: Marty Faraguna Signed: \_\_\_\_\_

Title: Environmental Specialist Date: 2/1/11

OGCC Approved: [Signature] Title: EPS Date: 2/3/11



