FORM
**27**
**Rev 6/99**

# State of Colorado
# Oil and Gas Conservation Commission

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

FOR OGCC USE ONLY
received 04/07/2014
Project 8302
Remediation 200400836
API 071-07060

OGCC Employee:
☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV
Tracking No:

## 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: 10084
Name of Operator: Pioneer Natural Resources USA, Inc.
Address: 1401 17th Street, Suite 1200
City: Denver State: CO Zip: 80202

Contact Name and Telephone:
David Castro
No: 303-298-8100
Fax: 303-298-7800

API Number: 05-071-07060
County: Las Animas
Facility Name: Lorencito 14-32-33-66R Offsite pit
Facility Number: unpermitted pit
Well Name: Lorencito
Well Number: 14-32-33-66R
Location: (QtrQtr, Sec, Twp, Rng, Meridian): SESW Sec. 32, T33S, R66W, 6th P.M. Latitude: 37.12223 Longitude: -104.80375

## 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.): Submitted on 2a

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Submitted on 2a

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Nearest permitted water well - 2245' (if SEO point is accurate)
Nearest surface water - 640' (if live water is present)

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

| Impacted Media (check): | Extent of Impact: | How Determined: |
|---|---|---|
| ☑ Soils | to be determined | proposed soil sampling |
| ☐ Vegetation | | |
| ☐ Groundwater | | |
| ☐ Surface Water | | |

## REMEDIATION WORKPLAN

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

Produced water from this well was being stored in this offsite pit. The well is no longer going to the pit and as much water has been pulled from it as possible.

**Describe how source is to be removed:**

Produced water has been removed from the pit.

**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.:**

Produced water may be surface discharged under a CDPS permit, disposed of in a Class II UIC injection well, or utilized for dust supression.

**Submit Page 2 with Page 1**

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Page 2

**State of Colorado**
**Oil and Gas Conservation Commission**
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Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No: _____

## REMEDIATION WORKPLAN (Cont.)

OGCC Employee:

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

It is not expected that produced water stored in this pit communicated with nor affected groundwater.

**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 need for reclamation is dependent on results of proposed site investigation plan below.

**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:

See diagram submitted with this Form 27 for visual reference. On top of the 6 samples already collected in and around the offsite pit (green points), Pioneer plans to collect 10 more samples in and near the length of the potential spill path, which will be where the red circles indicate. 5 of the samples will be collected from within the potential spill path, the other 5 will be respective native samples just above any high water mark from the spill path samples. All 10 samples will be lab tested for our usual "pit bottom" suite of constituents. All soil sample results and their GPS locations will be submitted to COGCC for review.

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

Produced water may be surface discharged under a CDPS permit, disposed of in a Class II UIC injection well, or utilized for dust supression.

## IMPLEMENTATION SCHEDULE

| | | |
|---|---|---|
| Date Site Investigation Began: 3/17/2014 | Date Site Investigation Completed: in progress | Date Remediation Plan Submitted: 4/7/2014 |
| Remediation Start Date: pending | Anticipated Completion Date: 2nd Qtr 2014 | Actual Completion Date: |

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

Print Name: David Castro Signed: David Castro

Digitally signed by David Castro
DN: cn=David Castro, o=Pioneer Natural Resources USA, Inc., ou, email=david.castro@pxd.com, c=US
Date: 2014.04.07 10:21:09 -06'00'

Title: Environmental Specialist Date: 4/7/2014

OGCC Approved: Peter Gintautas Title: Date:

Digitally signed by Peter Gintautas
DN: cn=Peter Gintautas, o=COGCC, ou=Environmental Protection Specialist, email=peter.gintautas@state.co.us, c=US
Date: 2014.04.11 15:32:12 -06'00'

Provide update on sampling and results and analytical data by 28 May 2014

METALS

Analytical results demonstrate that background concentrations of arsenic (As) exceed Table 910-1 concentration levels for samples in the initial sample site (unpermitted pit location of spill). Analytical results demonstrate that concentrations of As in soils in the pit also exceed Table 910-1 concentration levels and the pit concentrations are less than or within analytical uncertainty of being equal to the background concentrations. The analytical results are summarized below:

| METAL | BACKGROUND CONCENTRATION (MG/KG) | PIT CONTENTS, SOIL/BEDROCK BELOW PIT OR IMPACTED MEDIA (MG/KG) | TABLE 901-1 CONCENTRATION LEVELS (MG/KG) |
|---|---|---|---|
| Arsenic | 1.9-5.4 | 2.2-2.7 | 0.39 |

COGCC and CDPHE have consulted and agree that operators do not need to request variances from CDPHE for instances where the concentrations of metals in impacted soils are equal to or less than background concentrations, but do not meet Table 910-1 concentration values. Operators must ensure that remaining pit contents are covered with a minimum of 3 feet of backfill and soil or remediation for SAR will need to be proposed and accomplished. The soil horizons must be replaced in their original relative position, and reclaimed in accordance with 1000 Series Rules.

# *Site Investigation Plan*

## Lorencito 14-32-33-66R Spill

PIONEER
NATURAL RESOURCES