

State of Colorado Oil and Gas Conservation Commission

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received 11/14/2014 Project 8771 Document 200418202 Pit facility 113412

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.

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: 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: 05-071-06563 County: Las Animas Facility Name: Lonesome 22-10R Offsite West pit Facility Number: 113412 Well Name: Lonesome R Well Number: 22-10 Location: (QtrQtr, Sec, Twp, Rng, Meridian): SENW, Sec. 10, T33S, R66W, 6th P.M. Latitude: 37.18834 Longitude: -104.76966

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 - 1215' (if SEO point is accurate) Nearest surface water - 230' (if live water is present) Description of Impact (if previously provided, refer to that form or document): Impacted Media (check): Soils Extent of Impact: soil within pit How Determined: unlined

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. Describe how source is to be removed: Produced water is not being sent to this pit and it is no longer needed. 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.



Tracking Number: \_\_\_\_\_ Name of Operator: \_\_\_\_\_ OGCC Operator No: \_\_\_\_\_ Received Date: \_\_\_\_\_ Well Name & No: \_\_\_\_\_ Facility Name & No: \_\_\_\_\_

Page 2 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.

If back berm of pit exists, this material will be utilized to backfill pit. Native fill material may be collected from the recontouring of cut and fill slopes. Fill material will be brought onsite, if needed, to adequately backfill pit. The top 3 feet of the pit will be filled with at least 25% native soil. If topsoil exists, this material will be overlain on the fill material. Backfilled material may be contoured in a manner to be utilized as a stormwater BMP.

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:

No impact to the surrounding environment occurred from the use of this pit.

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 suppression.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: \_\_\_\_\_ Date Site Investigation Completed: 11/2014 Date Remediation Plan Submitted: 11/14/2014 Remediation Start Date: upon approval Anticipated Completion Date: 4th 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: [Signature] Title: Environmental Specialist Date: 11/14/2014

OGCC Approved: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Notify COGCC when closure process is completed.

#### METALS

Analytical results demonstrate that background concentrations of arsenic (As) exceed Table 910-1 concentration levels. 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	2.3-4.0	2.6-3.0	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. The soil horizons must be replaced in their original relative position, and reclaimed in accordance with 1000 Series Rules.