

State of Colorado Oil and Gas Conservation Commission

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Document Number:

401531601

Receive Date:

06/29/2018

Report taken by:

Jason Kosola

Site Investigation and Remediation Workplan (Initial 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: <u>PIONEER NATURAL RESOURCES USA INC</u>	Operator No: <u>10084</u>	Phone Numbers Phone: <u>(719) 846-7898</u> Mobile: <u>()</u>
Address: <u>5205 N O'CONNOR BLVD STE 200</u>		
City: <u>IRVING</u>	State: <u>TX</u> Zip: <u>75039</u>	
Contact Person: <u>Cheri Morgan</u>	Email: <u>cheri.morgan@pxd.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 11516 Initial Form 27 Document #: 401531601

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 checked="" 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 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: <u>PIT</u>	Facility ID: <u>256176</u>	API #: _____	County Name: <u>LAS ANIMAS</u>
Facility Name: <u>RAVEN RIDGE 24-16</u>		Latitude: <u>37.166605</u>	Longitude: <u>-104.787812</u>
		** correct Lat/Long if needed: Latitude: _____	Longitude: _____
QtrQtr: <u>SESW</u>	Sec: <u>16</u>	Twp: <u>33S</u>	Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

SITE CONDITIONS

General soil type - USCS Classifications CH Most Sensitive Adjacent Land Use Rangeland
Is domestic water well within 1/4 mile? No Is surface water within 1/4 mile? Yes
Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

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	SOILS	0	Soil Sampling

INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

To investigate the soil quality in and around the production pit, we collected samples from top of pit and bottom of pit.

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):

To investigate the soil quality in and around the production pit, we collected grab samples from top of pit and bottom of pit. These samples were analyzed for Table 910-1 standards criteria.

Proposed Groundwater Sampling

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

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 2

Number of soil samples exceeding 910-1 1

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet) 0

NA / ND

-- Highest concentration of TPH (mg/kg) 43

-- Highest concentration of SAR 5.3

BTEX > 910-1 No

Vertical Extent > 910-1 (in feet) 0

Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet) 0

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 910-1 0

Highest concentration of Benzene (µg/l) 0

Highest concentration of Toluene (µg/l) 0

Highest concentration of Ethylbenzene (µg/l) 0

Highest concentration of Xylene (µg/l) 0

Highest concentration of Methane (mg/l) 0

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) 0

Volume of liquid waste (barrels) 0

☐ Is further site investigation required?

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Source was produced water and the pit has been emptied

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.

We will add two feet of clean soil to the bottom of the pit (see sourcing below). We will use the backhoe to blend the clean soil in with the bottom of the pit. Then the pit will be backfilled with remaining clean soil. Clean soil source: 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. Clean fill material will be brought onsite, if needed.

Soil Remediation Summary

☐ In Situ

- ☐ Bioremediation (or enhanced bioremediation)
- ☐ Chemical oxidation
- ☐ Air sparge / Soil vapor extraction
- ☐ Natural Attenuation
- ☐ Other _____

☐ Ex Situ

- ☐ Excavate and offsite disposal
- ☐ If Yes: Estimated Volume (Cubic Yards) _____
- ☐ Name of Licensed Disposal Facility or COGCC Facility ID # _____
- ☐ Excavate and onsite remediation
- ☐ Land Treatment
- ☐ Bioremediation (or enhanced bioremediation)
- ☐ Chemical oxidation
- ☐ Other _____

Groundwater Remediation Summary

- ☐ Bioremediation (or enhanced bioremediation)
- ☐ Chemical oxidation
- ☐ 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.

NA

REMEDATION PROGRESS UPDATE

PERIODIC REPORTING

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

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

WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? No

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

Volume of E&P Waste (solid) in cubic yards _____

E&P waste (solid) description _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

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

E&P waste (liquid) description _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

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.

Once the pit is backfilled, it will be reseeded with an approved seed mix, per landowners instructions.

Is the described reclamation complete? No

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? Yes

If NO, does the seed mix comply with local soil conservation district recommendations? Yes

IMPLEMENTATION SCHEDULE

PRIOR DATES

Date of Surface Owner notification/consultation, if required. _____

Actual Spill or Release date, if known. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/29/2017

Date of commencement of Site Investigation. 06/29/2017

Date of completion of Site Investigation. 01/31/2018

REMEDIAL ACTION DATES

Date of commencement of Remediation. _____

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

Location coordinates have auto populated and are correct.

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

Signed: Cheri Morgan

Title: Environmental Technician

Submit Date: 06/29/2018

Email: cheri.morgan@pxd.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: Jason Kosola

Date: 07/06/2018

Remediation Project Number: 11516

COA Type**Description**

	Operator has received COGCC approval to discontinue testing for Arsenic for produced water pit closures. Operator 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.
	Operator shall submit Form 27 Supplemental documenting pit closure within 180 days of pit closure.

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**

401531601	FORM 27-INITIAL-SUBMITTED
401531618	ANALYTICAL RESULTS

Total Attach: 2 Files

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

Environmental	Operator did not make changes to form as requested previously. COGCC changed form as suggested in comments on 2/14/18 and 2/27/18.	07/06/2018
Environmental	Returned to DRAFT - Operator did not provide corrected coordinates to prior to submitting form. This pit was not permitted as a "sensitive area". "Impacted?" on the third tab should also be changed to "YES" since there were impacts as shown on sampling.	02/27/2018
Environmental	Returned to DRAFT - There are no coordinates displayed on the form. Operator shall provide COGCC with coordinates prior to submitting form. This pit was not permitted as a "sensitive area". "Impacted?" on the third tab should also be changed to "YES" since there were impacts as shown on sampling.	02/14/2018

Total: 3 comment(s)