FORM
27
Rev 6/99

received 08/19/2011
Project 6155
Remediation 200322096

State of Colorado
Oil and Gas Conservation Commission

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

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): Production Pit Abandon

OGCC Operator Number: 08667
Name of Operator: Petroglyph Operating Company, Inc
Address: PO Box 979
City: La Veta State: CO Zip: 81055

Contact Name and Telephone:
Tom Melland
No: 719-742-5570
Fax: 719-742-5571

API Number: 055-06150
County: Huerfano #055
Facility Name: Evap Tank #1 SW Pond
Facility Number: 115116
Well Name:
Well Number:
Location: (QtrQtr, Sec, Twp, Rng, Meridian): NESW 10 29S 67W 6
Latitude: 37.536636 Longitude: -104.879062

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Production 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.): Non Crop Land / Rangeland / Timber

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Noden 52

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Surface Water - 2080' Ground Water - 205' Water Well - 300'

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

Impacted Media (check):	Extent of Impact:	How Determined:
☐ Soils		
☐ Vegetation		
☐ Groundwater		
☐ Surface Water		

REMEDIATION WORKPLAN

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

This pit was originally a stock watering pond before any oil and gas development. The landowner requested Petroglyph to provide produced water, keeping the pit full. A Form 15 pit permit was submitted and approved. The landowner improved the dam and pit. A flow line was installed from the gathering system to the pit. The pit received water from multiple CBM wells. The pit has not received any produced water since July 2007.

Describe how source is to be removed:

The flow line will be removed and the pit will be left "as-is".

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 flow line will be removed and the pit will be left "as-is".

Submit Page 2 with Page 1

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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 the produced water stored in this pit communicated with or affected the 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.

Current owner has requested the pit to be left "as-is". The flow line will be removed and the pit will be left "as-is". Re-contouring and re-seeding will be done as required at the areas disturbed from removing the flow line.

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:

SAR levels exceed the Table 910-1 sthreshold. Sampling and analysis will be done for SAR, pH and EC again within 12 months and provided to COGCC as part of closure process.

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

The pit has water in it. The water is from precipitation run-off. Produced water will no longer be pumped or provided to the pond.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 5/2011	Date Site Investigation Completed: 5/2011	Date Remediation Plan Submitted: 8/19/2011
Remediation Start Date: Immediate	Anticipated Completion Date: 3rd QTR 2011	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: Tom Melland Signed: Thomas K Melland

Title: District Manager Date: 8/19/2011

OGCC Approved: _____ Title: _____ Date: _____

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: 2011.09.23 07:46:34 -06'00'

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	1.2-3.9	3.6	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.

Operator must ensure that SAR levels are below the threshold stated in Table 910-1 before pit will be considered closed. Sampling and analysis of soils from the pit must be submitted by May 1, 2012 to confirm the SAR does not exceed the threshold in the table.