

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

February 5, 2009

TO: Internal File

THRU: Jim Smith, Lead *DS 03/16/09*

FROM: Ingrid Wieser, Environmental Scientist II *WW 3/10/09*

RE: 2008 Midterm Review, Pacificorp, Deer Creek Mine, C/015/0018, Task ID # 3026

SUMMARY:

In a letter dated August 11, 2008 the Division notified Pacificorp of the commencement of the 2008 Midterm Review of Deer Creek Mine. The following items were chosen for review:

1. A review of the mine plan to ensure that the requirements of all permit conditions, division orders, notice of violation abatement plans, and permittee initiated plan changes are appropriately incorporated into the mine plan document.
2. A review to ensure that the mine plan has been updated to reflect changes in the Utah Coal Regulatory Program that have occurred subsequent to permit approval (example: compliance with U.S. Fish and Wildlife Department - Colorado River Endangered Fish Recovery Program).
3. A review of the applicable portions of the permit to ensure that the mine plan contains commitments for application of the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area.
4. An AVS check to insure that Ownership and Control information is current and correct, verify compliance status of unabated enforcement actions, determine status of any outstanding finalized penalties, and verify that there are no demonstrated patterns of violation.
5. A review of the bond to ensure that it is in order and that the cost estimate is accurate and is escalated to the appropriate current-year dollars.

6. A review of the mining and reclamation plan for compliance with operator commitments related to variances or special permit conditions (including but not limited to subsidence control/monitoring plans and reporting requirements, variances to AOC, experimental practices, electronic database water monitoring reporting, raptor surveys, revegetation test plots, etc.).
7. The Division may conduct a technical site visit, in conjunction with the assigned compliance inspector, to document the status and effectiveness of operational, reclamation, and contemporaneous reclamation practices.

The Division found deficiencies with the mining and reclamation plan, which are provided under recommendations.

TECHNICAL ANALYSIS:

GENERAL CONTENTS

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

FISH AND WILDLIFE RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.21; R645-301-322.

Analysis:

In Volume 12, Biology Section, page 3-18 and 3-19, the Permittee lists the water consumption calculations in accordance with the Colorado River Endangered Fish Recovery Program. Typically, mining operations can contribute to water depletion in the following ways: Coal production consumption (or coal moisture loss), surface operation consumption, ventilation, discharge from groundwater into mine workings, and pond evaporation.

The Permittee identified the following eight sources of potential water depletion from the mine.

1. Evaporation from ventilation. From this calculation, the Permittee found that the mine lost 55 acre/feet of water from ventilation evaporation.
2. Coal preparation. PacifiCorp owns the water rights for their coal preparation plant and therefore this water loss does not need to be included.

According to the USFWS, State-appropriated water rights are a separated issue and do not have any bearing on the depletion calculations and Colorado Fish Recovery Program.

3. Sediment pond evaporation. The Permittee stated that this would not be considered a consumption mechanism because the water is discharged into a receiving stream after the sediment has accumulated in the pond. The Permittee needs to calculate the loss of water due to evaporation from the slow moving water in the pond.

The permittee misinterpreted this source of water consumption. The permittee must calculate the water loss due to evaporation from the sediment pond, regardless of whether or not the remaining water is discharged back to the stream.

TECHNICAL MEMO

4. Subsidence effect on springs. The Permittee states that there have been no effects to the streams due to subsidence.
5. Alluvial abstractions into mines. The Permittee states that there are no water infiltrations from alluvial systems into the mine.
6. Postmining inflow into workings. The Permittee states that there are currently no proposed mine openings for the Mill Fork Lease.
7. Coal Moisture loss. The Permittee states that coal mined at Deer Creek is approximately 5% and run-off mine moisture averages 8.5%. They also state that in 2002, Deer Creek is scheduled to mine 4.2 million tons. This calculation sums to 161 acre feet of water.

The Permittee needs to update this calculation based on a current figure of mining production.

8. Direct Diversion. The Permittee states that there has been no consumption related to direct Diversion.

The Permittee calculates a final water consumption of 216 acre feet of water per year. The Permittee also lists a mine discharge of 2670 acre feet of water per year which would sum to a net gain of 2453 acre feet of water. ***However, the USFWS does not consider water discharge as a net gain or loss in the consumption equation. The mine is responsible for any water consumption over 100 acre feet regardless of mine discharge.***

The final water consumption calculation and fee will be determined by the USFWS in a Section 7 consultation with OGM.

Findings:

Information provided in the Mining and Reclamation Plan is not considered adequate to meet the minimum R645-302-322 Section requirements of the regulations. Prior to approval the permittee must provide the following in accordance with:

R645-301-322: The following deficiency is based on the USFWS Colorado River Endangered Fish Recovery Program Regulations.

The Permittee must calculate the water consumption due to evaporation from the sediment pond. Even though the water is discharged back into the stream after sediment settling, some water is lost due to evaporation increased by the slow movement of the water. This calculation must be included in the final sum of water consumption.

TECHNICAL MEMO

When calculating the water consumption due to Coal moisture loss, the Permittee used a coal production figure of 4.2 million tons, which was an estimate from 2002. The Permittee needs to update the calculation of coal moisture loss using a current mining production figure.

State appropriated water rights do not have any bearing on the depletion calculations and Colorado River Fish Recovery Program. The Permittee must include this depletion in the calculation.

According to the US Fish and Wildlife Service, water discharged by the mine is not considered a net gain or loss when calculating water consumption. The Mine is responsible for the Colorado River water consumption regardless of the mine discharge. It is the responsibility of the Permittee to submit documentation from the USFWS supporting mine discharge as a positive contribution to the stream.

The updated water consumption figure will be subject to a Section 7 consultation with OGM and the USFWS. The USFWS requires a current charge of 17.79 per acre foot of water consumption over 100 acre feet.

RECOMMENDATIONS:

The Midterm review cannot be approved until the following has been provided in accordance with:

R645-301-322: The following deficiency is based on the USFWS Colorado River Endangered Fish Recovery Program Regulations.

The Permittee must calculate the water consumption due to evaporation from the sediment pond. Even though the water is discharged back into the stream after sediment settling, some water is lost due to evaporation increased by the slow movement of the water. This calculation must be included in the final sum of water consumption.

When calculating the water consumption due to Coal moisture loss, the Permittee used a coal production figure of 4.2 million tons, which was an estimate from 2002. The Permittee needs to update the calculation of coal moisture loss using a current mining production figure.

According to the US Fish and Wildlife Service, water discharged by the mine is not considered a net gain or loss when calculating water consumption. The Mine is responsible for the Colorado River water consumption regardless of the mine discharge. It is the responsibility of the Permittee to submit documentation from the USFWS supporting mine discharge as a positive contribution to the stream.

TECHNICAL MEMO

The updated water consumption figure will be subject to a Section 7 consultation with OGM and the USFWS. The USFWS requires a current charge of 17.79 per acre foot of water consumption over 100 acre feet.

O:\015018.DER\FINAL\WG3026\IW3026.doc