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WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

April 13, 2010

TO: Internal File

THRU: Daron R. Haddock, Manager *DRH*

FROM: James D. Smith, Permit Supervisor *JS* 13 Apr 2010

RE: 2009 Fourth Quarter Water Monitoring, PacifiCorp, Trail Mountain Mine, C/015/0009, Task ID #3445

The Trail Mountain Mine is currently idle. The monitoring plan is described in Appendix A of Volume 9 of the MRP.

1. Were data submitted for all of the MRP required sites?

See spreadsheet: O:\015009.TMT\Water Quality\SPREADSHEETS\TMT All 2003 to 2010.xls

In-mine

YES NO

The mine is sealed, so other than the Oliphant portal discharge (18-1-1 or T-18), which is monitored as a spring, there is no monitoring of underground or in-mine water.

Springs

YES NO

During the 4th Quarter, the Oliphant portal discharge (18-1-1 or T-18) is monitored in December for operational water quality parameters. Springs 18-2-1, 17-21-1, 17-22-1, 17-26-4, 17-25-1, 17-26-5, 17-35-1, and 17-35-2 are monitored for operational parameters in October. Spring 17-22-1 was the only spring with reported flow during the 4th Quarter 2009.

Streams

YES NO

Stream monitoring sites SW-1, SW-2, SW-3, and 18-3-1 are monitored for flow in October and November for operational parameters in December. SW-1 and SW-3 had no flow during the 4th Quarter 2009.

UPDES

YES NO

DMRs were submitted in electronic format (Adobe). The mine was sealed in June 2001

WATER QUALITY MEMO

and there has been no reported discharge at UPDES UT23728-002 (the mine-water discharge into Cottonwood Creek) since May 2001. There was no discharge from UPDES UT23728-001 (the sedimentation pond) during the 4th quarter 2009.

Wells YES NO

TM-1B is monitored for water level in the first and second months of each quarter and for operational parameters in the third month. TM-3 is monitored monthly for water level: since July 2004 the water level in TM-3 has been reported as head above the casing elevation, which is determined from pressure measured by a gauge on the sealed wellhead.

2. Were all required parameters reported for each site?

Springs YES NO

Streams YES NO

UPDES YES NO

Wells YES NO

3. Were any irregularities found in the data?

Listed parameters were outside two standard deviations. An asterisk (*) indicates this is not a parameter required by the MRP.

Springs YES NO

17-22-1 October: acidity* and cation-anion percent difference.

Streams YES NO

18-3-1 December: field specific conductivity, bicarbonate as CaCO₃, SO₄, total alkalinity*, total hardness, TDS, total cations*, and total anions*;

Outfall UT0022896-001 of the Cottonwood/Wilberg Mine UPDES permit was relocated from Grimes Wash to the Trail Mountain Access Tunnel (TMA) in July 2001. This discharge produced a jump in TDS, sulfate, Ca, Mg, and K concentrations at SW-2 on Cottonwood Creek and has continued long enough that the values for these parameters are no longer flagged as exceeding the mean by more than 2 standard deviations.

UPDES YES NO

There were no UPDES discharges during the 4th quarter 2009.

Wells YES NO

WATER QUALITY MEMO

- TM-1B October, November, December: depth. The head in TM-1B has been slowly rising since early 2003. The cause is not evident.
- TM-1B December: bicarbonate as CaCO₃. Na, Cl, and SO₄ are also increasing but values have not exceeded the mean by 2 standard deviations; Ca, Mg, and K have remained relatively constant (see chart).
- TM-3 October, November, December: water elevation peaked in June 2005, remained steady through October, dropped 18.5 ft in November and December 2005 and remained virtually unchanged during 2006. The pressure gauge was replaced in January 2007 and values jumped to approximately match the pre-2006 curve. During the first half of 2007, the curve was relatively flat, but it resumed climbing during the 3rd Quarter 2007 and has continued on an upward trend.

4. On what date does the MRP require a five-year resampling of baseline water data.

The next renewal submittal is due 10/21/09 for renewal on 02/21/10. Baseline analyses were performed in 2001 and 2006. Analyses for baseline parameters will be repeated every 5 years, i.e., the next baseline analyses will be in 2011.

5. Based on your review, what further actions, if any, do you recommend?

There is no further action recommended at this time.

6. Does the Mine Operator need to submit more information to fulfill this quarter's monitoring requirements?

YES NO

7. Follow-up from last quarter, if necessary.

NA

8. Did the Mine Operator respond adequately to queries about missing or irregular data?

YES NO

NA

WATER QUALITY MEMO

