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# WATER QUALITY MEMORANDUM

## Utah Coal Regulatory Program

June 11, 2013

TO: Internal File

THRU: Steve Christensen, Permit Supervisor *SC*

FROM: Ken Hoffman, Hydrologist *KH*

RE: Fourth Quarter of 2012 Water Monitoring, PacifiCorp, Trail Mountain Mine, C/015/0009, Task ID #4232

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?

The Oliphant portal discharge (18-1-1 or T-18) is monitored as a spring. The MRP identifies 18-3-1 (T-19) as a stream monitoring point but the Permittee reports it as a spring.

**In-mine** YES  NO

The mine is sealed, so there is no monitoring of underground or in-mine water.

**Springs** YES  NO

The Oliphant portal discharge (18-1-1 or T-18) is monitored quarterly. Mine discharge has not occurred since December of 2001. The Permittee monitors springs 17-35-2, 17-35-1, 17-26-5, 17-25-1, 17-26-4, 17-22-1, 17-21-1, and 18-2-1 for operational parameters in July and October and for flow only in August and September. The Permittee monitors spring 18-3-1 (T-19) in Straight Canyon for operational parameters in March, June, September, and December and for flow only the remaining months of the year.

**Streams** YES  NO

The Permittee monitors SW-1, SW-2 and SW-3 in Cottonwood Canyon for flow only during the first two months of each quarter and for operational parameters during the last month of each quarter.

**UPDES** YES  NO

There was no reported discharge from either UPDES point during the Fourth Quarter of 2012. The mine was sealed in June 2001 and there has been no reported discharge at UPDES UT23728-002 (the mine-water discharge into Cottonwood Creek) since May 2001.

**Wells** YES  NO

Since July 2004, the water level in TM-3 has been reported as head above the casing elevation, determined from pressure measured by a gauge on the sealed wellhead (see chart below). TM-1B is monitored for water level monthly and for operational parameters during the last month of each quarter.

**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?**

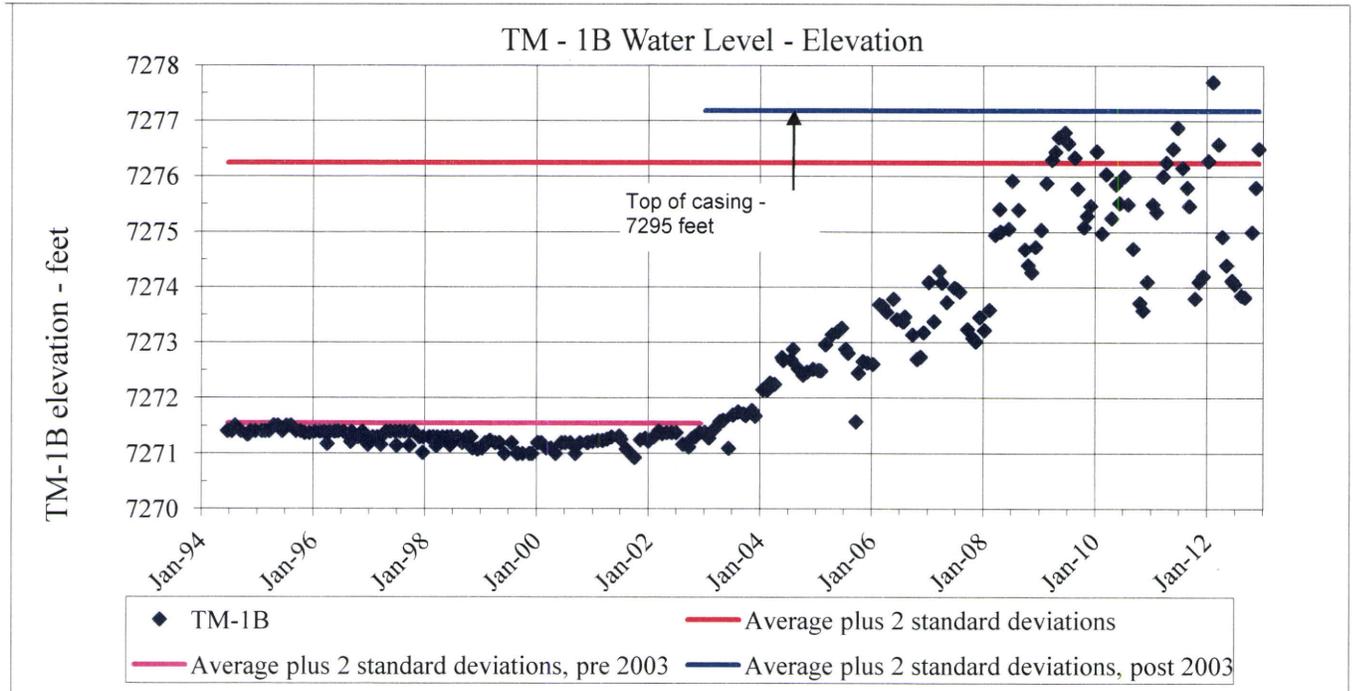
Listed parameters were outside two standard deviations.

**Springs** YES  NO   
17-22-1 October – cation-anion balance

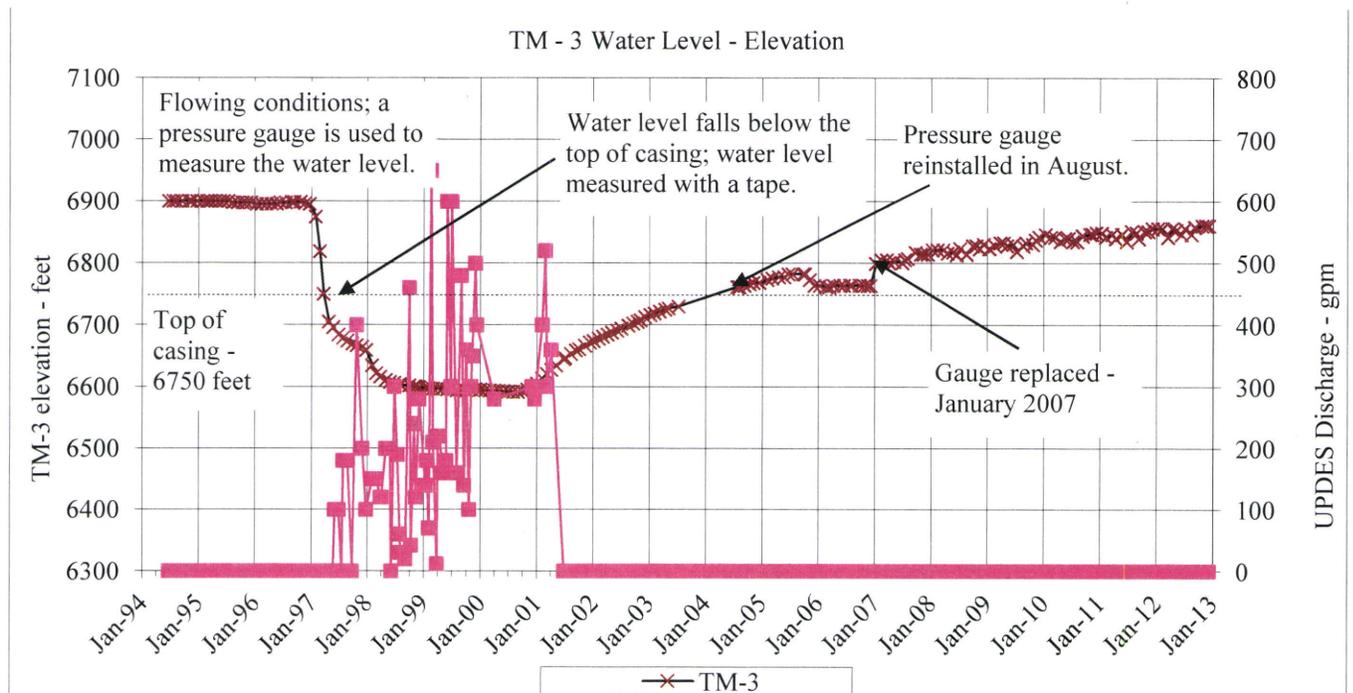
**Streams** YES  NO

**UPDES** YES  NO   
No discharge.

**Wells** YES  NO



The head in TM-1B began slowly rising in early 2003. The cause is not evident. Although highly variable from quarter to quarter, the water level now peaking again (the elevation was highest in February 2012). This water level will be continued to be tracked in the First Quarter of 2013



TM-3: 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 third quarter and has continued to climb during the Fourth Quarter of 2012.

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

The next renewal will be on February 21, 2015. Baseline analyses were performed in 2001, 2006, and 2011. Analyses for baseline parameters will be repeated every 5 years conducted during 2016.

**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