WATER QUALITY MEMORANDUM
Utah Coal Regulatory Program

November 24, 2014

TO: Internal File

THRU: Steve Christensen, Permit Supervisor

FROM: Keenan Storrar, Hydrologist *Keenan Storrar*

RE: Second Quarter of 2014 Water Monitoring, PacifiCorp, Trail Mountain Mine, C/015/0009, Task ID #4627

The Trail Mountain Mine is currently idle. The monitoring plan is described in Appendix A of Volume 9 of the Deer Creek/Cottonwood-Wilberg MRP.

Energy West submitted task #4443 to reduce spring monitoring sites. Hydrologic monitoring sites were approved for release on August 13, 2014.

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 operationally monitored quarterly. Mine discharge has not occurred since December of 2001. However, during the summer of 2013 a small hole was dug at the mouth of the portal and discharge filled the hole. This discharge was first measured on September 9, 2013. The Permittee monitors springs 17-21-1, 17-22-1, 17-25-1, 17-26-4, 17-35-1, 17-35-2, 18-1-1, and 18-2-1 for operational parameters in July and October and field parameters 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 First Quarter of 2014. 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 ☐

T-18 June – Cond (FLD), SO_4, total hardness, specific conductivity, total dissolved solids, total cations, total anions

Streams YES ☒ NO ☐

SW-1 June – SO_4, T-Alk, specific conductivity, total dissolved solids, total anions, Cat-Ani

UPDES YES ☐ NO ☒

Wells YES ☒ NO ☐

TM-1B April – Depth

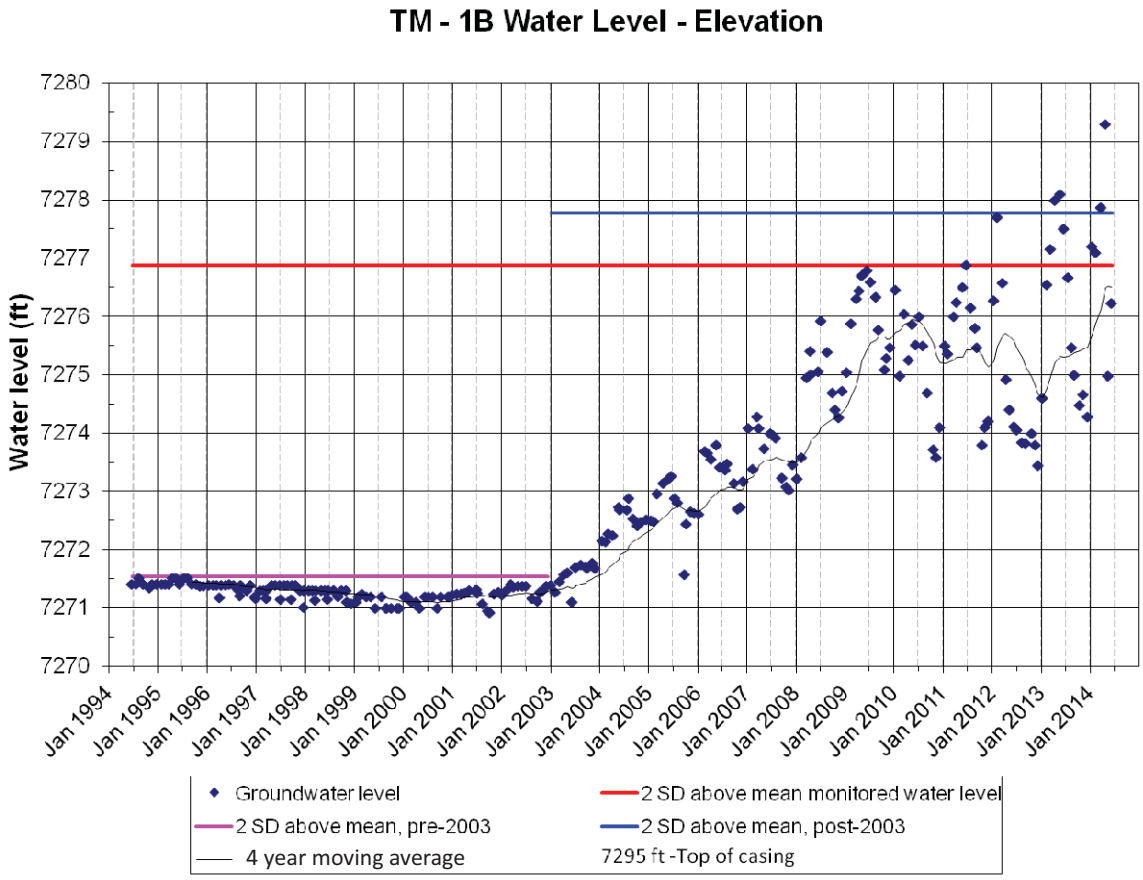
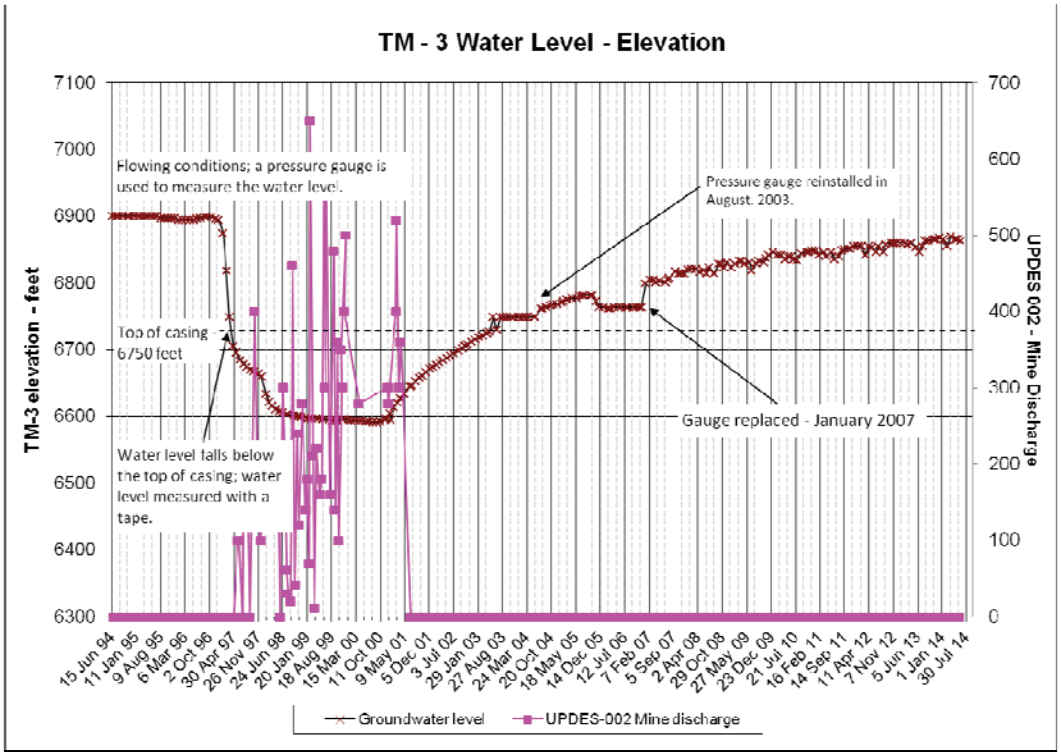


Figure 1. The head in TM-1B began slowly rising in early 2003. Although highly variable from quarter to quarter, the four year mean water level has begun to rise again after the slight dip in late 2012.



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 has been climbing through the Second Quarter of 2014. The outgoing document Reduce Hydrologic Monitoring Sites, PacifiCorp, Deer Creek, C/015/0018, Task ID #4332 stipulates this well should not be released until 6,900 ft is reached.

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 ☒