

WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

June 8, 2016

TO: Internal File

THRU: Steve Christensen, Permit Supervisor 

FROM: Keenan Storrar, Hydrologist 

RE: Fourth Quarter 2015 Water Monitoring, PacifiCorp, Deer Creek Mine.
C/015/0018, Task ID #5037

The Deer Creek Mine monitoring plan is described in Appendix A-1 of Volume 9 of the MRP. The Deer Creek Mine indefinitely ceased operations January 7th, 2015 and has transitioned to reclaiming the mine. The proposed bulkhead closure plan was rejected by MSHA. The Permittee plans to handle gravity drainage from the Rilda Right portals by piping the water down to the raw water holding pond for the Huntington power plant. This pond will be full consumption and in the event the power plant shuts down, there is adequate settling time to treat the mine water so it is in compliance with the Clean Water Act.

1. **Were data submitted for all of the MRP required sites?** YES NO
2. **Were all required parameters reported for each site?** YES NO
- Springs** YES NO
NEWUA meter-2 not monitored — NEWUSSD controls this meters
- Streams** YES NO
- Wells** YES NO
- UPDES** YES NO

3. **Were any irregularities found in the data?**

Listed parameters are more than two standard deviations above the mean.

- Springs** YES NO
- 89-67: Cond.
- EMPOND: Cond.
- GRANT SPRING: D-Ca, D-Mg, T-Hardns, T-Cats
- Little Bear: Cond, pH, D-Ca, D-Mg, T-Hardns
- MF 10: Cond.
- MF-19B: F-pH
- MF-219: D-Mg, Cond, D-K, SO4, T-Hardns, T-Cats
- MF-7: Cond, D-Na, SO4, TDS

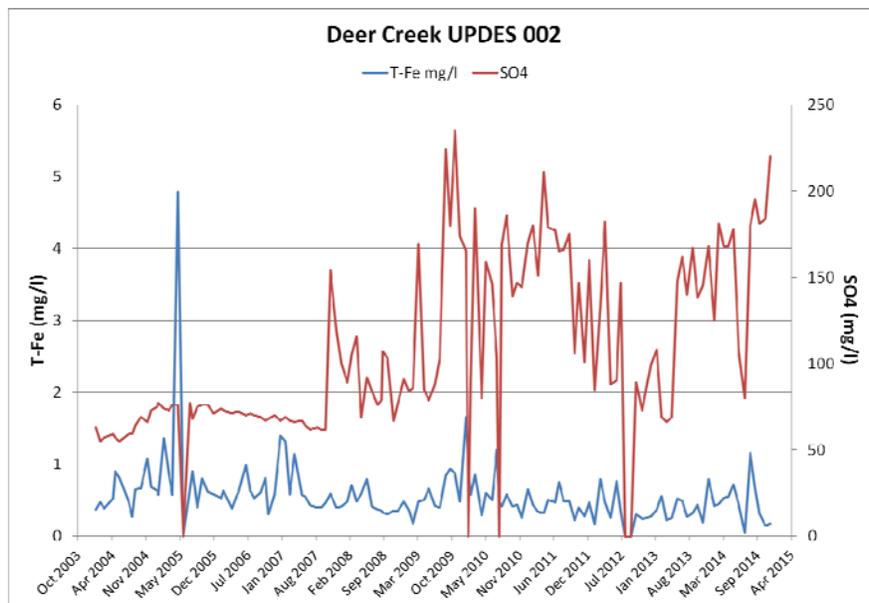
MFR-10: F-pH, Cond, D-Ca, Bcrb CaCO3, T-Alk
 RR-15: Cond, D-K, D-Na
 RR-23A: Cond, D-Na
 Sheba Springs: Cond, Water Temp.
 SP1-26: Cond.
 UJV 101: Cl, SO4,

Streams YES NO
 HCC04: L-pH
 ICA, ICB, ICD: Cond.
 RCW4: D-Na

Wells YES NO

UPDES YES NO

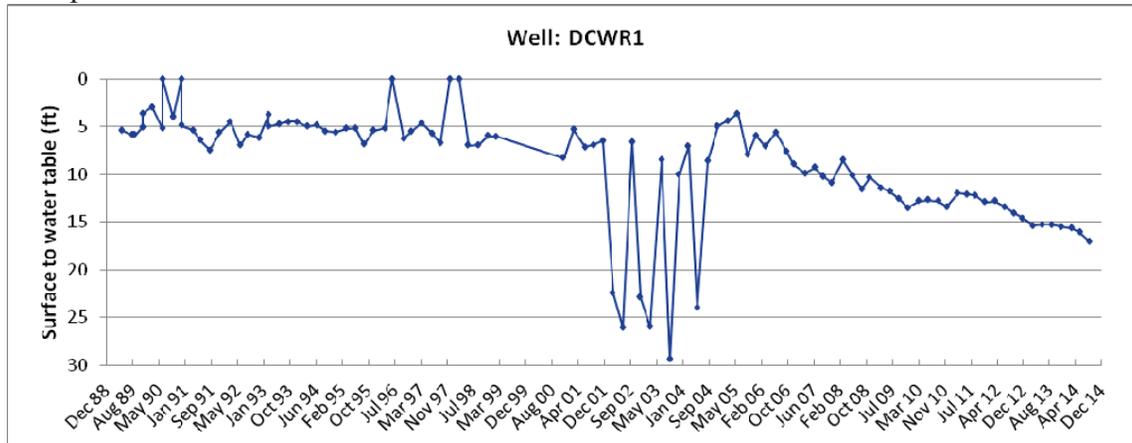
Mine water discharge at the UPDES outfall has ceased. The south half of the Deer Creek mine has been sealed. The pumps in the Mill Fork lease that produced the vast majority of in-mine dewatering were shut off as of mid-2015. Mine pools are developing and mine water will eventually gravity drain to the Deer Creek portals and the Rilda Right portals. Since there is no discharge from the Deer Creek mine portals the graph below is currently not applicable. Once gravity drainage reaches the Deer Creek and Rilda Right portals this graph should be reinitiated.



Wells YES NO

The Deer Creek Waste Rock well has been dropping since 2006 (following a small rise in

2004-2005). These changes are probably from factors other than disposal of waste rock at this site: a similar drop in water level is seen at WCWR1 at the Cottonwood/Wilberg Mine Waste Rock Disposal Site.



This well is no longer a Pacificorp water monitored site. It is now monitored by Bowie as the Deer Creek Waste Rock site.

4. **On what date does the MRP require a five-year resampling of baseline water data.**
 Baseline analyses were performed in 2001, 2006 and 2011 and are to be repeated every 5 years. The next baseline analyses will be conducted in 2016.
5. **Based on your review, what further actions, if any, do you recommend?**
 There is no indication of trends or extremes in any of the parameter values. 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.**
 None.
8. **Did the Mine Operator submit all the missing and/or irregular data (datum)?**
 NA.