

# WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

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January 24, 2005

TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor

FROM: James D. Smith, Senior Reclamation Specialist

RE: 2004 Third Quarter Water Monitoring, CO-OP Mining Company, Bear Canyon Mine, C/015/0025, Task # 2125

**1. Were data submitted for all of the MRP required sites?** YES [X] NO [ ]

*Identify sites not monitored and reason why, if known:*

SBC-11 has not been not accessible since early January 2003 because of a roof fall in the Hiawatha workings of Mine #1. SBC-9A replaced SBC-11 for monitoring water in this section of the #1 Mine; however, additional roof falls made Mine #1, including SBC-9A, inaccessible. The pipe that carries the water out of the mine to the culinary water supply is now the location for water quality and quantity monitoring, and SBC-9A has been retained as the name for this sampling site.

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

*See Technical Directive 004 for baseline resampling requirements. Consider the five-year baseline resubmittal when responding to question one above. Indicate if the MRP does not have such a requirement.*

### **Resampling Due Date**

Baseline parameters are to be taken in August of year 5 prior to each permit renewal (Table 7.1-8). Baseline parameters were measured August 2000 and included with the Third Quarter 2000 data submittal. Next baseline analysis will be in August 2005.

**3. Were all required parameters reported for each site?** YES [X] NO [ ]

*Comments, including identity of monitoring site:*

SBC-9A: total cations\*, total anions\*, and cation-anion balance were not reported; however, these are not required ground-water parameters under the current MRP

**4. Were irregularities found in the data?** YES [X] NO [ ]

*Comments, including identity of monitoring site:*

Oil and grease for BC-1, BC-2, and BC-3 was reported as 0 (zero) mg/L (instead of < MDL) for August.

BC-1 July: field water temperature (n = 143) was outside the two standard deviation range.

BC-2 July: field DO (n = 105) was outside the two standard deviation range.

BC-3 July and Aug: flow (n = 121) was outside the two standard deviation range.

SBC-4: bicarbonate (n = 79) was outside the two standard deviation range.

SBC-9A: field water temperature (n = 7) was outside the two standard deviation range; this water is being sampled at a new location, where the water-supply line leaves the mine.

SBC-12 Aug: field conductivity (n = 33) was outside the two standard deviation range.

SBC-14: Ca (n = 27) was outside the two standard deviation range.

SBC-17: field specific conductivity (n = 15) was outside the two standard deviation range.

SMH-2 July and Aug: field water temperature (n = 37) was outside the two standard deviation range.

SMH-4 July: field water temperature (n = 36) was outside the two standard deviation range.

SMH-4 Aug: field specific conductivity (n = 36) was outside the two standard deviation range.

MW-114 Aug: depth (n = 9) was outside the two standard deviation range.

SBC-3: field water temperature (n = 53) was outside the two standard deviation range.

**5. Were DMR data submitted for all required sites?**

1<sup>st</sup> month, YES [X] NO [ ]  
2<sup>nd</sup> month, YES [X] NO [ ]  
3<sup>rd</sup> month, YES [X] NO [ ]

*Identify sites and months not monitored:*

The data were submitted electronically as operational parameters. UPDES sites -002, -003, -006, and -007 were dry all quarter.

**6. Were all required DMR parameters reported?**

YES [ ] NO [X]

*Comments, including identity of monitoring site:*

DMR parameters that are not included in the operational parameter lists in the MRP - such as sanitary wastes, visible foam, and floating solids - are not reported in the electronic submittal. Operational monitoring values are reported for flow, TDS, TSS, pH, and total iron.

**7. Were irregularities found in the DMR data?**

YES [ ] NO [X]

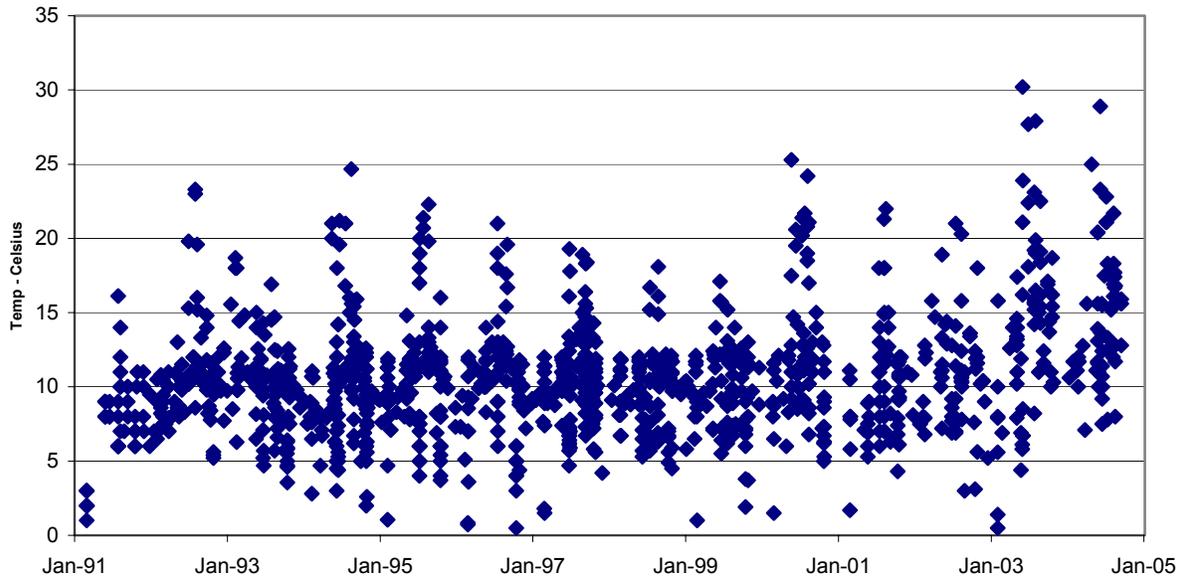
*Comments, including identity of monitoring site:*

There was no discharge from any UPDES point during the third quarter.

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

In the third quarter of 2004, five sites had water temperatures that were outside the two standard deviation range. As can be seen on the following chart, there appears to be both a trend towards higher water temperatures and a greater scatter of temperatures in recent years. The Permittee should review field procedures and check their thermometers for accuracy.

Time vs. Temp at Bear Canyon Mine - all sites



At this time there is no other action recommended.