

WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

April 15, 2004

TO: Internal File

THRU: Daron R. Haddock, Permit Supervisor

FROM: James D. Smith, Senior Reclamation Specialist

RE: 2003 Fourth Quarter Water Monitoring, CO-OP Mining Company, Bear Canyon Mine, C/015/0025-WQ03-4, Task # 1850

- 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 have made most of Mine #1, including SBC-9A, inaccessible. The fourth quarter entry to the database for both sites is "No access", and this will need to be entered for these sites until they are removed from the monitoring plan.

- 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

Renewal submittal due 07/02/00, renewal due 11/02/00. 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 Fourth 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:

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

Comments, including identity of monitoring site:

SBC-4: Ca (n = 38), Mg (n = 38), bicarbonate (n = 76), sulfate (n = 77), and total hardness (n = 77) were outside the two standard deviation range

SBC-5: Mg (n = 40), Na (n = 38), and total anions* (n = 65) were outside the two standard deviation range;

SBC-17: Ca (n = 13), Mg (n = 13), Na (n = 13), sulfate (n = 13), total hardness (n = 13), total anions* (n = 10), and total cations* (n = 10) were outside the two standard deviation range;

SMH-1: water temperature (n = 37) was outside the two standard deviation range;

SMH-2: water temperature (n = 34) was outside the two standard deviation range;

SMH-3: pH (n = 32) and field conductivity (n = 32) were outside the two standard deviation range;

SMH-4: water temperature (n = 33) was outside the two standard deviation range;

SDH-3: depth and elevation of water (n = 21) were outside the two standard deviation range;

SBC-3: water temperature (n = 50), Ca (n = 36), Mg (n = 36), K (n = 36), Na (n = 36), bicarbonate (n = 49), sulfate (n = 50), total alkalinity* (n = 49), total hardness (n = 50), total anions* (n = 47), and total cations* (n = 47) were outside the two standard deviation range.

* - not a required parameter

5. Were DMR data submitted for all required sites?

1st month, YES [X] NO []
2nd month, YES [X] NO []
3rd month, YES [X] NO []

Identify sites and months not monitored:

The data were submitted electronically. There were no UPDES discharges during the 4th quarter.

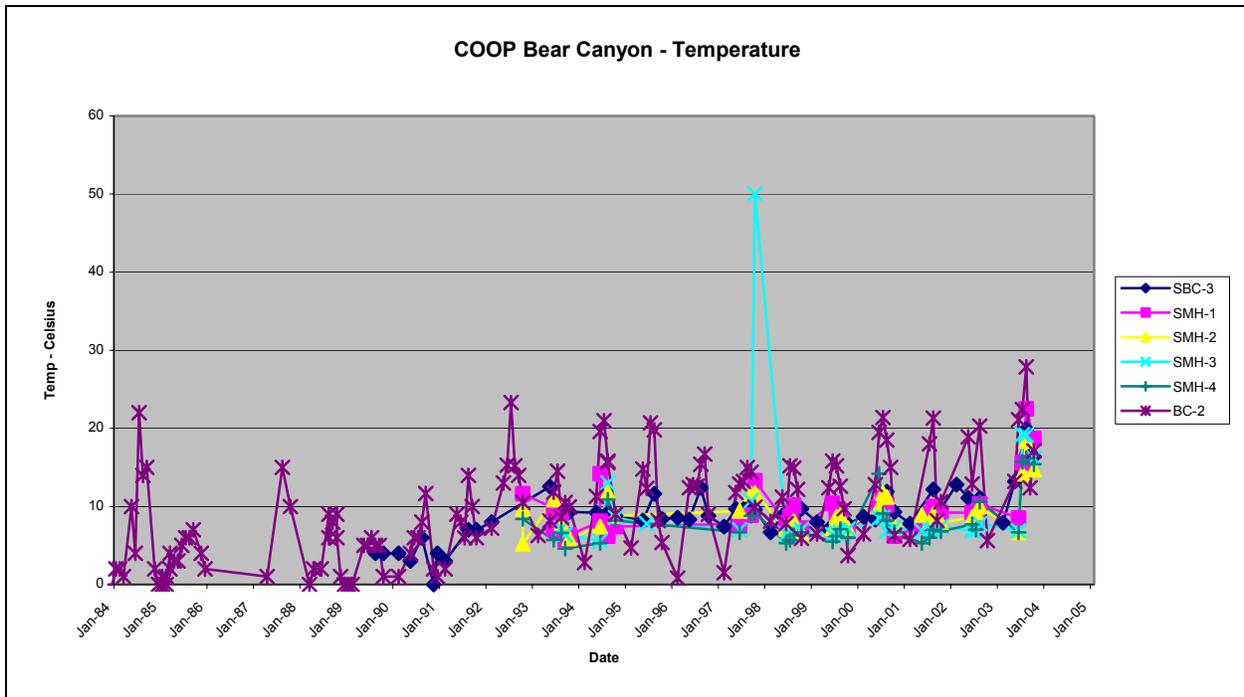
6. Were all required DMR parameters reported? YES NO
Comments, including identity of monitoring site:

When there is discharge, 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.

7. Were irregularities found in the DMR data? YES NO
Comments, including identity of monitoring site:

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

Four sites had water temperatures that were outside the two standard deviation range; the thermometer should be checked for accuracy. Recent temperature changes at six sites markedly exceed previous seasonal temperature fluctuation, as shown on the following chart.



The MRP should be amended to show SBC-9A and SBC-11 can no longer be monitored.

Other irregularities in the water-quality parameters do not appear significant and, other than watching for possible trends, no further action is recommended.