

# WATER QUALITY MEMORANDUM

## UTAH COAL REGULATORY PROGRAM

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February 25, 2009

TO: Internal File

FROM: April A. Abate, Environmental Scientist II *AAA*  
2-25-09

THRU: James D. Smith, Permit Supervisor

SUBJECT: 2008 Fourth Quarter Water Monitoring, Hiawatha Coal Company, Bear Canyon Mine, C/015/0025, Task ID # 3159

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The monitoring plan is described on pages 7-48 through 7-60A of the MRP. It includes Tables 7-12 through 7-17.

**1. Were data submitted for all of the MRP required sites?**

**In-mine** YES  NO

SBC-9A requires operational sampling only. It appears that additional sampling for baseline parameters were sampled during the 4<sup>th</sup> quarter 2008.

Sample 16-8-8-10 was sampled for analytical parameters during 4<sup>th</sup> quarter; however, based on the sampling plan outlined above on Table 7-14 only field parameters are required.

**Springs** YES  NO

SBC-20 has not been sampled since October 2007 but is listed as requiring field parameters. Why has this sample point not been sampled in recent quarters? Is there a problem with accessibility to the sample location area?

**Streams** YES  NO

**UPDES** YES  NO

Monthly monitoring data was not submitted from UPDES sample locations 002, 003, and 006 for the months of October and November 2008.

**Wells** YES  NO

All wells were monitored this quarter. Depth measurements only are required in accordance with the existing water monitoring plan.

**2. Were all required parameters reported for each site?**

**In-mine** YES  NO

Analysis for dissolved Pb was missed the previous few quarters but has been completed at SBC-9A for 4<sup>th</sup> quarter sampling. However, sample SBC-9A was sampled for full baseline parameters when only operational parameters are required.

**Springs** YES  NO

Sample SCC-2 was sampled for analytical parameters; however field parameters only are required.

Samples SBC-4 and SBC-5 did not get analyzed for oil and grease. Operator was aware of the error.

**Streams** YES  NO

**UPDES** YES  NO

Not applicable. None of the UPDES data reported showed any discharges during the 4<sup>th</sup> Quarter 2008.

**Wells** YES  NO

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

Listed parameters were outside two standard deviations. An asterisk (\*) indicates the parameter is not required.

**In-mine** YES  NO

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**Springs**

YES  NO

Selected spring samples had one or two parameters that were outside of two standard deviations. SBC-17, however reported a higher than usual flow rate of 90 gallons per minute and several parameters associated with that sample were outside of two standard deviations and lower than their normal concentrations.

**Streams**

YES  NO

A spike of elevated water quality parameters along Lower Bear Creek and the Lower Right Fork of Bear Creek (samples BC-2 and BC-3) was noted this 4<sup>th</sup> quarter. In particular, sample BC-3 had several parameters that were outside of two standard deviations including: elevated dissolved oxygen (DO), dissolved calcium, dissolved magnesium, dissolved potassium, dissolved sodium, bicarbonate, chloride, sulfate, alkalinity, hardness and total dissolved solids (TDS). Data from this sample location were available since 2004; however, these parameters were at their highest levels during this 4<sup>th</sup> quarter sampling event.

**UPDES**

YES  NO

Not applicable

**Wells**

YES  NO

Not applicable

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

Baseline parameters are to be taken in August of year 5 prior to each permit renewal (Table 7.14). The next permit renewal date is November 02, 2010, so the baseline analyses should be done on samples collected in August 2010.

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

- In-mine water sample point SBC-9A requires only operational parameters, not full baseline parameters.
- Sample 16-8-8-10 requires field measurements only.
- Spring sample SCC-2 was sampled for analytical parameters but only field parameters are required.

The Permittee should carefully review their water monitoring requirements in the MRP. If

there are any inconsistencies found between your water monitoring plan, and the Division's, please inform the Division immediately so that we may resolve any issues prior to the next sampling event.

- UPDES sampling at three locations was also not reported as monitored for two events (October and November) within this quarter.
- Spring sample SBC-17, described as "16-7-24-4 Spring by the Waterfall" had an unusually high flow rate this quarter compared to other quarters. Is there any explanation as to why the flow rate has increased so significantly?
- A spike of elevated water quality parameters was noted in the samples collected along Lower Bear Creek and the Lower Right Fork of Bear Creek. Have these areas been subject to excess sedimentation problems in the past few months, or is there anything unusual occurring along these water bodies?

**6. Does the Mine Operator need to submit more information to fulfill this quarter's monitoring requirements? YES  NO**

- Spring sample SBC-20 requires field parameter sampling but has not been sampled for over one-year. Please collect the required samples from this spring location, or provide an explanation to the Division
- Samples SBC-4 and SBC-5 did not get analyzed for oil and grease. Operator was aware of the error. The operator may want to consider reevaluating their sampling plan to only perform oil and grease analysis when it is deemed necessary (such as a visible sheen on the water). Oil and Grease samples are due to be collected from these locations in the 1<sup>st</sup> quarter sampling event of 2009.

**7. Follow-up from last quarter, if necessary.**

The compliance issue identified during the previous quarter was that dissolved lead samples were not collected for SBC-9A. The operator has collected dissolved lead samples at this location for the 4<sup>th</sup> quarter and is now back in compliance.

**8. Did the Mine Operator submit all the missing and/or irregular data? YES  NO**

Not applicable this quarter.

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