

WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

OK

June 10, 2004

TO: Internal File

THRU: Daron Haddock, Permit Supervisor *DH*

FROM: Steve Fluke, Reclamation Hydrogeologist *STF*

RE: 2003, Fourth Quarter Water Monitoring, West Ridge Resources, Inc.,
West Ridge Mine, C/007/0041-WQ03-4, Task ID #1846

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

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

Resampling due date.

Five-year baseline resampling to occur at the time of the mid-term review. The next baseline resampling will be conducted by October 1, 2006.

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

Missing flow and oil and grease data for stream site ST-5 on August 14.

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

Flow was reported in only two of eight spring monitoring sites; SP-8, and SP-12. For site SP-8, concentrations of calcium, dissolved magnesium, and hardness were reported above two standard deviations. For site SP-12, concentrations of dissolved magnesium were reported above two standard deviations. In addition, concentration of hardness and dissolved magnesium for SP-8 and concentrations of TDS, conductivity, dissolved magnesium, and sulfate for SP-12 appear to be trending upward since approximately 2001. These increased concentrations are likely due to the ongoing drought.

No irregularities were reported for the stream monitoring sites. Site ST-5 reported elevated concentrations of conductivity (2200 umhos/cm), dissolved potassium (9.63 mg/L), sulfate (733 mg/L), and TDS (1438 mg/L). This is not uncharacteristic of an ephemeral stream during a storm event. No flow was reported for site ST-6 for this same storm event.

5. Were DMR forms submitted for all required sites?

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

DMR data is submitted to the DOGM database. No flow was reported for UPDES site 001 (discharge from the sediment pond).

6. Were all required DMR parameters reported? YES [] NO [X]

Missing dissolved oxygen data for October. Although temperature, pH, and conductivity concentrations for November were submitted via email (on spreadsheet), these parameters are still missing in the database. Dissolved oxygen reported for November is different on the spreadsheet than reported in the database.

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

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

Although the drought is apparently impacting the springs resulting in decreased flows and increased concentrations of some constituents since approximately 2001, continue monitoring the springs for trends in flow and parameter concentrations to compare with drought data such as the Palmer Hydrologic Index.

Continue discussions with the permittee and mine hydrologist regarding whether the automatic sampling method for some of the stream sites can be improved upon. Implement a plan to have the automatic sampler collection and holding times reported to DOGM to aid in the evaluation of the analytical results. Although elevated concentrations of some parameters were reported for ST-5 and ST-6, the concentrations were consistent with what would be expected from the mine discharge mixed with ephemeral storm-water runoff.

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The permittee has sent a corrected analytical results table for UPDES site 002 to DOGM to update the database. Have Dana update the database and verify that the data is correct since there is contradicting D.O. data for November.

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