

WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

October 22, 2007

JK

TO: Internal File

THRU: Pamela Grubaugh-Littig, Permit Supervisor *pgl*

FROM: *DD* Dana Dean, P.E, Senior Reclamation Hydrologist

RE: 2006 Second Quarter Water Monitoring, Mountain Coal Company, Gordon Creek 2, 7, & 8 Mine, C/007/0016-WQ06-2, Task ID #2663

The Gordon Creek 2, 7, & 8 Mine has been reclaimed, except for sedimentation ponds, and has received Phase I bond release. No mining or coal processing activities currently take place there, nor is the site in active reclamation.

Pertinent water monitoring requirement information is in the MRP in Sections 7.1.8 and 7.2.6, and tables 7-17, and 7-18.

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

Springs –

The Permittee is not required to monitor any springs at the Gordon Creek 2, 7, & 8 Mine.

Streams –

The Permittee is required to sample one intermittent stream (2-2W), and five ephemeral stream sites (2-7-W, 2-8-W, 2-9-W, 2-10-W, 2-11-W) for flow, and the laboratory parameters outlined in Table 7-18 each quarter.

The Permittee monitored and reported the essential data for all streams as required during this quarter.

Wells–

The Permittee is not required to monitor any wells at the Gordon Creek 2, 7, & 8 Mine.

UPDES

There is one active UPDES site at the Gordon Creek 2, 7, & 8 Mine. It is permit # UTG040004-001, allowing discharge from the sedimentation pond to Bryner Creek. The Permittee is required to monitor this UPDES site monthly.

The Permittee monitored and reported the essential data for the UPDES site as required during this quarter. The UPDES site did not record any flow during the period.

2. Were all required parameters reported for each site? YES NO

The Permittee included all required parameters for the sites that flowed this quarter.

3. Were any irregularities found in the data? YES NO

Reliability Checks outside of standard values were:

Site	Reliability Check	Value Should Be...	Value is...
2-2-W	Conductivity/Cations	> 90 & < 110	85
2-8-W	Conductivity/Cations	> 90 & < 110	80
2-8-W	Mg/(Ca + Mg)	< 40 %	51%
2-8-W	Na/(Na + Cl)	>50%	46%
2-10-W	Conductivity/Cations	> 90 & < 110	71
2-10-W	K/(Na + K)	<20%	27%
2-10-W	Mg/(Ca + Mg)	< 40 %	61%
2-10-W	Ca/(Ca + SO ₄)	>50%	50%
2-10-W	Na/(Na + Cl)	>50%	46%

The Permittee should work with the lab to make sure that samples pass all quality checks so that the reliability of the samples does not come into question. These inconsistencies do not necessarily mean that a sample is wrong, but it does indicate that something is unusual. An analysis and explanation of the inconsistencies by the Permittee would help to increase the Division's confidence in the samples. The Permittee can learn more about these reliability checks and some of the geological and other factors that could influence them by reading Chapter 4 of *Water Quality Data: Analysis and Interpretation* by Arthur W. Hounslow.

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

The MRP does not require a five-year re-sampling of baseline water data.

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

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No further actions are required at this time.

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