

# WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

---

July 14, 2004

OK

TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor *DWH*

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

RE: 2004 First Quarter Water Monitoring, Canyon Fuel Company, Soldier Canyon Mine, C/007/0018 Task #1951

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

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

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**

There is no commitment in the MRP to resample for baseline parameters.

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

*Comments, including identity of monitoring site:*

**4. Were irregularities found in the data?**

YES  NO

*Comments, including identity of monitoring site:*

The dissolved potassium at site G-6 (4.8 mg/l) was 2.66 standard deviations greater than the mean of 2.33 mg/l. The dissolved potassium does not correlate well with flow, however it has fluctuated up and down since the first recorded samples in 1997. The values ranged from 1.2 to 2.6 mg/l until a sharp peak of 5.3 mg/l in August of 2002. The value fell steadily from there to 1.8 mg/l in June 2003 and has been rising steadily since then. There is no water quality standard for potassium and the 4.8 mg/l is still a relatively low number.

Some routine Reliability Checks were outside of acceptable values. They were:

Site	Reliability Check	Value Should Be...	Value Is...
G-5	TDS/Conductivity	>.55 & <.75	.54
G-5	Mg/(Ca + Mg)	<40 %	56%
G-6	TDS/Conductivity	>.55 & <.75	.49
G-6	Mg/(Ca + Mg)	<40 %	56%

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.

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

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

All DMRs reported "no flow".

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

YES  NO

*Comments, including identity of monitoring site:*

All DMRs reported "no flow".

Page 3

C/007/0018-WQ04-1

Task ID #1951

July 14, 2004

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

YES

NO

*Comments, including identity of monitoring site:*

All DMRs reported "no flow".

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

No further actions are necessary at this time.

AN

O:\007018.SOL\WATER QUALITY\DD1951.DOC