

WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

August 10, 2004

TO: Internal File

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

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

RE: 2004 Second Quarter Water Monitoring, Plateau Mining Corporation, Willow Creek Mine, C/007/0038-WQ04-2, Task #1930

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 carbonate at B3N (21 mg/l) was 2.60 standard deviations above the mean of 11.44 mg/l. There is no water quality standard for carbonate and the water at this site has always been hard (>119.7 mg/l) to very hard (>179.55 mg/l).

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

Site	Reliability Check	Value Should Be...	Value is...
B3N	TDS/Conductivity	>.55 & <.75	.29
B3N	Mg/(Ca + Mg)	< 40 %	66%
B3N	Ca/ (Ca + SO4)	> 50 %	39%
B3N	Na/(Na + Cl)	> 50%	30%
B5	TDS/Conductivity	>.55 & <.75	.47
B5	Na/(Na + K)	< 20%	26%
B5	Mg/(Ca + Mg)	< 40 %	45%
B5	Na/(Na + Cl)	> 50%	26%
B151	Mg/(Ca + Mg)	< 40 %	59%
B151	Ca/ (Ca + SO4)	> 50 %	46%
B151	Na/(Na + Cl)	> 50%	33%
B6	TDS/Conductivity	>.55 & <.75	.55
B6	Na/(Na + K)	< 20%	26%
B6	Mg/(Ca + Mg)	< 40 %	45%
B6	Na/(Na + Cl)	> 50%	25%

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?

1st month, YES NO
 2nd month, YES NO
 3rd 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".

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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 actions are necessary at this time.

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