

WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

December 22, 2011

TO: Internal File

THRU: Steve Christensen, Permit Supervisor *SCC*

FROM: April A. Abate, Environmental Scientist III *abate*

RE: 2011 Second Quarter Water Monitoring, Plateau Mining Corporation (PMC), Willow Creek Mine, C/007/0038, WQ11-02, Task ID #3851

The Willow Creek Mine is in reclamation. The mines have been closed and sealed. The disturbed areas around the portals have been regraded and seeded. The most recent surface operations took place in Willow Creek Canyon, about a mile from the junction between U.S. Highway 6 and State Highway 191. The reclaimed area in Crandall Canyon is part of the Willow Creek permit area received Phase I Bond Release approval from the Division. The MRP requires that all surface water sampling be conducted up through Phase II Bond Release.

There are no ground water sites monitored during the reclamation phase.

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

Under the reclamation plan, surface water monitoring is required for sites listed on Table 4.7-2 and shown on Map 15.

Springs- There are no springs monitored during the reclamation phase.

Streams- There are six surface water-monitoring sites:
 B3N (Willow Creek above power plant),
 B-5 (Price River below processing plant above Willow Creek),
 B-6 (Price River above coal processing plant),
 B25 (Crandall Canyon Creek),
 B26 (lower reach of Crandall Canyon)
 B151 (Willow Creek – 3 miles above Willow Creek Mine)

The reclamation sampling water quality list is presented in Section 13, p. 28. Sampling is conducted quarterly. PMC tries to monitor the sites within a two week period from March 15th, June 10th, September 5th and November 30th to attempt to collect data that coincides with first thaw, spring high flow, end of summer low-flow and last sample before

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freeze-up.

All required stream sampling locations were monitored for the quarter on June 27 and 28, 2011. No flow was measured from Crandall Canyon Creek samples B-25 and B-26.

Wells- There are no operational monitoring wells.

UPDES- The mine has been reclaimed and as a result, there are no currently active Utah Pollutant Discharge Elimination System (UPDES) monitoring locations at the site.

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

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

Flows remain exceedingly high (approximately 5,700 gallons per minute upstream of the former portal area) in Willow Creek. Sample B151 had a drop in total suspended solids and total iron levels from 1st to 2nd quarter. Downstream of the former portal area near the processing plant flow levels were reported from B5 at 241,000 gpm and exactly the same rate of 241,454 from B6.

In general, reliability checks for total dissolved solids (TDS) relative to measured conductivity show a TDS result remaining between 55 – 75% of the conductivity value. Reliability checks for TDS values for all stream locations where a sample was collected are presented below:

ID	TDS (mg/L)	Conductivity uS/cm	Acceptable range = between 55% - 75%
B151	481	769	0.625488
B3N	519	831	0.624549
B5	274	411	0.666667
B6	272	412	0.660194

TDS standards for this reach of the Price River Watershed are set at 1,700 mg/L based on the Utah Administrative Code Rule R317-2. Stream samples during this quarter remain well below this standard ranging between 272-519 mg/L.

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

Baseline data were collected at the beginning of mining operations for a two-year period; however, routine 5-year sampling is not specified in MRP. The Division recommends baseline water quality parameter sampling at each five-year renewal period.

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

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The Permittee may wish to consider removing Crandall Canyon B-25 and B-26 samples from 1st quarter sampling requirements due to accessibilities issues during the winter months. Reporting of these data during 1st quarter would no longer be required. A minor amendment change to the water monitoring plan in the MRP would accomplish this.