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WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

January 25, 2010

TO: Internal File

THRU: James D. Smith, Permit Supervisor JS 01/01/10

FROM: Kevin Lundmark, Environmental Scientist II KWL

RE: 2009, 3rd Quarter Water Monitoring, Sunnyside Cogeneration Association, Sunnyside Refuse/Slurry, C0070035, WQ09-3, Task 3392

The Sunnyside Refuse/Slurry Mine is currently operational. The facility mines the old Sunnyside Mine coarse refuse and slurry cells, blends the material and burns it at the adjacent co-generation facility. Sunnyside Cogeneration Association (SCA) started mining coal refuse at this site in 1993 and projects a total mine life of at least 20 years. Water monitoring requirements are described in the MRP in Section 730 and Appendix 7-8.

This report was prepared from monitoring data queried from the UDOGM database. The data that support this report were collected and submitted to the database by SCA. The data were downloaded into file O:\007035.SRS\Water Quality\DATA\SRS_21Jan2010.xls for this review.

1. Was data submitted for all required sites?

Springs YES [X] NO [ ]

The Permittee is required to monitor and sample springs CRS, CRB and F-2 quarterly. Spring CRS was not flowing at the time of monitoring. Flows of 8 and 5 gpm were reported for springs CRB and F-2, respectively.

Streams YES [X] NO [ ]

The Permittee is required to monitor and sample Icelander Creek at location ICE-1 quarterly. Stream site ICE-1 was reported with no flow during the third quarter 2009 monitoring event.

Wells **YES [X]** **NO [ ]**

The Permittee is required to monitor and sample the East Carbon City Well (a.k.a. Dragerton Well or WELL-1) and well B-6 quarterly. WELL-1 was sampled August 18, 2009 and well B-6 was reported as dry.

UPDES **YES [X]** **NO [ ]**

There are six active UPDES sites at the Sunnyside Refuse/Slurry Mine. They are all under the permit UT0024759, and include outfalls 007, 008, 009, 012, 014, and 016. The Permittee is required to monitor each UPDES site monthly according to the permit. The current permit expires July 31, 2012. The Permittee monitored and reported no discharges during the quarter.

2. **Were all required parameters reported for each site?**

Springs **YES [X]** **NO [ ]**

Streams **YES [X]** **NO [ ]**

Wells **YES [X]** **NO [ ]**

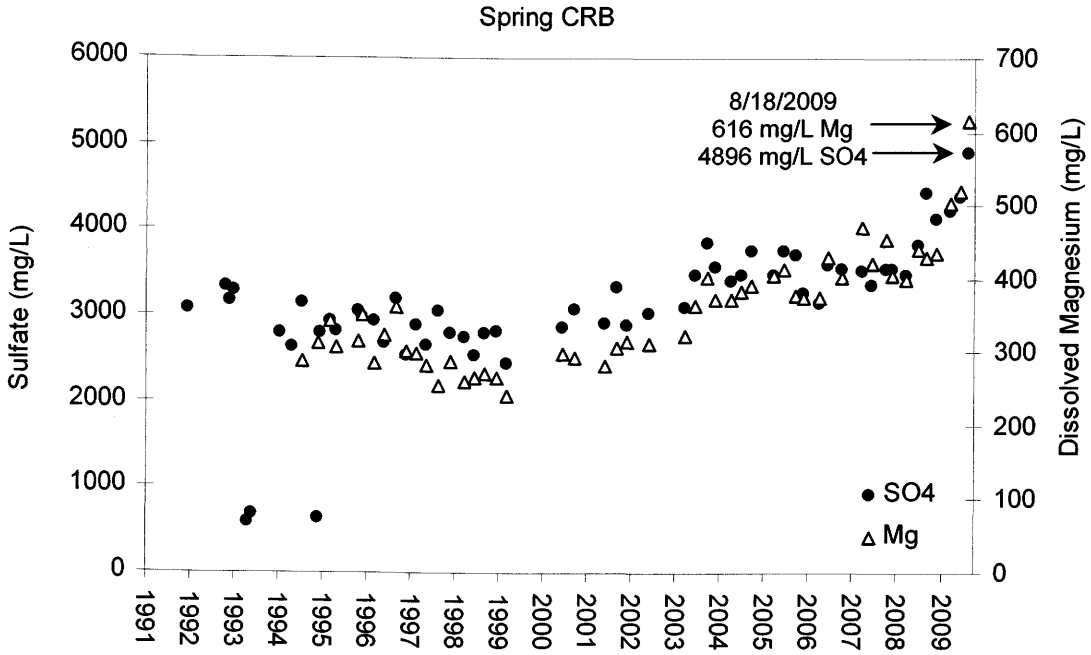
UPDES **YES [X]** **NO [ ]**

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

Springs **YES [X]** **NO [ ]**

Multiple parameters were elevated by greater than two standard deviations above the average values in the sample collected August 18, 2009 at spring CRB, as summarized in the table below. Dissolved magnesium and sulfate concentrations appear to be increasing at spring monitoring location CRB (see plot below).

Parameter (units)	Spring CRB 8/18/2009	Spring CRB Average	Spring CRB Std. Deviation
Conductivity (umhos/cm)	7790	5111	1022
Diss. Magnesium (mg/L)	615.74	361	78.9
Diss. Potassium (mg/L)	59.14	28.5	9.85
Diss. Sodium (mg/L)	1099.3	571	155
Sulfate (mg/L)	4896	3142	767
Total Hardness (mg/L as CaCO3)	3773	2575	546
Total Dissolved Solids (mg/L)	8478	5400	1054
Tota Cations (meq/L)	124.7	78.6	13.4
Total Anions (meq/L)	115	79.8	11.3



Streams **YES [ ]** **NO [X]**

Wells **YES [ ]** **NO [X]**

UPDES **YES [ ]** **NO [X]**

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

MRP Appendix 7-8 states that "once every five years (prior to each application for permit renewal) one sample from each of the monitoring sites listed in Table 7-2A will be sampled and analyzed for the parameters listed in Table 7-2B". The Permittee monitored the complete list of baseline parameters during the first quarter of 2007. The next five-year sampling should take place in 2012.

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

None.

Does the Mine Operator need to submit more information to fulfill this quarter's monitoring requirements? Yes [ ] No [X]

6. Follow-up from last quarter, if necessary.
Did the Mine Operator submit all the missing and/or irregular data (datum)?

None required.

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