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WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

May 23, 2011

TO: Internal File

THRU: James D. Smith, Permit Supervisor *DS 05/25/11*

FROM: Kevin Lundmark, Environmental Scientist II *KWL*

RE: 2010 Fourth Quarter Water Monitoring, Sunnyside Cogeneration Association, Sunnyside Refuse/Slurry, C0070035, WQ010-4, Task 3676

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_WQ.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. Springs CRB and F-2 were both reported with flows of 3 gpm and 10 gpm, respectively.

Streams YES [X] NO []

The Permittee is required to monitor and sample Iceland Creek at location ICE-1 quarterly. Stream site ICE-1 was reported with no flow during the fourth quarter 2010 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. Both wells were reported as dry during the fourth quarter 2010 sampling event.

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 []**

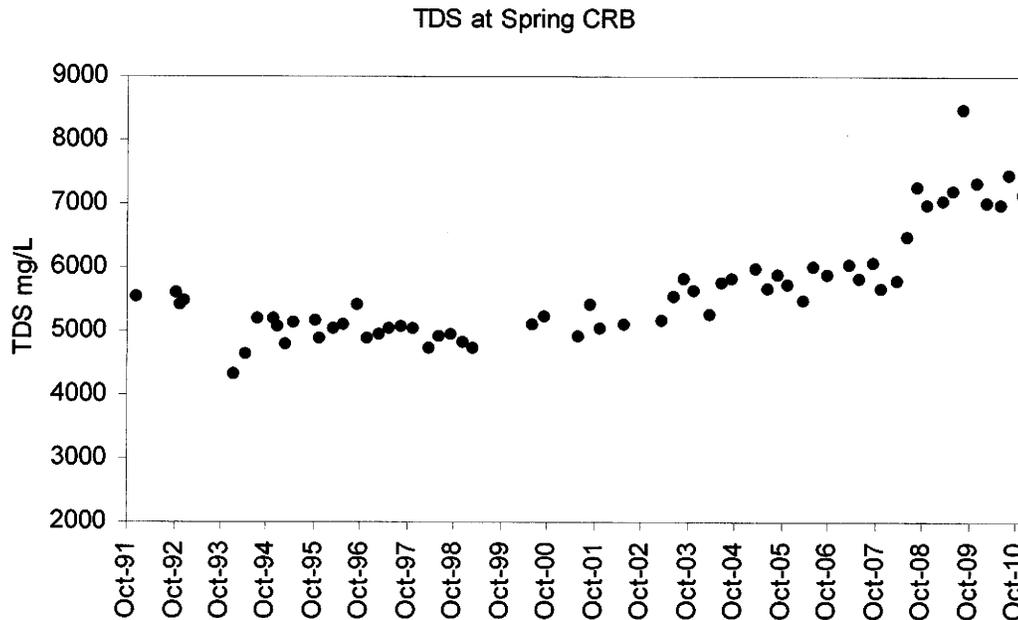
3. Were irregularities found in the data?

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

The dissolved oxygen concentration measured on November 23, 2010 at seep CRB (10.9 mg/L) was flagged as being greater than two times the standard deviation greater than the mean value in the database. The Operator verified that the value was correct as entered. The dissolved oxygen concentration measured November 23, 2010 is consistent with values from the previous monitoring events and is within the range of values reported previously for CRB. The potassium concentration for seep CRB (50.72 mg/L) was also flagged as being greater than two times the standard deviation greater than the mean value in the database. Similar potassium concentrations have reported for this location (e.g., 59.14 mg/L for third quarter 2009). The cation-anion balance (1.74 percent) for the fourth quarter 2010 CRB sample was acceptable.

The total dissolved solids concentration at spring monitoring location CRB appears to be increasing over time (see plot below). During fourth quarter 2010, 7118 mg/L total dissolved

solids were reported for spring CRB.



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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