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OK

# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

November 20, 2006

TO: Internal File

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

FROM: Steve Fluke, Reclamation Hydrogeologist *STF*

RE: 2006 Second Quarter Water Monitoring, West Ridge Resources, West Ridge Mine, C007/0041-WQ06-2, Task ID #2673

1. Was data submitted for all required monitoring sites? YES [ X ] NO [ ]

The West Ridge Mine is currently operational. Water monitoring data is evaluated from the data that is submitted quarterly by the mine to the Division EDI database. Water monitoring protocols, and surface, groundwater and monitoring wells, and UPDES sample parameters are outlined in the mine's MRP on Tables 7-1, 7-2, 7-3, and 7-4, respectively.

**Surface** *Operational sampling is required quarterly for six stream monitoring sites (ST-3, ST-8, ST-9, ST-10, ST-13, and ST-15). Four sites (ST-5, ST-6, ST-6A, and ST-7) are equipped with automatic samplers that are required to be checked following precipitation events. One stream monitoring site (ST-11) is monitored monthly from May through September, and one site (ST-12) is monitored once in May and once in September.*

All surface monitoring sites were sampled/monitored and data submitted for the 2006 second quarter monitoring.

**Groundwater and Wells** *Operational sampling is required quarterly for ten spring monitoring sites (SP-12, SP-13, SP-15, WR-1, WR-2, SP-16, SP-8, S-80, SP-101, and SP-102) and one groundwater monitoring well site (DH 86-2).*

All groundwater and well monitoring sites were sampled/monitored and data submitted for the 2006 second quarter monitoring.

**UPDES** *Operational sampling is required monthly for two active UPDES sites (D001 and D002).* Effective May 1, 2006, the general coal mining UPDES permit was updated to include the mine in the salinity offset program. Waste loads were calculated by DWQ that increased the total iron limit from 1.0 mg/L to 1.3 mg/L.

All UPDES sites were sampled and data submitted for the 2006 second quarter monitoring.

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

**Surface** All required parameters were reported for accessible sites that had measurable flow.

**Groundwater and Wells** All required parameters were reported for accessible sites that had measurable flow.

**UPDES** All required parameters were reported.

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

**Surface** No irregularities were found in the data with the following exception:

**ST-5** – Specific conductivity, total dissolved solids (TDS), and total iron were reported above two standard deviations. Erratic TDS and conductivity concentrations are historically reported at this site possibly due to flow (mostly from mine discharge) in the ephemeral drainage. The reported TDS is consistent with the upstream site ST-6.

**Groundwater and Wells** No irregularities were found in the data with the following exceptions:

**S-80** – Chloride was reported above two standard deviations. Continue monitoring for trends.

**SP-8** – Chloride was reported above two standard deviations. Continue monitoring for trends.

**DH 86-2** – Specific conductivity, TDS, total hardness, dissolved calcium, magnesium and potassium, and chloride were reported above two standard deviations. Continue monitoring for trends.

**UPDES** No irregularities were found in the data with the following exceptions:

**D002** – Total iron concentration was reported at 1.12 mg/L for April, exceeding the limit of 1.0. The limit has been increased to 1.3 mg/L for the updated UPDES permit effective May 1, 2006.

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

Five-year baseline resampling is to occur at the time of the mid-term review. The next baseline resampling should be conducted by October 1, 2006.

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

**Surface** Continue discussions with the Permittee and mine hydrologist regarding whether the automatic sampling method for some of the stream sites can be improved upon.

**Groundwater and Wells** None.

**UPDES** None.

**6. Does the Mine Operator need to submit more information to fulfill this quarter's monitoring requirements?** YES [ ] NO [ X ]

**7. Follow-up from last quarter, if necessary. Did the Mine Operator submit or provide an explanation for missing and/or irregular data?**

An updated UPDES permit, effective May 1, 2006, has been issued by the DWQ to include the mine in the salinity offset program.