

# WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

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OK

October 12, 2004

TO: Internal File

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

FROM: Gregg A. Galecki, Reclamation Hydrologist III *GAG*

RE: 2004 First Quarter Water Monitoring, Canyon Fuel Company, LLC, Dugout Mine, C/007/0039-WQ04-1, Task ID #1954

**1. Was data submitted for all of the MRP required sites?** YES [ x ] NO [ ]  
*Identify sites not monitored and reason why, if known:*

**2. On what date does the MRP require a five-year re-sampling 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 dose not have such a requirement.*

**Re-sampling due date**

Baseline sampling was conducted at the required sites during the 3<sup>rd</sup> quarter 2002.

**3. Were all required parameters reported for each site?** YES [ x ] NO [ ]  
*Comments, including identity of monitoring site:*

Of the 24 total samples required for sampling this quarter, 11 sites were inaccessible due to snowpack. Well GW-24-1 is blocked and access to the water is no longer possible. No plans to correct the breach are anticipated. The Operator should take this well off the water monitoring schedule.

**4. Were irregularities found in the data?** YES [ x ] NO [ ]  
*Comments, including identity of monitoring sites:*

Water quality in MD-1 (Old Johnson mine / Gilson seam) has changed significantly since spring 2002 when they started pumping the old workings. Dissolved Magnesium, Dissolved Sodium, Chloride, Sulfate and TDS have all increased since pumping began. However, flow is often reduced significantly since the site was thought to primarily be recharged from the old mine workings. These same parameters were slightly higher in the 1<sup>st</sup> quarter 2004, this is attributed to no meteoric water being mixed with the water generated from the old workings. This condition will continue to be monitored.

Stream site DC-1 has also observed increases in concentrations of dissolved Mg, Na, Cl, SO<sub>4</sub>, and TDS in the last few quarters. This is attributed to increased mine discharge since DC-1 is located immediately downstream of the mine facility and below the mine discharge locations. This condition will continue to be monitored.

Spring SC-116 showed slightly higher concentrations of Specific Conductivity, pH, SO<sub>4</sub>, and TDS, but this was attributed to the sample being collected in the stream immediately below the spring and not in the spring. The spring was iced-over and was covered with snow.

**5. Were DMR forms submitted for all required sites?**

*Identify sites and months not monitored:*

1<sup>st</sup> month, YES [ x ] NO [ ]  
2<sup>nd</sup> month, YES [ x ] NO [ ]  
3<sup>rd</sup> month, YES [ x ] NO [ ]

Information for sites 001-004 (001- Mine Q, 002- Sed. Pond Q, 003 – 30K tank, 004 Waste Rock Sed. Pond) were reported electronically.

**6. Were all required DMR parameters reported?**

YES [ x ] NO [ ]

*Comments, including identity of monitoring sites:*

**7. Were irregularities found in the DMR data?**

YES [ ] NO [ x ]

*Comments, including identity of monitoring sites:*

UPDES site 001 (Mine Discharge) discharged a total of four (4) times during the 1<sup>st</sup> quarter. Of the four discharge events, three (3) exceeded the 2,000 lb/day total limit on Total Dissolved Solids (TDS). The daily maximum of 1 mg/l on Total Iron (T-Fe) was exceeded on March 3, 2004, with a value of 2.41 mg/l, respectively. As with site MD-1, this is discharge related to draining of the Gilson seam (Old Johnson Mine). The Gilson seam is thought to be recharged slowly from groundwater, however the workings have sporadically flooded to the

point requiring emergency discharging of the water due to safety concerns. The flooding of the Gilson seam is a situation that continues to be monitored. Dugout Mine is currently in the process of having their UPDES permit modified because of anticipated increased flows of high TDS and Fe water.

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

No further action is necessary for the 2004 1<sup>st</sup> Quarter Water Monitoring data.