0052

WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

November 1, 2005

TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor DWH

FROM: Steve Eluke, Reclamation Hydrogeologist SME

RE: 2005 Second Quarter Water Monitoring, Canyon Fuel Company, LLC SUFCO Mine, C/041/0002-WQ05-2, Task ID #2262

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

The SUFCO Mine is currently operational. Water monitoring data is evaluated from the data that is submitted quarterly by the mine to the Division EDI database. The water monitoring program, field and laboratory measurement protocols, and groundwater and surface water operational water quality parameters are outlined in the mine's MRP in Tables 7-2, 7-3, 7-4, and 7-5, respectively. Quarterly groundwater monitoring for the SUFCO Mine is required for three quarters only (second, third, and fourth quarters). UPDES reporting requirements are presented in Appendix 7-7 of the MRP.

Additional water monitoring is being conducted as part of the East Fork of Box Canyon monitoring and mitigation plan outlined in Appendix 3-10 of the MRP. This monitoring data is being submitted and reviewed separately from the EDI database monitoring data, although there is some overlap.

Surface *Operational sampling is required quarterly for fifteen stream monitoring sites. Two stream monitoring sites (Pines 407 and 408) are equipped with pressure transducers because monthly monitoring is required July through October each year. Two stream monitoring sites (FP-1 and FP-2) require the identification of the perennial portion of stream on or near October 1 of each year. For Pines 407, Pines 408, FP-1, FP-2, USFS-109, and Pines 106, flow data, perennial stream flow maps, and the results of weather data/flow data comparison will be submitted with the fourth quarter monitoring report each year.*

All surface monitoring sites were sampled and data submitted for the 2005 second quarter monitoring.

Groundwater and Wells *Operational sampling is required quarterly for seventeen spring monitoring sites and eleven groundwater monitoring well sites including the five waste rock disposal site (WRDS) wells. In addition, operational sampling is required yearly for two additional groundwater monitoring wells.*

All groundwater and well sites were sampled/measured and data submitted for the 2005 second quarter monitoring.

UPDES *Operational sampling is required monthly for three active UPDES sites (UT002198-001, -002, and -003A).*

All UPDES sites were sampled and data submitted for the 2005 second quarter monitoring.

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

Surface All required parameters were reported with the exception of stream sites 041 and 042, which are missing laboratory parameters because the laboratory apparently lost the samples. SUFCO notified the Division of the mishap.

Groundwater and Wells All required parameters were reported.

UPDES All required parameters were reported.

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

Surface No irregularities were found with the following exceptions:

006 – Total iron was reported at 7.64 mg./L, exceeding the DWQ Class 3A Cold Water Aquatic Wildlife standard of 1.0 mg/L.

007 - Total iron was reported at 1.04 mg./L, exceeding the DWQ Class 3A Cold Water Aquatic Wildlife standard of 1.0 mg/L.

Pines 106 – Dissolved sodium, chloride, and sulfate concentrations were reported above two standard deviations for historical data.

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

057A – Flow has resumed to this spring after no flow since 1999; possibly the response to the end of six years of drought.

Pines 214 – Flow remains low and conductivity high since undermining in 2003.

Pines 303 – Flow diminished since 2001.

UPDES No irregularities were found.

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

The MRP does not require a five-year resampling of baseline water data.

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

Surface Continue monitoring stream stations in the East Fork of Box Canyon for trends of diminished water quality and flow. The undermining of the stream had created fractures in the stream channel that interrupted surface flow until repairs were made in the fall of 2004. Flow has since resumed to historic flow amounts. Determine why the weather data/flow data comparison required with the fourth quarter monitoring report was not submitted.

Groundwater and Wells Continue monitoring springs in the East Fork of Box Canyon. Flow from Pines 214 has significantly diminished and two pairs of twin springs (EFB-12 and EFB-13) have ceased flowing based on additional monitoring data from the EFB monitoring and mitigation plan. These impacts are not unexpected, and the effects on natural habitat will be monitored to determine if mitigation is necessary.

UPDES No further action is recommended.

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?