

WATER QUALITY MEMORANDUM Utah Coal Regulatory Program

October 16, 2013

TO: Internal File

THRU: Steve Christensen, Permit Supervisor *SLC*

FROM: Amanda Daniels, Environmental Scientist *AD*

RE: 2012 Fourth Quarter Water Monitoring, Canyon Fuel Company, LLC, SUFCO Mine, C/041/0002, WQ12-4, Task ID #4230

The SUFCO Mine is an operating longwall mine. Current operations are in the Quitchupah and Muddy Tracts. Water monitoring requirements can be found in Section 7.3.1.2 of the MRP, see Tables 7-2, 7-3, 7-4, 7-5, and 7-5A. Page 7-48 contains the important statement that (non Box-Canyon, non-UPDES) “monitoring sites are sampled three times per year,” meaning the second, third, and fourth quarters.

SUFCO has added additional stream monitoring points to their plan: SUFCO 006A, 006B, 006C, and 006D are intended to monitor the upstream and downstream flow along the South Fork of Quitchupah Creek. Additional spring sample locations were approved for the South Fork reach of Quitchupah located in the headwaters area and further downstream. These springs include: Spring 006A, Roberts Spring, RS-A, RS-B, Wedge Spring, Amanda Spring, 94-113 Seep.

1. Was data submitted for all of the MRP required sites?

Springs

YES NO

The MRP requires the Permittee to monitor 29 springs during the second, third, and fourth quarter as per Table 7-2. Some require full laboratory analysis according to Table 7-4, while others simply require field measurements.

All required springs were monitored during the fourth quarter of 2012.

Streams

YES NO

The MRP requires the Permittee to monitor 20 streams during the second, third and fourth quarter as per Table 7-2. Perennial stream monitoring of Box Canyon is required at FP-1 and FP-2 at the beginning of the month of October each year.

All required streams were monitored during the fourth quarter of 2012.

Wells YES NO

The MRP requires the Permittee to monitor water levels for 7 wells. Monitoring wells US-80-2, 89-20-2W, US-81-3, US-81-4 and 01-8-1 are monitored quarterly. Monitoring wells US-80-4 and US-79-13 are monitored annually during the 3rd quarter. Groundwater monitoring at the Waste Rock site occurs three times per year.

Well WRDS-B6 has been reporting an increase in the depth to water over the last 25 years. This well is located on the waste rock site itself and the drop in water level is actually an indication of additional waste rock material being added to the site, adding cover to the well site.

All wells including the waste rock wells were monitored in accordance with the monitoring plan during the fourth quarter of 2012.

UPDES

The UPDES Permit/MRP require bi-weekly monitoring of 3 outfalls: UT0022918-001: mine water discharge to Spring Canyon; UT0022918-002: sedimentation pond discharge to Spring Canyon; and UT0022918-003A: the mine water discharge to the North Fork of Quitchupah Creek.

The Permittee submitted all required samples for the UPDES sites. Outfall 001 reported no flow this quarter.

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

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

The following sample locations reported results outside of at least two standard deviations:

Springs:

Pines 100 – November – Cat-Ani, TDS

M-SP02 – November – Conductivity

Streams:

7 – November – Cat-Ani

Pines 403 – November – Dissolved Calcium, Conductivity, SO4

46 – December – Dissolved Magnesium

Wells:

WRDS-B6 – December – Dissolved Sodium, Dissolved Potassium, Chloride

WRDS-B8 – December – Dissolved Calcium, Dissolved Magnesium, Dissolved Sodium

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

There is no commitment in the MRP to resample for baseline parameters.

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

No recommendations are warranted at this time.