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TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

October 5, 2011

TO: Internal File

THRU: Steve Christensen, Permit Supervisor *SCC*

FROM: April A. Abate, Environmental Scientist III and Task Lead *AAA*
10-5-2011

RE: Water Monitoring Modification, Canyon Fuel Company LLC, Skyline Mine, C007/0005, Task # 3897

SUMMARY:

On September 8, 2011, Canyon Fuel Company (the Permittee) submitted an amendment electronically to the Division to modify the Skyline Mine mining and reclamation plan (MRP). Groundwater monitoring well W20-4-2 from the plan due to a breach in the casing that has hampered the ability to collect water level readings. As such, the well has been withdrawn from the plan and shown as discontinued/abandoned on Figure 2.3.6-1.

In addition, Skyline has updated the MRP to add piezometers located in Woods Canyon to Plate 2.3.6-1 and updating their description in the text.

RECOMMENDATIONS:

All revisions to Section 2.3 of the MRP meet the Utah Coal Rules. Approval is recommended.

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TECHNICAL ANALYSIS:

OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

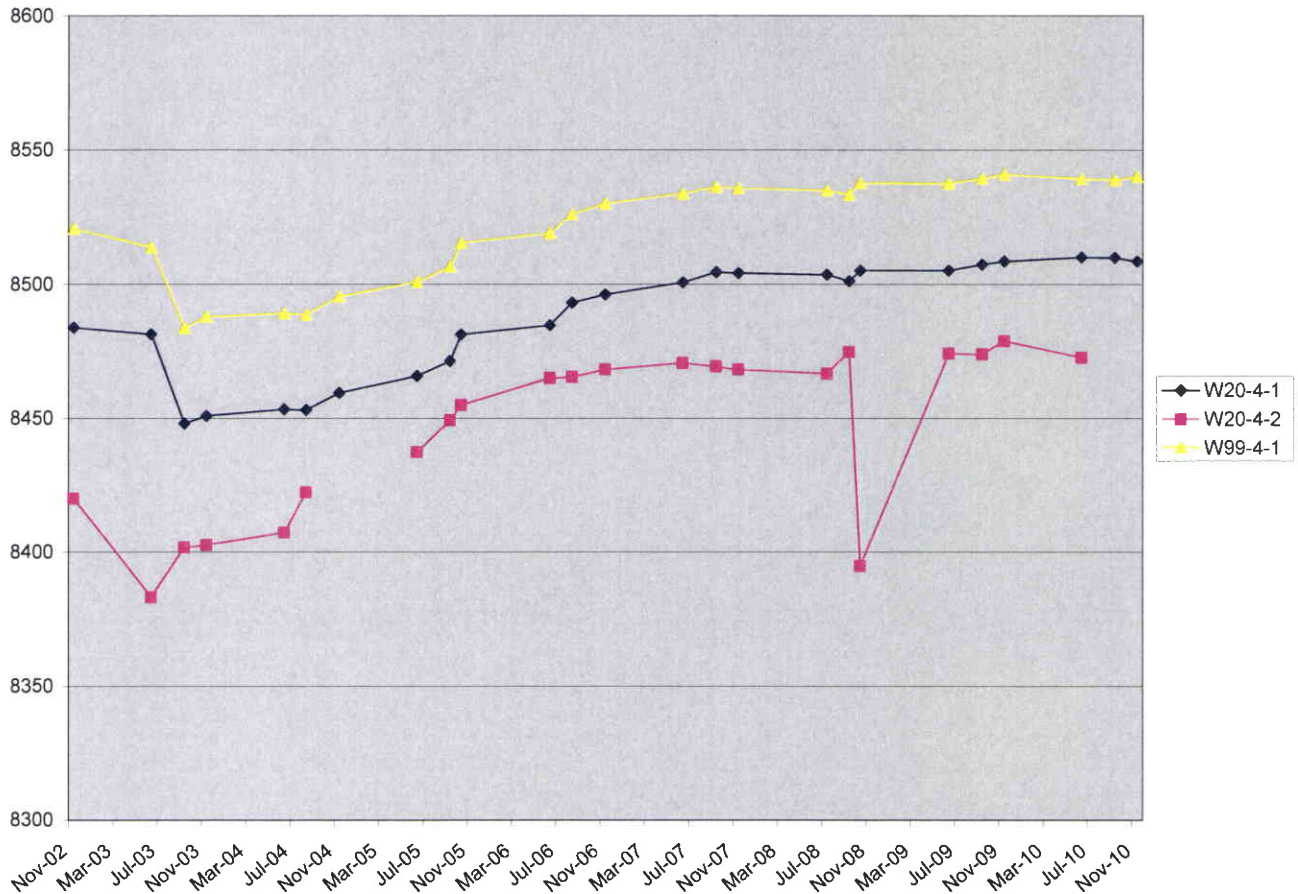
Groundwater Monitoring

The Permittee has indicated that groundwater monitoring well W20-4-2 is no longer functional because it has been breached approximately 700 feet below the surface and approximately 375 feet above where the last water level was collected. This well is located in Section 4, Township 12S R6E. There are two additional wells (20-4-1 and 99-4-1) also located in Section 4 adjacent to a stream in Boulger Canyon measured for water level only on a quarterly basis. These wells are separated from W20-4-2 by approximately 3,000 feet of distance and elevations between 683-712 feet below W20-4-2. The chart on the following page was plotted to show the water levels in each of these wells.

The Permittee has also updated the language in Section 2.3, page 2-35c and Table 2.3.7-1 of the MRP to include piezometers that have previously been installed along the stream in Woods Canyon. These piezometers are listed as WC-3N, WC-3S, WC-5N, WC-5S, WC-7N, WC-7S, WC-9N, WC-9S.

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Potentiometric Water Levels in Section 4



As can be seen on the above chart, the potentiometric water surface appears to follow a general trend in all three wells indicating that all three wells measure ground water originating from the same aquifer. Based on this chart, it appears that collecting water level data from the nearby two wells in Section 4 would be representative of groundwater in this area. Therefore, there will not be any additional need for a replacement well for W20-4-2.

As a result of the breach in the casing, the Permittee has removed groundwater monitoring well W20-4-2 from Table 2.3.7-1, page 2-36a.

Findings:

The updates to the groundwater water monitoring plan meet the Utah Coal Rules and no additional actions are required.

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MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Monitoring and Sampling Location Maps

The Hydrologic Monitoring Stations map in the Skyline MRP is represented on Figure 2.3.6-1. An electronic copy of this figure was submitted to the Division as part of this amendment review process. Figure 2.3.6-1 has been updated to show the locations of the piezometers in Section 36 of T12S R6E and groundwater monitoring well W20-4-2 updated as discontinued/abandoned.

Findings:

Figure 2.3.6-1 meets the Utah Coal Rules.

RECOMMENDATIONS:

Approval is recommended.

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