



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter
Governor

Dee C. Hansen
Executive Director

Dianne R. Nielson, Ph.D.
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

10 December 1991

TO: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Hugh Klein, Geologist/Hydrologist *HK*

RE: Special Condition, R614-301-731.200 (Water Monitoring), for Federal Lease Tract Approval, ACT\015\009, Folder #2, Mountain Coal Company, Trail Mountain #9 Mine, Emery County, Utah

SYNOPSIS

As part of approval for the Federal Lease, the applicant is required to monitor quality and quantity of the Star Point aquifer at a point where the flow leaves the permit area. Previously, a plan was received and reviewed by the Division. On 27 November 1991, a new proposal (dated 25 November 1991) was submitted to the Division. In short, the latest proposal does not satisfy what this staff member believes to be the intent or requirement of the Special Condition.

ANALYSIS

Mountain Coal is now proposing to monitor water from the Star Point as it outcrops in Section 11, Township 18S; the proposal seems to indicate that the water is discharging from the mine and not a spring. While this is a location associated with the Star Point and water leaving the permit area, it does not accomplish all the goals of the Special Condition.

The Special Condition states, "The applicant must monitor quality and quantity of the Star Point aquifer at a point where the flow in the aquifer leaves the permit area. The most likely place to develop this monitoring site is in the area near DH-5 (Figure 6-4). The applicant will be required to develop a well to monitor aquifer parameters, seasonal fluctuation, mining influence and hydrologic tests. The applicant will be required to construct the monitoring within 90 days of permit approval. This information is requested in accordance with the requirements for water monitoring regulations R614-301-731.200 through R614-301-731.215."

Given this Special Condition, it should be noted that the area near DH-5 (see above) was called "the most likely." The location, as this writer sees it, was never

Page 2

Memo/P. Grubaugh-Littig

December 10, 1991

an absolute. After reviewing the location of this point along with the mine sequence map (Plate 3-6) and the map containing contours of the piezometric surface (Plate 7-2), a general direction for mining and ground water flow was ascertained. It should be noted that these maps are not considered to be cast in stone. They are used only to gain a general sense of the direction mining will proceed and ground water flows. For this reason, it was concluded that the location referenced in the Special Condition would not yield data associated with mining for several years. More simply stated, the groundwater that may be impacted by mining would not intersect this point for quite some time. The generalized direction of ground water flow along with present mining activities is also the reason Mountain Coal's newly proposed point is not thought to be satisfactory. With the generalized direction of flow in mind, it appears as though the Oliphant Mine point is down gradient from the area already mined. So the problem is, how can mine related impacts be discerned if no pre-mining data exists for comparison (i.e., no baseline data)? Mining influence is one of the issues addressed in the Special Condition. There are a number of other issues associated with the proposal that have not been addressed, but the location of this monitoring point is of the utmost concern and the other issues seem mute until this one is resolved.

RECOMMENDATIONS

1) The original intent of the Special Condition to have a well constructed should remain in effect. The new proposal does not meet with the intent or requirements of the above referenced Special Condition.

2) Mountain Coal needs to propose a point for a well where baseline data can be collected. The point should also be located down gradient of an area to be mined in the near future (two to three years).

3) Once the location has been agreed upon, other aspects of the plan will need to be addressed such as: drilling methods, completion plan, monitoring frequency and a parameter list.

4) At this time, it should also be pointed out that the progress of this Special Condition is less than would be hoped for. Some of this has been explained by Mountain Coal. Regardless, resolution of this matter should not be delayed. An agreement needs to be reached in the near future so that as soon as the weather permits, work can be started.