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**State of Utah**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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September 10, 1996

TO: File

THROUGH: Joe Helfrich, Permit Supervisor *Joh*

FROM: Paul Baker, Reclamation Biologist *PBB*

RE: Changes to the Castle Gate Water Monitoring Plan, Amax Coal Holding Company, Castle Gate Mine, ACT/007/004-96A, Folder #2, Carbon County, Utah

## SUMMARY

In November 1995, violation N95-41-3-1 was written to Amax Coal Company for failing to conduct water monitoring in accordance with the approved mining and reclamation plan. More specifically, this violation was for failing to take water samples at sampling point B-22 in Crandall Canyon.

Amax originally submitted amendment 96A on January 16, 1996. A revised amendment was submitted August 21, 1996.

In the most recent submittal, Amax has clarified the location of sampling point B-22 and renamed it B-22-1. Also, a few water monitoring parameters have been changed.

## ANALYSIS

### SURFACE AND GROUND WATER MONITORING

Regulatory Reference: R645-301-731

#### Analysis:

Monitoring point B-22 is a spring at the bottom of Crandall Canyon just below the uppermost topsoil pile, and it probably emanates from the alluvium. There is a sign in the streambed indicating a location for the monitoring point. In 1995, water was coming from the ground about 45 feet below the sign, but in 1996, water has been coming from very near the sign.

Various places have been called B-22 in the past. There was a well near the Crandall Canyon shafts that was apparently called B-22 at one time. Other places that may have been sampled and called site B-22 include the culvert at the canyon mouth and just below the main

disturbed area.

During a hearing where violation N95-41-3-1 was being contested and also in the cover letter accompanying amendment 96A, Amax contended that B-22 was originally a ground water monitoring point for water coming from rock near the topsoil pile about three feet above the channel bottom. However, it appears to be clear, and the Division Director found, that B-22 should actually be sampled where water is coming from the alluvium at the bottom of the canyon.

In amendment 96A, Amax has proposed to change the name of monitoring point B-22 to B-22-1. This differentiates future data from previous data that may be inaccurate but still associates B-22 with B-22-1. Also, Amax has put a comment in the plan explaining past confusion over the proper location of B-22 and the reason for renumbering it.

In this amendment, Amax has also proposed to delete monitoring point B-17 and add point B-45. B-17 is near the confluence of Sowbelly Gulch and Spring Canyon about a mile below the disturbed area. There are several abandoned mines and other disturbances that may affect water quality between the disturbed area and the monitoring point, so it does not show influences of Amax's operations. The proposed location of B-45 is a much better place for locating a surface water monitoring point in Sowbelly Gulch.

Amax samples water coming from Adit No. 1 at ground water monitoring point BM30. The location of this monitoring point has been corrected on Exhibit 7-3. UPDES sampling point 20 is for discharge from pond 10 at Adit No. 1. The location of this monitoring point has also been corrected.

In 1995, Amax reclaimed ponds 16 and 17 in Sowbelly Gulch. Discharges from these ponds were included in the UPDES permit and in the mining and reclamation plan surface water monitoring plan. Since it is no longer necessary to monitor any discharge, Amax has dropped these points from the water monitoring plan.

Amax proposes to no longer analyze ground water samples for total suspended solids, settleable solids, and dissolved oxygen. Oil and grease would only be checked visually.

#### **Findings:**

The Permittee has met the regulatory requirements of this section.

#### **RECOMMENDATIONS**

The Division should approve amendment 96A as submitted on August 21, 1996.