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

Michael O. Leavitt
Governor

Ted Stewart
Executive Director

James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

March 17, 1994

TO: Tom Hurst

FROM: Paul Baker

RE: Soil Samples taken at Sowbelly Gulch, AMAX Coal Co., Castle Gate Mine, ACT/007/004, Folder #2, Carbon County, Utah

Here are the results of the analyses on the soil samples we took March 9, 1994, in Sowbelly Gulch.

Sample Number	pH	Electrical Conductivity (EC mmhos/cm)
1	7.38	3.60
2	7.35	4.25
3	8.21	2.95

These values are all within acceptable limits.

Appendix 8-B of the plan contains soil test results. Two sets of samples were taken in the area where we took our samples. The first set includes the samples whose locations are shown on Exhibit 8-5. In this first group of samples, sample 7 had high EC and sodium adsorption ratio (SAR) values. Therefore, a second set of samples was taken in an effort to better delineate the problem. The three samples from the second set were designated L-7 for the "lower sample site 30' upstream from original sample S-7," M-7 for the original sample site, and U-7 for the "upper sample site 30' downstream from original sample S-7." In our copy of the plan, the sixth page from the end of Appendix 8-B has the results from the second set of samples.

The original sample taken in this area had an EC of 28.8 and SAR of 32.6. The second sample from site 7 (M-7) did not have particularly high EC or SAR values. The problem sample in the second sampling was from site U-7, 30' downstream from the original sample site. It had EC values ranging from 30.6 to 103 and SAR values from 110 to 361. The high values were present throughout the four foot profile.

I believe our sample 3 was taken near location L-7, the upper sample site. This was not the sample that had high SAR and EC values. Our results show slightly higher pH and EC values than those shown in the appendix. I think that the original sample site and U-7 were covered with gravel and soil when we did the inspection. If possible, I think more sampling should be done in this area so that the problem soils can be identified and buried during grading.