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November 21, 1990

Mr. Mike Herkimer  
State of Utah  
Department of Health  
Division of Environmental Health  
288 North 1460 West  
Salt Lake City, Utah 84126-0128

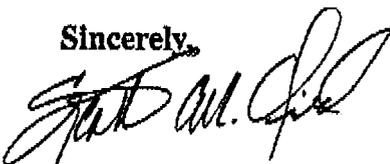
Re: **PROPOSED BYPASS TO DEER CREEK MINE  
UPDES PERMIT NO. UT-0023604**

Dear Mr. Herkimer:

The approval letter dated November 16, 1990 from Mr. Don Ostler of your office included Appendix I for the Riparian Habitat Assessment. We have discovered and corrected some typographical errors occurred in paragraphs 4 and 5. Due to the similar wording in these paragraphs, some sentences were inadvertently interchanged and meanings were slightly modified during word processing.

We have corrected these errors and have included a revised Appendix I. We apologize for the error and hope this causes you no great inconvenience.

Sincerely,



J. Blake Webster  
Permitting Administrator

JBW:bb:6593  
Enclosure

cc: Bart Hyita  
Scott Child  
Val Payne  
Chuck Semborski  
Rodger Fry

## Appendix I

### DEER CREEK MINE DISCHARGE RIPARIAN HABITAT ASSESSMENT

#### PURPOSE

Riparian assessment and monitoring will provide data and methods whereby changes in the riparian habitat associated with Deer Creek stream can be documented and evaluated and mitigation needs can be determined.

#### METHODS AND PROCEDURES

Data will be collected, recorded and evaluated generally as outlined for Level III Evaluation in the U.S. Forest Service Integrated Riparian Evaluation Guide, Intermountain Region, May 1990.

Changes in the distribution of forested, shrub and herbaceous riparian communities will be monitored in the vicinity of the 13 stations identified in the ERI study. Monitoring will include measuring cross section composition, green line composition and woody species regeneration.

Cross section composition will be evaluated along three (3) permanent transects in each of the 13 stream reaches. Transects will be marked with rebar. Community type composition will be obtained and percent composition for each community type will be calculated.

Green line vegetation composition will be evaluated at the central cross section in each of the 13 stream reaches. The number of feet of each community type encountered along the green line will be measured and the percent composition for each community type will be calculated.

Woody species regeneration will be measured along the green line as described in the Evaluation Guide. Additionally, the woody species regeneration measurements will include an inventory (number, species and size) of all trees within the green line transect belt. The trees will be categorized according to the following size classes: 1) 1 to 2 inches dbh; 2) 3 to 5 inches dbh; 3) 6 to 10 inches dbh; 4) 11 to 14 inches dbh; 5) > 15 inches dbh. Canopy cover and age classes (seedling, young, mature, decadent, dead) will be determined. The inventory will also identify trees inundated as a result of mine water discharge.

Data will be collected before mine discharge begins and annually for five years thereafter. Sampling frequency may be lessened if supported by the data. Results of the monitoring will be used to quantify the effects of the

discharge upon riparian habitat. A control transect will be located outside the areas of potential discharge impact to document non-discharge related impacts. Appropriate mitigation will be implemented if net losses of riparian habitat are documented. Mitigation measures will be designed in cooperation with the appropriate agencies.

SC:Riparian,DC