

0003



United States Department of the Interior  
OFFICE OF SURFACE MINING  
Reclamation and Enforcement  
[Redacted]  
DENVER, COLORADO 80202

Brooks Towers  
1020-15th Street

*File Copy  
Braztah  
Complex  
Rtn copy & copy  
to Ken Hutchinson  
at Braztah  
ACR/007/004*

OFFICE OF THE REGIONAL DIRECTOR

19 NOV 1979



Mr. Ron Daniels  
Coordinator of Mined Land Development  
Utah Department of Natural Resources  
Division of Oil, Gas and Mining  
1588 West North Temple  
Salt Lake City, Utah 84116

Dear Mr. Daniels:

This office has reviewed Braztah Corporation's "Conceptual Design of Compliance Measures for Disturbed Surface Areas, Castle Gate Area, Carbon County, Utah." Based on this review, we have the following comments.

With regard to the section of the report dealing with "Protection of Hydrologic Balance," Braztah proposes to grade disturbed areas to retain all precipitation and to divert away surface flow from undisturbed areas, thus avoiding construction of sedimentation basins. Some relatively large areas are proposed to be bermed to prevent runoff. We recommend the use of sedimentation ponds to treat runoff from the larger disturbed areas.

The report states that diversion channels will be designed to keep velocities below 15 feet per second. At 15 feet per second, flowing water is very erosive and only large riprap may be stable. We recommend a reduction of the present velocity to a maximum permissible velocity in the range of five feet per second.

All culverts and permanent diversions should be designed to safely convey runoff from the area. A safety factor should be incorporated to insure that no excessive erosion occurs. If a culvert is to convey the flow for the life of the mine and the life of the mine is 30 years, the culvert should be designed to safely convey the runoff resulting from the 50-year precipitation event. All permanent diversions should be designed to have a combination of channel and floodplain to safely pass the runoff resulting from the 100-year precipitation event. All permanent diversions should have longitudinal profiles to complement the natural drainage and to prevent headcutting and excessive erosion.

Mr. Ron Daniels

-2-

Almost all road cuts, dumps, and waste piles have slopes of 1.5h:1v. Such structures should have a safety factor of at least 1.5 to insure that they will be stable. Considering the present instability at Willow Creek, it is doubtful that slopes of 1.5h:1v will be stable. We recommend decreasing slopes to achieve a more stable configuration.

We are concerned about the proposed practice of placing only two feet of soil cover on top of regraded waste dumps. We require at least four feet of soil cover on all waste. We also suggest that refuse in stream channels be removed before diversions are constructed. A general program to remove all refuse from stream channels should be implemented.

The proposed seed mixture is stated to be approved by BLM for drill site reclamation. We have reviewed this mixture, and we suggest that it may be unsuitable for permanent reclamation. We suggest that the seed mixture include more native species and a higher seed mixture rate. The use of hydroseeding should be discouraged.

It was stated in the report that on regraded refuse piles with soil cover, the use of mulching and seeding would eliminate the need for a sedimentation pond. We do not agree with this statement. It often takes more than one seeding to guarantee revegetation. Also, it may take several years for a vegetative cover to be established that is adequate enough to control sediment laden runoff.

If you have any questions related to this review, please contact John Nadolski of my staff (303-837-3773).

Sincerely,



DONALD A. CRANE