



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dianne R. Nielson, Ph.D., Division Director

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October 22, 1984

CERTIFIED RETURN RECEIPT REQUESTED
P402-457-304

Mr. Jerry M. Nettleton
ACZ, Inc.
Engineering and Environmental Division
737 Lincoln Avenue
P. O. Box 774018
Steamboat Springs, Colorado 80477

Dear Mr. Nettleton:

Re: Approval of Abatement Plan for Violation NOV N84-8-2-1,
North American Equities, Blazon Mine, INA/007/021, Carbon
County, Utah #7

The Division's technical staff has reviewed the plans and calculations submitted on 17 October 1984 to abate NOV N84-8-2-1.

Several errors were discovered in the application of the rational method and the determination of culvert capacity. Errors associated with the rational method are:

1. Area should be in acres not square feet.
2. Rainfall intensity (i) should be the maximum intensity of precipitation as distributed according to an applicable rainfall distribution for a duration equal to the time of concentration rather than a uniform intensity.
3. The coefficient needed to make the equation dimensionally correct is 1.0008 and is usually ignored. No additional conversion of inches or hours is required.

For the culvert capacity determination it was assumed in the calculations that pipe flow was limiting. However, because of the steep slope and small contributing drainage area inlet controlled flow is the limiting type of flow

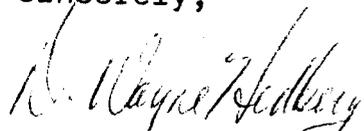
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These errors, though serious to the technical correctness of the methodologies, do not affect the feasibility of the proposed abatement activities. Flow from the small drainage area will be less than 0.5CFS and will pass through an 8 inch culvert assuming inlet control, therefore the proposed design is acceptable.

Based on the above finding, the Division hereby grants approval to the installation of an 8 inch culvert to convey disturbed area drainage from the upper-pad to ditch B. Installation of the culvert must be completed by November 9, 1984.

If you have any questions, please call.

Sincerely,



D. Wayne Hedberg
Permit Supervisor/
Reclamation Hydrologist

TJS:jvb

cc: R. Hagen
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A. Smith
J. Helfrich
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