



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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February 28, 1986

Mr. Wes Sorenson
Chief Mine Engineer
Southern Utah Fuel Company
P. O. Box P
Salina, Utah 84654

FILE COPY

Dear Mr. Sorenson:

Re: Comments on February 19, 1986, Meeting Stream Channel
Restoration, Southern Utah Fuel Company, Convulsion Canyon Mine,
ACT/041/002, Sevier County, Utah

This letter is a follow-up for the comments and concerns raised during the February 19, 1986 meeting with the Office of Surface Mining, Fish Lake National Forest, Division of Oil, Gas and Mining, Sergeant, Hauskins and Beckwith, and Southern Utah Fuel Company at the Convulsion Canyon Mine. The purpose of the meeting was to discuss the concerns and comments raised by the Forest Service, the Office of Surface Mining and the Division of Oil, Gas and Mining regarding the proposed stream channel restoration plans submitted to the Division December 23, 1985.

After the initial discussion and field inspection of the site, the discussion dealt with the concerns of each of the agencies associated with the plans proposed for the site. A summary of the concerns are listed below:

1. Based on the review of all three agencies, it is evident that within reach four of the main channel, a hydraulic jump will occur. Concerns were raised regarding the height of the jump and the capability of the stream channel, over time, to be capable of containing the required flow because of possible deposition of material within the subcritical reach of the stream channel. SUFCO is therefore required to evaluate the design plans for reach # 4, to either deepen or widen the channel in the area immediately above and below the site of the hydraulic jump.

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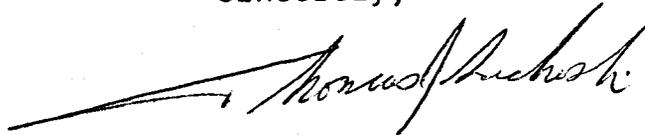
2. Concerns were raised regarding the design of the reinforced bank shown in Figure 5 of the submittal. It was suggested that riprap be placed all the way to the top of the embankment rather than only 5.1 feet above the channel bottom. Therefore, SUFCO is required to modify the plans to incorporate the riprapping to the reinforced bank all the way to the crest of the bank.
3. Concerns were raised regarding the size of riprap in the collector ditch across the fill. It was the feeling of the Forest Service staff that the riprap should be increased in size to a D-50 of 9 inches and a D-max of 18 inches in diameter. Therefore, SUFCO is required to increase the size of riprap in the collector ditch across the fill to the above specified size.
4. Concerns were raised regarding apparent conflicts between channel depths indicated in the tables and in the cross sectional drawings in the appendix. SUFCO is required to clarify the text, drawings, and tables to show channel configurations that will be constructed and to specify that all channels will be constructed in rock with the exceptions of reach A-1 of the west side collector ditch which will be across fill material.
5. Concerns were raised regarding the classifications of flows which would occur within the west side collector channel. Based upon the normal depth and critical depth, it appears as though the flows are designed within several tenths or hundredths of critical flow. Concerns were raised by the Forest Service that such a design could not begin to be guaranteed during field construction to meet the design standards (i.e. that some sections would have super-critical and some sections would have subcritical flow causing changes in the flow of the gradient during construction which would allow hydraulic jumps and unstable flow conditions to exist in the ditch. Therefore, it is required to reevaluate the collector ditch on the west side to determine whether or not supercritical and subcritical flow transistions will occur and if the designs are to close too critical flow, then changes in the slopes and/or configuration of the ditch reaches should be considered.

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The above concerns were discussed by the various agencies and SUFCO, as to time frames and commitments which could be stipulated and addressed prior to approval. It was the major consensus of the agencies involved that all except point no. 5 could be addressed prior to approval and that point No. 5 would be stipulated in the TA. In discussions with Wes Sorenson and Allen Owen as to when the required information would be submitted prior to approval they indicated they would attempt to meet a February 28, 1986 deadline for submission of the information.

If you have any questions regarding the above commitments and or time frames please do not hesitate to call.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas J. Suchoski". The signature is written in a cursive style with a long horizontal stroke extending to the left.

Thomas J. Suchoski
Geologist

jvb
0031R-37