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FILE #3
ACT/007/007
C.C. J.WHITEHEAD

sla

SIMONS, LI & ASSOCIATES, INC.

3555 STANFORD ROAD
P.O. BOX 1816
FORT COLLINS, CO 80522

TELEPHONE (303) 223-4100

February 21, 1984

Mr. Bob Turner, Geologist
Kaiser Steel Corporation
PO Box 58
Oakland, CA 94604

Re: AVF determination for Kaiser Steel Sunnyside Mine (our job no. UT-DOGM-01)

Dear Bob:

After further review of your MRP and consultation with Utah DOGM, I have developed a list of information that is necessary for Kaiser Steel to provide in order that a determination on the AVF (alluvial valley floor) issue can be made. The principal area of concern is the land along Grassy Trail Creek, below Whitmore Canyon. This area, from the limited information provided and the site visit, has a high potential for being classified as an alluvial valley floor. Although it may be argued that at the mouth of the canyon is an alluvial fan, this would not exclude it from an AVF since downstream alluvial deposits are contained within the valley along with a perennial stream. The area does have potential for flood irrigation based on the fact that alfalfa fields currently occupy a portion of the area and a perennial stream flows through the area, giving rise to the potential for further artificial irrigation.

The information I am requesting was selected to answer two main questions. The first is whether an alluvial valley floor exists in the area of Grassy Trail Creek below Whitmore Canyon. The second is if an AVF exists, whether mining activities will significantly impact the functioning of the AVF. Since KSC does not appear to be physically disturbing alluvial deposits, the second question is concerned mainly with water quality impacts mining may have on the AVF.

The following is a list of data that should be provided to allow a determination on the AVF issue to be made.

1. Provide a map showing agricultural activities along Grassy Trail Creek from the mouth of Whitmore Canyon to a point a minimum of three miles downstream of the western boundary of the permit area. Also include a vegetation map that identifies the presence of any naturally occurring irrigrated species. Any historical

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irrigation structures, such as diversions, sprinkler systems, spreader dikes, etc., should be shown.

2. Provide a map of stream-laid deposits covering the same reach of Grassy Trail Creek as specified above.

3. Provide a thorough topographic cross section extending from valley wall to valley wall and perpendicular to Grassy Trail Creek at the following four locations:

   a. Through the athletic fields (Sunnyside)
   b. Through the alfalfa field
   c. South from the cemetery
   d. South from the golf course

   Actual field-surveyed cross sections are requested. Contour intervals on the maps provided with the MRP are not sufficient for these cross sections. Locations of major features such as fields, roads, and stream-laid deposits should be indicated.

4. A history of agricultural usage should be included. If possible, types of crops, grazing activities, and acreages should be estimated.

5. Water rights associated with the usage of the mine water discharge should be provided. Type of use, location and quantity should be provided. Water rights along Grassy Trail Creek within the area described in question no. 1 should be identified and described in the same manner.

6. Aerial photographs of the area outlined in question no. 1 should be provided to the extent available. Color infra-red should be included if available.

7. Address contamination of Grassy Trail Creek from mine water discharge and seepage from the refuse area and slurry ponds. Provide data to substantiate any claims.

8. Provide a letter from farmers and other users of the mine water discharge confirming their satisfaction with the water quality and its suitability for their crops as stated in the MRP.

9. Detail the location (both in plan view and cross section) of the refuse disposal area to the stream-land deposits and possible underlying geologic formations (i.e., Mancos shale). Show locations of seepage from the refuse and slump disposal area. It is necessary to discuss the possibility of seepage from the refuse and slurry areas contaminating the alluvium. If the alluvium is

isolated from these areas, provide information to justify such a contention.

This information is intended to provide a basis to make the determination. If you have any further questions, please contact me.

Sincerely,

William T. Fullerton

William T. Fullerton
Senior Hydraulic Engineer

WTF:BJG

cc: Tom Munson, Utah DOGM

RD40/R389