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**KAISER
STEEL**

KAISER STEEL CORPORATION
SUNNYSIDE COAL MINES
SUNNYSIDE, UTAH 84539
TELEPHONE 801-888-4421

October 16, 1979



Mr. Ron Daniels
Department of Natural Resources
Division of Oil, Gas & Mining
1588 West North Temple
Salt Lake City, Utah 84116

Re: KSC Sunnyside Mines
ACT/007/007
Special Study Period

Dear Mr. Daniels:

As a result of our appearance before the Board on 9-26-79 an outline for the study period was prepared by us and reviewed with your people on 10-9-79. Kaiser Steel Corporation hereby submits a detailed outline of the parameters to be studied for the "Special Year Study on Use of Coal Waste Material". The following items are periodic and will be done as indicated:

- I. WATER ANALYSIS (Monthly) Grassy Trail Creek sample above (UPR) and below (LWR) mine area, testing by Ford Chemical for: alkalinity, acidity, arsenic, chloride, conductivity, iron (dissolved and total), lead, manganese, nitrate, oil & grease, phosphorus, potassium, selenium, silver, sulphate, TDS, TSS, and pH.
- II. CREEK BOTTOM STUDY (Quarterly) Grassy Trail Creek sample for invertebrates at approximately six random spots determined by DOGM, KSC and Dr. R. N. Winget (BYU), being tested and analyzed by Dr. Winget.
- III. NATURAL VEGETATION GROWTH (frequency to be determined by DOGM). This item will be monitored by DOGM personnel at designated areas in Whitmore Canyon. KSC will establish and plant a refuse test plot to determine growth potential of coal waste to be supervised and analyzed by DOGM. SCS and DWR also available for some help and input.

The following are one time only items:

- IV. ANALYSIS OF WASHED COAL (Physical and chemical) copy of test results indicating make-up of material.
- V. ANALYSIS OF COAL REFUSE (Waste) random sample tested for use as road base material analyzed by AC&R, RB&G, Pittsburgh Testing and UDOT.
- VI. AVAILABILITY OF ALTERNATE MATERIAL SOURCE (Granular) check local area, Henrie pile and Lowdermilk pile and tested by UDOT.

VII. AREA SOILS ANALYSIS conducted by USU Soils Lab. Samples of:

- (1) Undisturbed top soil along road and creek.
- (2) Top soil pile near slurry ponds.
- (3) Disturbed slope near manshaft.
- (4) Refuse silt from road runoff.

VIII. ROAD DRAINAGE PATTERNS on all areas where coal refuse used. Map indicating contributing watershed, runoff patterns, size & spacing of culverts, and past flood data. DOGM will analyze sedimentation, erodability and infiltration.

IX. SUPPORTING MATERIAL -

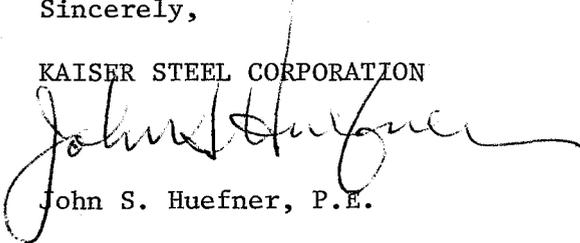
- A. Maps showing locations of items I, II, III, VII, and VIII.
- B. Photographs of items II and III.
- C. Graphs of items I and IV.
- D. Reports included where relating to this study from BOM, SCS, DWR, etc.

X. SUMMARY - REPORT OF ANALYSIS & FINDINGS drafted by KSC with attachment by DOGM. DOGM also to consider coal refuse use as part of regulations.

Please advise us as soon as possible as to the acceptance of this outline and if we are needed to present this format before the Board at the October meeting.

Sincerely,

KAISER STEEL CORPORATION



John S. Huefner, P.E.

JSH:dm

CC: Joe Taylor
Lloyd Heath
Lynn Huntsman