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**U. S. Steel  
Mining Co., Inc.**

a Subsidiary of United States Steel Corporation

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WESTERN DISTRICT

*To Sue*  
File ACT/007/012  
File #2

**JIM**  
JAN 12 1984

January 10, 1984

RECEIVED  
JAN 16 1984

DIVISION OF  
OIL, GAS & MINING

Mr. James W. Smith, Jr.  
State of Utah  
Division of Oil, Gas and Mining  
4241 State Office Building  
Salt Lake City, Utah 84114

Attn: Susan Linner  
Reclamation Biologist

Re: Wellington Coal Cleaning Plant  
ACT/007/012

Dear Ms. Linner:

I am enclosing the two revised pages as discussed with V. R. Watts. Page 783-8 should be inserted in the ORP. Page I-4 should be inserted in Appendix I of the Determination of Completeness Response.

Sincerely

G. H. Sides  
Chief Engineer

GHS:VRW:cs

Enc.

cc: V. R. Watts  
B. L. Kirkwood  
L. King  
B. A. Filas  
EC File

and increase infiltration of available moisture.

#### Fertilizer

Soil analysis results indicated nutrient deficiencies in many of the soils to be used for reclamation. The Vegetation Study contained in Appendix H of the ORP recommended application of fertilizer at the rate of 80 lbs of nitrogen and 60-80 lbs of phosphorus per acre. This will be used at present as an estimated application rate for the Reclamation Plan. The amount of fertilizer to be applied will be determined from soil samples at the time of reclamation. Refer to the Topsoil Handling Plan (Appendix II), Nutrients and Amendments.

#### Topsoil Borrow Area

A vegetation study using the methods described in Appendix H of the Operation and Reclamation Plan will be conducted of the topsoil borrow area (refer to Map E9-3339) to establish revegetation standards during the summer of 1984. A report will be issued to the Division on or before October 31, 1984. This vegetation study will also provide a recommended seed mix for reclamation.

#### Mechanical Treatment of Soils

Mechanical treatments such as chiseling and discing will be used as necessary to relieve soil compaction of the soils following the topsoil removal operations. During topsoil removal, the upper 2.5 feet of soil will be mixed. Soil will be redistributed to a depth of 0.7 feet over the topsoil borrow area for reclamation.

#### Mulching

Straw mulch will be applied to the entire area at a rate of 2000 lbs per acre and will be anchored to the soils with a mulch crimper. The application of mulch will serve to decrease evaporation and increase infiltration of available moisture as well as reduce soil erosion.

#### Fertilizer

Soil analysis results indicated nutrient deficiencies in many of the soils to be used for reclamation. The Vegetation Study contained in Appendix H of the ORP recommended application of fertilizer at the rate of 80 lbs of nitrogen and 60-80 lbs of phosphorus per acre. This will be used at present as an estimated application rate for the Reclamation Plan. The amount of fertilizer to be applied will be determined from soil samples at the time of reclamation. Refer to the Topsoil Handling Plan (Appendix II), Nutrients and Amendments.

#### Planting and Seeding

The disturbed area associated with the topsoil borrow area will be seeded by drilling methods with seed mix determined above.

Geology Description

(a) The surface areas occupied by the Coal Cleaning Plant are as follows:

- (1) The Coal Cleaning Plant facilities.
- (2) The Coal Cleaning Plant refuse disposal area and water clarification ponds.

The preconstruction investigation of the Coal Cleaning Plant site shows alluvium underlain by Blue Gate Shale with the shale some 36 to 40 feet below the surface. A five to 15 foot sand and gravel layer consisted of cohesive soils varying in thickness from 15 to 30 feet. The surface is a blanket of brown loam.

The investigation of the pump station site showed a surface layer of four feet of sandy loam, a 29 foot layer of sand and gravel which is underlain by shale.

Test borings in the refuse disposal area show that the total area is underlain by shale and that the valley is underlain by a shale bowl. In the bottom of the valley the shale is immediately overlain by water bearing sand and gravel which is variable in thickness. The sand and gravel was overlain by silty and sandy loams. The shale is exposed on the walls of the valley and is weathered to variable depths.

The sub-surface investigations concluded that the Blue Gate Shale is continuous within the refuse and clear water pond areas as well as the plant area and should provide protection to the underlying Ferron Sandstone. The indicated degree of protection is further supported by the low permeability of the shale shown on Figure 3, Appendix C of the DRP.