

orig mine file  
cc S. Himmer  
R. Daniels  
file



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

a Subsidiary of United States Steel Corporation

WESTERN DISTRICT

P.O. BOX AE  
PAONIA, COLORADO 81428  
303/527-4816

February 12, 1985

Dianne R. Nielson  
Director  
Department of Natural Resources  
Division of Oil, Gas & Mining  
355 West North Temple  
3 Triad Center  
Salt Lake City, Utah 84180-1203

RECEIVED

FEB 19 1985

DIVISION OF OIL  
GAS & MINING

Re: Wellington Coal Cleaning Plant  
ACT/007/012 #2  
Stipulations to Permit

Dear Dianne:

I am enclosing the required information to answer stipulations to the Wellington Permit approval.

Stipulation 817.22 - (1) - TLP

Additional soil samples have been taken and analyzed. The results for OM and EC are attached. They indicate a much lower value for OM and a higher value for EC than had been previously reported.

Stipulation 817.22 - (2) - TLP

The stipulation refers to mixing of the borrowed topsoil at the time of final reclamation. Preliminary sampling of the topsoil borrow area indicated high percentages of clay in some of the samples (see soil samples 7A, 8A, 8B and 11WP). The clay soils could require mixing with soils that contain less clay to insure greater chance of revegetation success at the time of final reclamation.

After reviewing results from previous soil analyses and on-site field inspections of the topsoil borrow area by representatives of U.S. Steel (Dr. P. D. Collins, V. R. Watts, B. A. Filas) and the Division of Oil, Gas and Mining (T. Portle, L. Kunzler), it is believed that the clay textured soils are contained in a relatively small proportion of the borrow area. This area is located near soil sample locations 8 and 11WP. However, to more adequately outline the parameters of the clay soils, more soil sampling will be conducted.

### Soil Sampling Techniques

Soil sampling to ascertain the extent and trends of the topsoil will be conducted at the time of reclamation (prior to use). A grid system will be implemented and sample locations placed regularly to identify textural trends. A total of 9-12 sample locations will be placed on the grid. These soil samples will be taken at each sample location at 0-6, 6-18 and 18-33 inch depths. Soil texture analyses will be run and reported on the soil samples.

When soil sampling and analyses are complete, approximate trends, calculations will be made on total volumes of clay soils for proper mixing at the time of final reclamation.

### Soil Mixing Techniques

As mentioned above, the proportion of clay soils to nonclay soils is expected to be relatively small. At the time of final reclamation the clay soils will be marked appropriately as to be identified by the heavy equipment operators. This will enable proper mixing of the soil types for final seedbed preparations. To begin, volumes and proportions will have been adequately calculated to insure proper results from mixing of the soil types. Mixing techniques will insure at least "fair" suitability levels of the growing media are obtained. The clay soils will be transported first followed by appropriated volumes of the more desirable borrowed topsoil. This method should allow flexibility in the transportation techniques. Clay soils would be transported in alternate loads or all at once depending on practicality during the final reclamation operation. An attempt will not be made however, to deposit a given depth of the clay soils over the entire area to be revegetated. The clay soils will be deposited as it is practical. Volumes per given area is, of course, dependant on the ratio of clay vs. nonclay soils that will be ascertained from the described soil sampling procedures.

Following distribution of the clay soils that are overlain with nonclay soils, the areas will be disked (or otherwise tilled) to adequately mix the two soil types. This should allow conditions for adequate seedbed growing media. Subsequent reclamation techniques are somewhat dependant on results from the revegetation test plots that are presently being implemented.

### Stipulation 817.24 - (2) - TLP

A 1 foot deep layer of coarse slurry will be tested to prevent loss of soil into voids in the coarse refuse area. Refer also to the final test plot designs submitted in July 1984.

Stipulation 817.48 - (1) - DD

A chemical analysis of the coal seam being processed at the plant (from U.S. Steel Mining Co., Inc.'s Somerset Mine) is attached.

Stipulation 817.52 - (1) - DD

The surface and groundwater monitoring program is fully implemented.

Stipulation 817.71 - .74 - (1) - DD

No response required.

Stipulation 817.99 - (1) - SL

No response required.

Stipulation 817.103 - (1) TLP

No response required.

Sincerely,



Glenn H. Sides  
General Superintendent

cc L. King  
V. R. Watts  
B. A. Filas  
B. L. Kirkwood  
E. C. File

GS/tl

Wellington Coal Cleaning Plant

Soil Samples

<u>Sample</u>	<u>OM</u>	<u>EC</u>
3A	2.24	19.00
4A	1.33	17.60
5A	1.59	18.00
5B	1.29	15.50
5C	1.32	10.00
6A	2.07	1.37
6B	1.35	4.70
6C	1.59	7.00
6D	1.64	7.20
7A	2.61	2.68
7B	1.31	1.57
7C	0.91	2.50
8A	2.52	1.14
8B	1.86	3.20
8C	1.22	4.40
9A	1.97	8.20
9B	0.85	14.20
9C	0.83	17.50
10A	0.88	15.70
10B	0.63	21.00
10C	0.71	15.40
10D	0.74	18.40

EXHIBIT II A

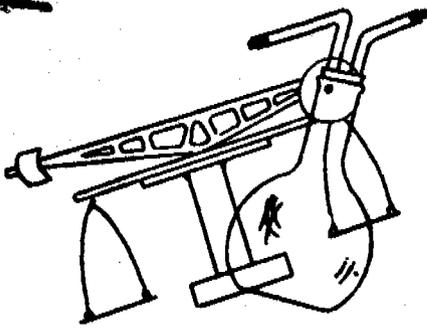
REQUIRED VOLUME OF TOPSOIL

<u>Location</u>	<u>Area (Acres)</u>	<u>Depth (ft.)</u>	<u>Volume (CY)</u>
Coarse Refuse Pile	19.3	1.0	31,000
Refuse Pond Area	235.3	0.5	190,000
Clear Water Pond	24.4	0.25	10,000
Misc. Areas East of Price River	7.2	0.25	3,000
Main Plant & Misc. Areas	113.9	0.25	45,000
Topsoil Borrow Area	68.9	--	--
Total	469		279,000

AVAILABLE VOLUME OF TOPSOIL

<u>Location and Source</u>	<u>Volume (CY)</u>
<u>Existing Storage Piles</u>	
West of Upper Refuse Pond (Sauerman)	500
North of Refuse Disposal Area (Topsoil and Subsoil)	6,000
Total	6,500
<u>Future Storage Piles</u>	
Main Plant Area - Extend Coarse Refuse Pile (SN)	7,400
Main Plant Area - Extend Coarse Refuse Pile (BuB2)	21,700
West of Upper Refuse Pond - Extend Upper Refuse Pond	10,000
Total	39,100
Total Available at Reclamation	45,500
Amount Required from Topsoil Borrow Area	233,500

Rev. 2-11-85



# Ford Chemical

**LABORATORY, INC.**  
*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 486-8761

DATE: 01/22/85

**CERTIFICATE OF ANALYSIS**

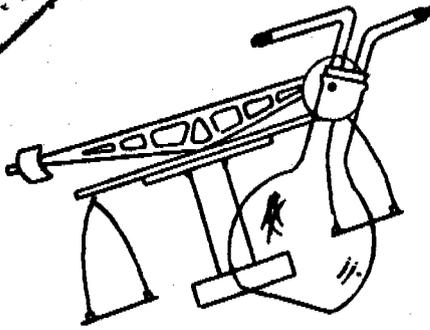
U.S. STEEL CORP.  
P.O. BOX AE  
PAONIA, CO  
V.R. WATTS 81428

85-005027

SAMPLE: COMPOSITE COAL SAMPLE FROM WELLINGTON COAL CLEANING PLANT  
COLLECTED 12-6/12-13-84 RECEIVED 12-24-84 FOR ANALYSIS  
UNDER P.O. 599-70550-217.

**RESULTS**

Acidity as CaCO <sub>3</sub> PPM	<.10
Alkalinity as CaCO <sub>3</sub> PPM	11,400
Aluminum as Al PPM SM303C	66.000
Arsenic as As Tot. PPM SM304	.027
Barium as Ba (Tot) PPM SM303C	5.60
Boron as B PPM	2.160
Cadmium as Cd Tot.PPM SM304	.020
Chromium as Cr Tot.PPM SM303A	<.001
Conductivity umhos/cm SM205	410
Copper as Cu (Tot) PPM SMS03	.002
Iron as Fe (Tot) PPM SM303A	1.90
Lead,Pb(Tot) PPM SM303A	1.158
Manganese Mn Tot.PPM SM303A	.20



# Ford Chemical

LABORATORY, INC.  
*Bacteriological and Chemical Analysis*

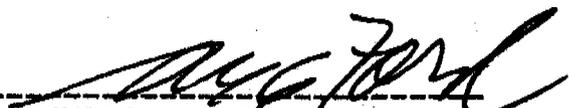
40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 466-8761

PAGE: 2

CERTIFICATE OF ANALYSIS  
85-005027

## RESULTS

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Marcasite %	.01
Mercury as Hg PPM SM320A	<.0002
Molybdenum as Mo PPM SM303C	.05
Nickel as Ni (Tot) PPM SM303A	.10
Organic Sulfur % ASTM D2492	.30
Pyritic Sulfur %	.130
Selenium as Se Tot PPM SM304	<.001
Total Combustable Solids %	85.3
Total Dis. Solids mg/l SM209B	268
Zinc as Zn (Tot) PPM SM303A	.436
pH Units SM423	9.50

  
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FORD CHEMICAL LABORATORY, INC.