

0019

Document Information Form

Mine Number: 4/007/022

File Name: Incoming

To: DOGM

From:

Person N/A

Company N/A

Date Sent: April 18, 1983

Explanation:

WESTERN EXTENSION OF REFUSE PILE

cc:

File in: CI 007/022, 1983, Incoming

Refer to:

- Confidential
- Shelf
- Expandable

Date _____ For additional information

ACT/001/022
A3

WESTERN EXTENSION OF REFUSE PILE

This area is shown on the attached map.

The soils in this area were sampled in 1980, along with the rest of CV Spur (see attached soils map). Based on this survey and onsite investigations, approximately 8000 cubic yards of soil were stripped from this area in 1981 and stockpiled in the previously approved storage sites. The entire stripping operation was supervised by the Beaver Creek Coal Company Environmental Coordinator.

The stripping of this area was performed to allow for expansion of the main refuse disposal area. This has since been expanded and is constructed and maintained in compliance with MSHA regulations as well as with DOGM regulations.

The methods of construction and maintenance are described on the following attached sheets, along with a stability analysis from OSM and approval letters from MSHA. A map is also enclosed, showing the ultimate configuration of the refuse pile.

Site inspections (817.82) have been performed as described in the attached write-up on Coal Processing Waste Disposal. This section will also demonstrate compliance with Section 817.85(c). Contemporaneous reclamation is also addressed under the attached section.

RECEIVED

APR 18 1983

**DIVISION OF
OIL, GAS & MINING**

File in:

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- Shelf
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Refer to Record No 0019 Date 4-18-83

In C/001/022, 1983 Incoming

For additional information

Coal Processing Waste Disposal

The coal processing waste disposal sites are designed and constructed to meet all requirements of UMC 817.81-817.85. Plate 3-3, Refuse Disposal Plan, shows the planned locations and cross-sections of refuse disposal areas #1, #2, and #3.

Coal processing waste at CV Spur is truck hauled from the preparation plant to the designated disposal site within the permit area. The design, construction and maintenance of the waste bank is under the supervision of a registered professional engineer.

The coal processing waste is the reject from the washing cycle used to clean and upgrade the coal from the Beaver Creek Coal Company mines in the Carbon-Emery County area. Coal is presently washed from the Gordon Creek #2 Mine (Castle Gate "A" Seam), Gordon Creek #3 Mine (Hiawatha Seam), and Huntington Canyon #4 Mine (Blind Canyon Seam). All of the seams producing coal for this plant are low-sulfur (0.5% to 0.8%). The reject is also low-sulfur, non-acid, and non-toxic. The attached typical analyses show the quality of the coal and the refuse product. 12/11/80

Site Inspection

OK
The refuse banks will be inspected by a qualified registered engineer at least quarterly; this will continue until the bank has been graded, covered, and reseeded. Inspections will include observations of any potential safety hazards, to assure that organic material and topsoil is removed before deposition and that construction and maintenance are being performed in accordance with the design plan.

If such inspection discloses a potential hazard, the inspector will immediately notify the regulatory authority of the hazard and emergency procedures to be implemented.

Copies of the inspection findings will be maintained and available for review.

Water Control Measures

A subdrainage system is employed upslope from the refuse disposal area. This system consists of a backfilled trench containing an 8-inch diameter perforated pipe surrounded by a clean 2-inch drain rock filter, covered with an impervious plastic. The intercepted groundwater from this trench (if any) will flow into a buried 10-inch solid pipe and discharge into the buried 25,000-gallon sump at the northeast corner of the property. The water from this sump is recirculated into the plant washing system. It has been installed upslope from this drain system, and since installation, neither the well nor the drain have shown any presence of groundwater in this area.

The surface drainage from the refuse pile is collected into a collection pond downslope. The overflow (if any) from this pond is conveyed through an additional collection ditch to a final filtering pond, cleaned, dis-

charged into the same underground sump, and recirculated through the plant as wash water. Slope protection is provided at the face of the refuse bank through the use of terracing. Upon completion, the bank will be graded, covered with a total of two feet of suitable material, and revegetated. All earthlined collection and diversion ditches will be *from where?* revegetated upon completion of construction.

Protection of the hydrology is accomplished through the use of sedimentation and filtering ponds and a system designed for no discharge from the permit area within a ten-year, 24-hour precipitation event.

Construction Requirements

The following is a general refuse disposal procedure employed at the site:

Preparation

1. Remove vegetation and suitable topsoil and place in compacted lifts of one foot or less on designed storage area.
2. Remove lower soil to a depth of two to four feet as ground conditions allow. This material is also to be placed in compacted lifts of twelve inches or less in a designated storage area.

Dumping

1. Refuse should be dumped on the extreme perimeter of the prepared area. Truckloads dumped should have three to five feet clearance from previous loads to allow spreading. Refuse will not be dumped beyond the perimeter or upon any unprepared area.
2. Continue dumping around perimeter until filled:
 - a. If using more than one area, begin dumping back at original point or as near as possible to this point.

Spreading and Compaction

1. Refuse piles should be knocked down and spread as soon as practical, preferably at least every other day. Spread the refuse as thinly as possible to allow for more efficient drying *up what?*
2. Compaction should take place during spreading operation if possible. If refuse is too wet to compact, allow for air-drying and then proceed. Compact in layers not to exceed 24 inches, starting at the perimeter and working out. This will allow for the building of the height of the pile in a series of stable lifts. Compaction will be to 90% of the maximum dry density. ✓

Burning

Proper compaction and maintenance of the waste bank should prevent any combustion from occurring; however, in the event of a fire, the following plan will be followed:

The plant supervisor will be notified immediately. The operations manager or chief engineer will be notified secondly.

The plant supervisor will examine the fire area and determine its severity. He will then confer with the operations manager or chief engineer to determine the extinguishing method to be employed. One of the following two methods will be used, depending upon the extent of the fire:

1. Small area of heat or fire: With a small area, it will be best to smother the fire by hauling incombustible earth material only from a previously soil-stripped zone and spreading and compacting the borrow over the burning area to eliminate the air supply.
2. Large area of heat or fire: With an area greater than 100 feet x 100 feet, it will be necessary to begin removal of the burning material. The removed material will be spread in thin layers onto a soil-stripped area for extinguishing. This area will be within that proposed for refuse disposal and pre-stripped as per the plan. Water will be employed only if the spreading material is not sufficient to prevent further burning. Once a fire is extinguished, a layer of incombustible material at least eighteen inches thick will be placed over the burned material and compacted before any further waste deposition takes place over it.

Only the plant supervisor and operators or others designated by him will be allowed to participate in fire extinguishing procedures. All authorized persons will be familiar with the above techniques prior to working around a fire, and adequate safety measures will be employed to ensure the safety of the fire fighters and the public in general.

Slope Stability

The Office of Surface Mining has completed a stability analyses using the Slope IV computer for worse case conditions at the CV Spur which indicates a static safety factor of 1.98 (OSM Review Document, CV Spur Application, May 1981). MSHA has reviewed processing waste disposal design and construction specifications and determined that the proposed piles present no safety hazard (see attached).

COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES, 228 NORTH LA SALLE STREET, CHICAGO, ILLINOIS 60601 AREA CODE 312 726-8434

WESTERN DIVISION MANAGER
LLOYD W. TAYLOR, JR.



PLEASE ADDRESS ALL CORRESPONDENCE TO:
139 SOUTH MAIN, HELPER, UTAH 84526
OFFICE TEL. (801) 472-2537

▶ BEAVER CREEK COAL CO.
P.O. Box AU
Price, Utah 84501

Mar. 3, 1980

Sample identification
by Beaver Creek Coal Co.
Refuse Bin

Kind of sample
reported to us Coal

Sample taken at C.V. Spur

Sample taken by Beaver Creek Coal Co.

Date sampled 2-12-80

Date received 2-12-80

Analysis report no. 57-3468 page 2

<u>MINERAL ANALYSIS OF ASH</u>	<u>Percent Weight Ignited Basis</u>
Silica, SiO ₂	66.95
Alumina, Al ₂ O ₃	18.82
Titania, TiO ₂	0.90
Ferric oxide, Fe ₂ O ₃	3.83
Lime, CaO	1.26
Magnesia, MgO	1.26
Potassium oxide, K ₂ O	2.65
Sodium oxide, Na ₂ O	0.18
Sulfur trioxide, SO ₃	0.82
Phos. pentoxide, P ₂ O ₅	0.25
Strontium Oxide, SrO	0.00
Barium Oxide, BaO	0.08
Manganese Oxide, Mn ₂ O ₄	0.12
Undetermined	0.00
	<u>97.12</u>

Alkalies as Na₂O, Dry Coal Basis = 1.34
Silica Value = 91.34
Base: Acid Ratio = 0.11

Fouling Index = <0.2
Slagging Index = <0.6

ESTIMATED VISCOSITY at critical viscosity
Temperature of XXXX °F = XXXX Poises
T₂₀₀ Temperature = 2900 °F

JB/ep

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.
Jack Blair

Jack Blair
Manager, Helper Laboratory



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COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 228 NORTH LA SALLE STREET, CHICAGO, ILLINOIS 60601 AREA CODE 312 726-2434

WESTERN DIVISION MANAGER
LLOYD W. TAYLOR, JR.



PLEASE ADDRESS ALL CORRESPONDENCE TO
139 SOUTH MAIN, HELPER, UTAH 84526
OFFICE TEL. (801) 472-3537

▶ BEAVER CREEK COAL CO.
P.O. Box AU
Price, Utah 84501

Mar. 3, 1980

Sample identification
by
Beaver Creek Coal Co.
Refuse Elevator-Coarse

Kind of sample reported to us Coal
Sample taken at C.V. Spur
Sample taken by Beaver Creek Coal Co.
Date sampled 12-04-79
Date received 12-05-79

- Analysis report no. 57-3117 page 2

MINERAL ANALYSIS OF ASH

Percent Weight Ignited Basis

Silica, SiO ₂	72.82
Alumina, Al ₂ O ₃	17.11
Titania, TiO ₂	0.77
Ferric oxide, Fe ₂ O ₃	2.54
Lime, CaO	1.33
Magnesia, MgO	1.27
Potassium oxide, K ₂ O	2.46
Sodium oxide, Na ₂ O	0.10
Sulfur trioxide, SO ₃	0.48
Phos. pentoxide, P ₂ O ₅	0.16
Strontium Oxide, SrO	0.00
Barium Oxide, BaO	0.04
Manganese Oxide, Mn ₂ O ₃	0.01
Undetermined	0.00
	<u>99.09</u>

Alkalies as Na₂O, Dry Coal Basis = 1.38
Silica Value = 93.41
Base: Acid Ratio = 0.08

Fouling Index = < 0.2
Slagging Index = < 0.6

ESTIMATED VISCOSITY at critical viscosity
Temperature of XXXX °F = XXXX Poises
T₃₀₀ Temperature = 2900 °F

JB/gp

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.
Jack Blair,

Jack Blair
Manager, Helper Laboratory

44-42 -

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Chart No. Memo



Reply to
139 South Main
Helper, Utah 84526

Phone: 801-472-3537

March 25, 1980

Mr. Herman Beckman
BEAVER CREEK COAL CO.
P. O. Box AU
Price, Utah 84501

ANALYTICAL REPORT

Acidity and pH were determined on a 1:1 w/v water extract prepared according to the procedures of U.S.D.A. Agriculture Handbook No. 60.

Separate portions of the sample were extracted following the procedures of the U.S. EPA as outlined in the Federal Register, Part IV, December 18, 1978. The extracts were then analyzed for barium, cadmium, chromium, lead, and silver by flame atomic absorption, for arsenic and selenium by hydride generation atomic absorption, and for mercury by cold vapor flameless atomic absorption.

The results of these analyses are presented in Table No. 1 and are reported in mg/l unless otherwise indicated.

If you have any questions concerning these analyses, please call.

Jack Blair, Manager
Helper Laboratory



COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 228 NORTH LA SALLE STREET, CHICAGO, ILLINOIS 60601 AREA CODE 312 726-8434

WESTERN DIVISION MANAGER
LLOYD W. TAYLOR, JR.



PLEASE ADDRESS ALL CORRESPONDENCE TO:
139 SOUTH MAIN, HELPER, UTAH 84526
OFFICE TEL. (801) 472-3537

BEAVER CREEK COAL CO.
P. O. Box AU
Price, Utah 84501

Mar. 25, 1980

Sample identification
by Beaver Creek Coal Co.
Refuse Elevator-Coarse

Kind of sample reported to us Coal Refuse
Sample taken at C. V. Spur
Sample taken by Beaver Creek Coal Co.
Date sampled 12-04-79
Date received 12-05-79

Analysis report no. 57-3117 page 3

Table No. 1

<u>Parameter</u>	<u>Concentration in mg/l</u>
Acidity, as CaCO ₃	15
pH	7.8
Arsenic	≤0.003
Barium	0.32
Cadmium	≤0.003
Chromium	≤0.02
Lead	≤0.09
Mercury, ug/l	0.12
Selenium	≤0.004
Silver	≤0.005

JB/cp

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.
Jack Blair

Jack Blair
Manager, Helper Laboratory



Charter Member

COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 225 NORTH LA SALLE STREET, CHICAGO, ILLINOIS 60601 AREA CODE 312 726-8434

REGIONAL DIVISION MANAGER
LLOYD W. TAYLOR, JR.



PLEASE ADDRESS ALL CORRESPONDENCE TO:
139 SOUTH MAIN, HELPER, UTAH 84526
OFFICE TEL. (801) 472-3537

BEAVER CREEK COAL CO.
P. O. Box AU
Price, Utah 84501

Mar. 25, 1980

Kind of sample reported to us Refuse
Sample taken at XXXX
Sample taken by Beaver Creek Coal Co.
Date sampled XXXX
Date received 12-14-79

Sample identification
by
Beaver Creek Coal Co.
Peterson Refuse
(filter cake)

Analysis report no. 57-3180 page 3

Table No. 1

<u>Parameter</u>	<u>Concentration in mg/l</u>
Acidity, as CaCO ₃	10
pH	7.8
Arsenic	≤0.003
Barium	0.25
Cadmium	≤0.003
Chromium	≤0.02
Lead	≤0.09
Mercury, ug/l	≤0.03
Selenium	≤0.004
Silver	≤0.005

05/80

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

James Blair
James Blair

Manager, Helper Laboratory



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4-45

Charter Member

COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 228 NORTH LA SALLE STREET, CHICAGO, ILLINOIS 60601 AREA CODE 312 726-8434

WESTERN DIVISION MANAGER
LLOYD W. TAYLOR, JR.



PLEASE ADDRESS ALL CORRESPONDENCE TO:
139 SOUTH MAIN, HELPER, UTAH 84526
OFFICE TEL. (801) 472-3537

BEAVER CREEK COAL CO.
P.O. Box AU
Price, Utah 84501

Mar. 25, 1980

Sample identification
by
Beaver Creek Coal Co.
Refuse Bin

Kind of sample reported to us Refuse
Sample taken at C. V. Spur
Sample taken by Beaver Creek Coal Co.
Date sampled 2-12-80
Date received 2-12-80

Analysis report no. 57-3468 page 3

Table No. 1

<u>Parameter</u>	<u>Concentration in mg/l</u>
Acidity, as CaCO ₃	10
pH	7.8
Arsenic	≤0.003
Barium	0.20
Cadmium	≤0.003
Chromium	≤0.02
Lead	≤0.09
Mercury, ug/l	≤0.03
Selenium	≤0.004
Silver	≤0.005

JB/cp

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.
Jack Blair,

Jack Blair
Manager, Helper Laboratory



COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 228 NORTH LA SALLE STREET, CHICAGO, ILLINOIS 60601 AREA CODE 312 726-8434

WESTERN DIVISION MANAGER
LLOYD W. TAYLOR, JR.



PLEASE ADDRESS ALL CORRESPONDENCE TO:
139 SOUTH MAIN, HELPER, UTAH 84526
OFFICE TEL. (201) 472-3537

Dec. 12, 1979

SWISHER COAL CO.
P.O. Box AU
Price, Utah 84501

Sample identification
by Swisher Coal Co.
Refuse Elevator-Ccarse

Kind of sample reported to us Coal Refuse
Sample taken at C.V. Spur
Sample taken by Swisher Coal Co.
Date sampled 12-04-79
Date received 12-05-79

Analysis report no. 57-3117

SHORT PROXIMATE ANALYSIS

	<u>As Received</u>	<u>Dry Basis</u>
% Moisture	8.35	XXXX
% Ash	75.57	82.46
Btu/lb.	1185	1293
% Sulfur	0.47	0.51

FUSION TEMPERATURE OF ASH

	<u>Reducing</u>	<u>Oxidizing</u>
Initial Deformation	XXXX of	XXXX of
Softening (H=W)	XXXX of	XXXX of
Softening (H=1/2W)	XXXX of	XXXX of
Fluid	XXXX of	XXXX of

H = Cone Height
W = Cone Width

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Lloyd W. Taylor, Jr.
Manager, Helper Laboratory



Table 1

Strength Parameters of Waste and Foundation Materials

80/12/19. 11.11.36.
PROGRAM SLPOUT

1	2	3	4	5	6	7	8	
1234567890123456789012345678901234567890123456789012345678901234567890								
HEAD21112-19-80	5	WORST CASE CONDITION BEAVER CREEK COAL CO					112 11 1	
GRID 0								
0.01280. 50.0	5 149. 50.0	5 0.0	0.0	10 135. 40.	0.00.000	0.00	0.0	
GEOM 2								
0.1270.1445.2300.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0	
100. 160. 100. 100.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.		
0.2300. 0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0	
100. 100. 0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.		
SOIL 2								
115.00	100.00	25.00	0.00	COAL WASTE WORST CASE			10	
145.00	500.00	20.00	0.00	MANCOS SHALE WORST CASE			20	
POR4 2 WORST CASE PORE PRESSURE								
0.1140.1445.2300.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0	
100. 120. 100. 100.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.		
0.1140.1445.2300.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0	
100. 120. 100. 100.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.		
CALC 0								
1	2	3	4	5	6	7	8	
1234567890123456789012345678901234567890123456789012345678901234567890								

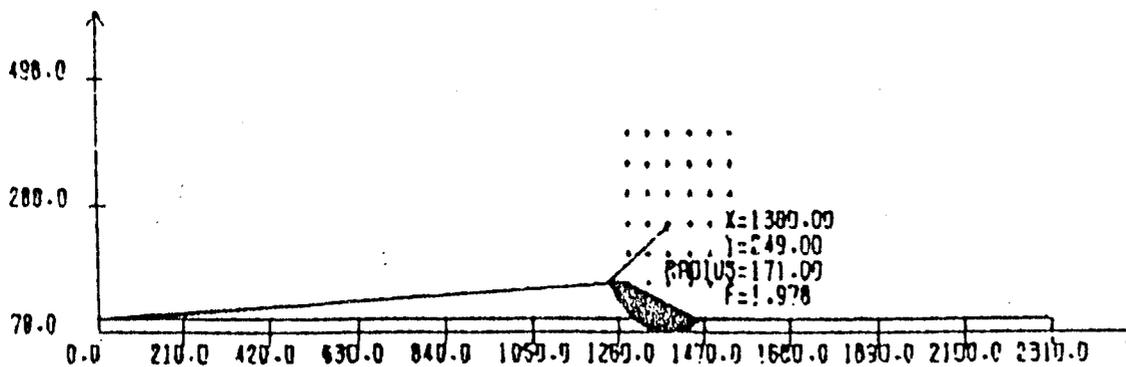
For definition of key words and data input information, refer to Slope II Computer Program User's Manual S-10 available in the Earth Sciences and Geotechnical Branch, OSM, Region V.

DATE: 12-19-00 RUN NUMBER: 5 PROJECT: WORST CASE CONDITION BEAVER CREEK COAL CO

SIMPLIFIED BISHOP'S METHOD

Figure - 1
OSM Stability Analysis
Processing Waste Pile, C.V. Spur

- ① UNIT WEIGHT = 115.00 PCF
COHESION = 100.00 PSF
FRICTION ANGLE = 25.00 DEGREES
- ② UNIT WEIGHT = 145.00 PCF
COHESION = 500.00 PSF
FRICTION ANGLE = 20.00 DEGREES



1 INCH = 210.0 FEET

Figure 3-3



March 19, 1981

Dan W. Guy, P.E.
Chief Engineer
Beaver Creek Coal Company
P.O. Box A.U.
Price, UT 84501

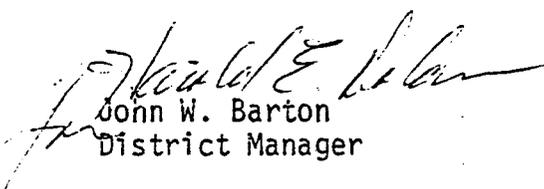
Re: C.V. Spur Prep Facility, ID No. 42-01444
Site ID No. 1211-UT-9-0033
Refuse Pile Report

Dear Mr. Guy:

The refuse pile report submitted March 5, 1981, for the subject site has been reviewed by this office and will be maintained on file.

No further information need be submitted to this office regarding this site unless the site is determined to present a hazard by the District Manager, or at such time the site is to be abandoned.

Sincerely,


John W. Barton
District Manager



*Figure
3-A*

March 2, 1981

Dan W. Guy, P.E.
Chief Engineer
Beaver Creek Coal Company
P.O. Box AU
Price, UT 84501

Re: C. V. Spur Prep Facility, I.D. No. 42-01444
Site I.D. No. 1211-UT-9-0034
Refuse Pile Report

Dear Mr. Guy:

The refuse pile report submitted for the subject site has been reviewed by this office and will be maintained on file.

No further information need be submitted to this office regarding this site unless the site is determined to present a hazard by the District Manager, or at such time the site is to be abandoned.

Sincerely,


John W. Barton
District Manager

U.S. DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

Mailing Address:
P.O. Box 25367, DFC
Denver, Colorado 80225

Street Address:
730 Simms
Lakewood, Colorado



Coal Mine Safety and Health
District 9

October 2, 1979

Dan W. Guy, P. E.
Chief Engineer
Swisher Coal Company
P. O. Box A. U.
Price, Utah 84501

Re: C. V. Spur Preparation Facility
I. D. No. 42-01444
Temporary Refuse Fill Area No. 1, I. D. No. 1211-UT-9-0033
Refuse Dumping Site Area No. 2, I. D. No. 1211-UT-9-0034

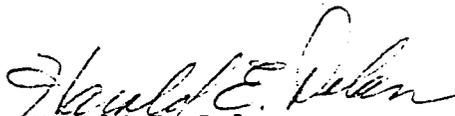
Dear Mr. Guy:

Your letter of June 28, 1979, notifying this office of two (2) new refuse sites at the C. V. Spur Preparation Facility, has been received and the following identification numbers assigned:

- (a) Temporary Refuse Fill Area No. 1, I. D. No. 1211-UT-9-0033
- (b) Refuse Dumping Site Area No. 2, I. D. No. 1211-UT-9-0034

Please note that Section 77.215-1, 30 CFR, requires an identification marker to be placed at each site, and Section 77.215-2, 30 CFR, requires a refuse pile report be submitted within 180 days of the date of this acknowledgement letter. Please refer to these two sections of Title 30 concerning the marker and report requirements.

Sincerely,


Harold E. Dolan
Supervisory Mining Engineer