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file ACT/007/006 #2

CYPRUS-PLATEAU MINING CORP.
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March 30, 1988

Mr. John Whitehead
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Re: **USFS PAP Update Request, DOGM Letter 11/16/87**

Dear Mr. Whitehead:

This submittal is to respond to your November 16, 1987 letter regarding items questioned by the Manti-LaSal National Forest Office by letter to the OSM dated March 10, 1987.

Item 2 - Letter to USFS from DOGM dated 11/2/87:

I contacted the SCS regarding a description for soil mapping unit JCG3 and was informed that this unit has been redesignated as JCG2. Furthermore, JCG2 has been renamed and a new profile description has been written.

Maps 38 and 39, sheets 5 and 6, have been revised to reflect this change. Three copies of each of these maps are attached, one each for the Division, OSM and the Forest Service. Since this is an insignificant revision, I don't believe any other PAP sets need to be updated.

Revised pages are also attached to revise Exhibit 19 to correspond to the new SCS soil name and profile description for JCG2. The revised pages replace PAP pages with the same page numbers. Three copies are included for DOGM, OSM and USFS.

Item 3 - Letter to USFS from DOGM dated 11/2/87:

PAP text page 784-26a has been revised to clarify reclamation of Corner Canyon. Since Table 68 is only a very brief summary of reclamation

activities, no changes are necessary. Table 69 is a summary of bond calculations, including building and structure removal costs from Exhibit 36. Removal of all fan components, including the fuel tank, is included in the calculations in Exhibit 36 and on Table 69; therefore, no revisions to this table and exhibit are necessary. Three copies of page 784-26a are attached.

If you have questions, please contact me.

Sincerely,

Ben Grimes
Sr. Environmental Engineer

BG:sd

Attachments

File: ENV 2-5-2-17
Chrono: BG-880306

insure a good, stable contact between the refuse and the cover material.

Test plots were established in 1982 on the east end of the refuse pile to evaluate various topsoil and subsoil depths for final reclamation of the refuse pile. So far, data is showing a favorable trend toward the adequacy of as little as 10 inches of soil for final reclamation. As discussed in response to UMC 784.13(b)(4), we have available enough topsoil and subsoil to provide the refuse pile with 17 inches of cover.

Since the test plots have not been established for an adequate period to prove conclusively that 10 or 17 inches of material are acceptable for final reclamation, PMC commits to reclamation according to the applicable regulations. However, PMC desires consideration of alternate reclamation methods when the final results of test plots are available. The Division's concerns with the potential for processing waste to become acidic or toxic-forming also dictates that PMC commits to reclamation of the refuse pile with a 4 foot cover as per UMC 817.85(d). When and if a lesser amount is proven to be adequate, this commitment may be modified.

Following ripping or scarifying, a suitable cover material will be spread on the pile at the approved depth. Revegetation will then be conducted as discussed in response to ICR UMC 784.13(b)(5).

The Corner Canyon Fan site will be reclaimed using the original excavated subsoil which is stored in the mine close to the site. Topsoil from this site is stockpiled adjacent to other topsoil and will be returned to the fan site. This topsoil is segregated and marked for use only at the fan site. The re-topsoiled area will be left in a rough condition to reduce erosion and to promote revegetation. Water bars or contour trenches may also be used to prevent erosion. Seeding will be done upon completion of re-topsoiling. All work will be done from within the mine; no new disturbance will be made to reclaim this site.

(4) A PLAN FOR REMOVAL, STORAGE, AND REDISTRIBUTION OF TOPSOIL, SUBSOIL, AND OTHER MATERIAL TO MEET THE REQUIREMENTS OF UMC 817.21-817.25;

RESPONSE:

As described in the response to UMC 783.22, mining activities have been conducted in the Wattis area since 1917. Due to this past history of mining, large areas were disturbed without topsoil salvaging. Areas that have been disturbed subsequent to the passage and implementation of the Surface Mining and Reclamation Control Act of 1977 and subsequent regulations and associated permits have had topsoil removed and stored. The first topsoil removal activities conducted at the Star Point Mines were associated with the construction of sedimentation ponds initiated

SCS MAP SYMBOLS

SYMBOL	NAME
JGH3	JA-JE - Decross complex, 30 to 90 percent slopes, severely eroded. JA - Stony fine sandy loam, 30 to 50 percent slopes, severely eroded.
UDG3	UD extremely fine stony sandy loam, 30 to 70 percent slopes, severely eroded.
JCG2	Pathead extremely bouldery fine sandy loam, 40 to 70 percent slopes.
FEC	Featherlegs stony loam, 3 to 8 percent slopes.
ABC	Harvey very fine sandy loam, high rainfall, 1 to 6 percent slopes.
PD	Pit, mine dumps.
BY	Badland - Rubble land complex.
UFF2	Doney shaley silty clay loam, 15 to 40 percent slopes, eroded.
INE2	Ildefonso - shingle complex, 8 to 30 percent slopes, eroded. Ildefonso - very stony loam, 8 to 30 percent slopes. Shingle extremely stony loam, 8 to 20 percent slopes, eroded.

JCG 2 MAPPING UNIT

PATHEAD EXTREMELY BOULDERY FINE SANDY LOAM, 40 TO 70 PERCENT SLOPES

The Pathead series consists of moderately deep, well drained, moderately permeable soils are on benches, ridges, canyon sideslopes and mountainslopes. These soils formed in colluvium and residuum derived dominantly from sandstone and shale. Slopes are 15 to 70 percent. Elevation is 5,900 to 9,000 feet. The average annual precipitation is 14 to 20 inches, and the mean annual air temperature is 38 to 45 degrees F.

These soils are loamy-skeletal, mixed (calcareous), frigid Typic Ustorthents.

Typical pedon of a Pathead extremely stony loam, in an area of Pathead-Curecanti family association, about 2 miles north and 4 miles west of Helper, about 1,100 feet north and 400 feet west of the southeast corner of Sec. 6, T. 13 S., R. 9 E.

A1--0 to 3 inches; brown (10YR 5/3) extremely stony loam, dark grayish brown (10YR 4/2) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; few very fine pores; 5 percent pebbles, 15 percent cobbles, 40 percent stones, and 5 percent boulders; moderately calcareous, carbonates are disseminated; strongly alkaline (pH 8.6); abrupt smooth boundary.

C1--3 to 14 inches; pale brown (10YR 6/3) very cobbly loam, brown (10YR 5/3) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, few fine and medium roots; many very fine pores; 20 percent pebbles and 5 percent cobbles; moderately calcareous, carbonates are disseminated; strongly alkaline (pH 8.8); clear smooth boundary.

C2--14 to 26 inches; pale brown (10YR 6/3) very cobbly loam, brown (10YR 5/3) moist; moderate medium subangular blocky structure; soft,

friable, slightly sticky and slightly plastic; common very fine, few fine roots; few very fine pores; 20 percent pebbles; 25 percent cobbles, and 5 percent stones; moderately calcareous, carbonates are disseminated; strongly alkaline (pH 8.8); clear smooth boundary.

R--26 inches; sandstone.

Bedrock is at a depth of 20 to 40 inches. The particle-size control section is 35 to 60 percent rock fragments.

A horizon: Value is 5 or 6 dry and 3 through 5 moist, and chroma is 2 or 3. Texture is gravelly loam, cobbly loam, extremely stony fine sandy loam, extremely stony loam, and extremely bouldery fine sandy loam. Reaction is moderately alkaline or strongly alkaline.

C horizons: Hue is 10YR or 2.5Y, value is 6 or 7 dry and 3 through 5 moist, and chroma is 2 through 4. Texture is very cobbly loam, extremely cobbly loam, and very stony fine sandy loam. Clay content is 18 to 27 percent. Carbonate equivalent is 11 to 28 percent. Reaction is moderately alkaline or strongly alkaline.

FEC MAPPING UNIT

FEATHERLEGS STONY LOAM, 3 TO 8 PERCENT SLOPES

This Featherlegs soil is very deep and well drained. It occurs on fan terraces at elevations of 6,400 to 7,500 feet. This soil formed in glacial outwash and alluvium derived mainly from sandstone and shale.

The average annual precipitation is 12 to 14 inches. Mean annual air temperature of 45- to 47-F, mean annual soil temperature is 47- to 49-F, and the average freeze-free season is 100 to 120 days. This soil occurs in the vicinity of Wattis Junction and the town of Hiawatha. Slopes are 3 to 8 percent and occur on each aspects. They are medium in length and concave-convex in shape.

Present vegetation is dominantly pinyon, juniper, Indian ricegrass, big sagebrush, and yellowbrush.

Included in mapping are small areas of LH loam, 3 to 8 percent slopes, Ildefonso very stony loam, 3 to 8 percent slopes.

In a representative profile, the surface layer is brown stony loam about 7 inches thick. The subsoil is brown cobbly loam or cobbly clay loam about 10 inches thick. The substratum is very pale brown cobbly to extremely cobbly loam to a depth of 60 inches or more. A horizon of carbonate accumulation occurs at a depth of about 17 inches.