

*Called Ben Grimes 12/22
Told him wait*

SALT LAKE AREA OFFICE
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Midvale, Utah 84047
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*process
until receive
12/22
pulls cover letter
from permittee.
December 19, 1997
Left voice mail (yfl)*

Joseph C. Helfrich, Permit Supervisor
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801

Re: Thickener Pond Redesign - Preparation Plant, Cyprus Plateau Mining Corp., Willow Creek Mine. ACT/007/038-97J. File #2, Carbon County, Utah.

*Copy Cover Letter to
File #2
Put cover letter
in file.
Waiting to process*

Dear Mr. Helfrich:

In a December 1, 1997 letter from you to Mr. Ben Grimes, of Cyprus Plateau Mining Corp., Cyprus Plateau was directed to address concerns itemized in an attached memo pertaining to the proposed Thickener Pond Redesign - Preparation Plant. In behalf of Cyprus Plateau, we submit the following responses to the comments. Please note that the issue or comment is first listed, followed by a response to the comment.

Issue 1

R645-301-533.100 states that the Permittee will show that all MSHA ponds will have a static safety factor of 1.5 and a seismic safety factor of 1.2. Non-MSHA ponds must have a static safety factor of 1.3. The Permittee failed to comply with the requirements of R645-301-533.100 by:

Not stating the volume of each pond and the maximum height of the embankments. That information is needed to determine if the pond is subject to MSHA requirements (total volume of 20 acre-feet or more, have a high of 20 feet or more).

Response

The design capacity of the three ponds comprising the total treatment system are as follows:

POND	TOTAL DESIGN CAPACITY
Pond A	6.57 ac.ft
Pond B	2.22 ac.ft
Clearwater Pond	0.21 ac.ft

See attached stage-capacity curves for each pond.

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The ponds are principally incised, requiring embankment only to provide freeboard in Pond A near the southeast end of the Pond. The maximum height of this outside embankment is 2 feet, located at the south end of Pond A. Ponds A and B have a common, inside embankment which is 14 feet in height, however, failure of this embankment would simply create one treatment pond rather than two, and no lives or property would be impacted by a breach of this common embankment. Pond B and the Clearwater Pond have a similar common embankment. The bottom elevation of Pond A and Pond B is 6,116 feet, and the elevation of the top of the embankments surrounding the ponds is 6,130 feet. Therefore, on neither volume nor embankment height do these treatment ponds fall under the MSHA requirements.

Issue 2

(R645-301-533.100) Not showing that the pond's embankments meet or exceed the appropriate safety factors.

Response

See a "Geotechnical Investigation - Thickener Drain Pond" (August, 1997), attached, prepared by Applied Geotechnical Engineering Consultants, Inc. (AGEC) for information on submerged and unsubmerged slope stability analysis. The report states that both conditions (submerged and unsubmerged) have a safety factor of at least 1.5. The minimum safety factor required for a non-MSHA pond is 1.3, therefore the current pond design is in compliance with R645-301-533.100.

Issue 3

R645-301-533.300 states that the slopes will be stable under rapid drawdown conditions.

The Permittee did not address how the embankments will be protected from rapid drawdown.

Response

See attached addendum to the geotechnical report by Applied Geotechnical Engineering Consultants, Inc. (AGEC). However, due to the incised nature of the ponds, rapid drawdown would not be considered a critical issue.

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Issue 4

Exhibit 3.4-4B shows the cross-sections for Pond A and Pond B. The Permittee shows the existing ground level on each cross-section. During an on-site technical inspection the Division saw that a pond exists in the area where the ponds will be constructed. The existing ground level shown on Exhibit 3.4-4b does not show the existing pond.

The Permittee must update Exhibit 3.4-4b so that it shows the existing topography.

Response

Attached is Revision 1 of Sheet 6 of 15, showing a cross-section of both the existing sediment surface and the bottom of the existing pond.

Issue 5

R645-301-533.700 states that the Permittee will supply the Division with a detailed design plan for each non-MSHA pond. The plan will include the operation and maintenance requirements. The Permittee's design plan was inadequate because it did not show:

Cross-sections for the Clearwater Pond.

Response

Cross-Section 4, (cut on Sheet 4 of 15) shown on Sheet 6 of 15, includes the Clearwater Pond. Due to the simple, uniform slopes of the Clearwater Pond, one cross-section has been deemed adequate for a design plan.

Issue 6

(R645-301-533.700) The cross-sections for Pond A and Pond B did not show the locations of the primary spillway, the secondary spillway and the emergency spillway.

Response

The locations of the Primary Spillways, the Secondary Spillway, and the Emergency Spillway are clearly identified on Sheet 4 of 15 of the design drawings. Further details for each spillway are provided on subsequent sheets. Both plan views and cross-sections of the Primary Spillways for Pond A and Pond B are found on Sheet 8 of 15. A plan view and cross-section of the Secondary Spillway is included on Sheet 9 of 15. A cross-section of the Emergency Spillway has not been included due to the fact that the plan view (Sheet 9 of 15) showing the Emergency Spillway cutoff wall and channel identifies

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any appropriate design and construction information. A cross-section would provide no additional necessary clarification needed for construction purposes.

Issue 7

(R645-301-533.700) The cross-sections do not adequately show the topography surrounding the ponds. At a minimum, the cross-sections should show the embankment plus five times the pond's maximum depth. That information is needed for slope stability studies.

Response

See attached Revision 1 of Sheet 6 of 15, showing extended cross-sections containing adjacent embankments and side-slopes.

Issue 8

(R645-301-533.700) The Permittee must state if the ponds will be inspected as one unit or if they will be inspected as individual units.

Response

The operating elevation of all three ponds is at or below the existing ground surface elevation of 6,128 feet. Potential embankment failure would therefore still allow for complete containment, minimizing any risk downstream to life or property. Due to the complete incisement of all pond design storage capacity, Cyprus Plateau proposes that the treatment ponds be inspected as one unit.

Issue 9

(R645-301-121.100) Not clearly stating if refuse and soil materials will both be placed in the stockpile area shown on Sheet No. 3 of 15. The drawing shows a disposal stockpile area for excess cut materials, with a note: refuse pile as well. Stockpiled cut materials and refuse materials must be stored separately. The Permittee must state what materials will be stored in the stockpile area.

Any material placed in a refuse pile will be considered refuse. Refuse materials must be reclaimed to the standards listed in R645-301-553.250. Those standards include a requirement to cover all refuse with at least 4 feet of suitable cover. Stockpiled soils do not have the minimum cover requirement.

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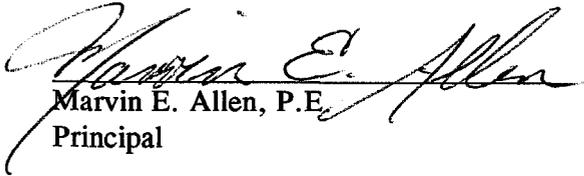
Response

Stockpiled cut materials shall include only excavated materials which are appropriate for potential use in embankment and pond construction, and shall be stored at the Disposal Stockpile Area shown on Sheet 3 of 15. Sheet 13 of 15 (see attached) further clarifies materials appropriate for storage in the stockpile area. Other materials excavated which are not appropriate for use in the new treatment pond construction, i.e., not meeting the criteria as set forth in the Contract Documents, shall be hauled and placed on the existing refuse pile, and will be subject to the approved reclamation plan.

If you have any further questions, please call.

Sincerely,

HANSEN, ALLEN & LUCE, INC.


Marvin E. Allen, P.E.
Principal