SOHIO WESTERN MINING COMPANY

P.O. BOX 25201, ALBUQUERQUE, NEW MEXICO 87125

TELEPHONE (505) 242-2762

URANIUM OPERATIONS

March 10, 1981

Mr. Steve E. Reynolds
State of New Mexico
State Engineer's Office
Bataan Memorial Building
Santa Fe, New Mexico 87503

Dear Mr. Reynolds:

Attached for your review is a stability analysis report by D'Appolonia for increasing the L-Bar dam height by one additional foot to 6,202. As we discussed with your staff in November, we would need approximately three feed of dam height increase before the remedial action program is completed. We are presently at the point of needing the second foot of increase and would like permission for this increase now. We are not trying to increase the dam height any more than absolutely necessary to keep the mill operational. This additional foot will provide us with a few more months of operation. We are diligently pursuing the drain installation work and anticipate construction to start by mid-April.

A. Kuhn states in the attached report that the one foot of increase will not produce instability under normal operating conditions and the increase is technically acceptable considering the progress on our remedial action program.

Sohio appreciates any consideration your office might give us in this matter to enable us to continue operating under the present reduced schedule until remedial action is complete.

Sincerely,

Sam Shaw, III
Vice President, Uranium Operations

SS/pbs

Attachment

cc: J. Bazemore
E. Maurer
A. Kuhn w/o attachment
J. Oliver
G. Stewart, NMEID

D'APPOLONIA
CONSULTING ENGINEERS, INC.

MAR 09 REC'D

March 6, 1981

Alan K. Kuhn, Ph.D., P.E.
PROJECT SUPERVISOR

Project No. NM80-740

Mr. Jerry Oliver
Chief Mining Engineer
L-Bar Uranium Operations
Sohio Western Mining Company
P. O. Box 25201
Albuquerque, NM 87125

Dam Stability
Crest Elevation 6202 Feet

Dear Mr. Oliver:

At your request we have performed analyses to assess the effects on stability of raising the tailings dam crest at L-Bar Uranium Operations from elevation 6201 feet to 6202 feet. The analyses were performed in the same manner as all our previous analyses. Soil parameters used in these analyses are those determined from the field and laboratory investigations of February, 1981, and summarized in our First Quarter Inspection Report, 1981, submitted on March 5, 1981. The pond level and phreatic surface used in this analysis were increased to correspond with the increase in crest elevation.

The analyses were performed for Section E-E' (Station 17+50), the same section used in previous analyses. The results are:

Failure Mode	Static Safety Factor Crest Elevation 6201 Feet	Static Safety Factor Crest Elevation 6202 Feet
1	5.11	5.10
2	5.05	4.72
3	4.25	4.15
4	1.69	1.66

The failure modes are identical to those described in our quarterly inspection reports.

Increasing the crest elevation by one foot to elevation 6202 feet results in a reduction of minimum static safety factor (Mode 4) of 0.03 at Section E-E', but the safety factor remains well above the required 1.5 value. The reduction in the minimum pseudo-static safety factor is about 0.02 (1.20 to 1.18), also above the required value of 1.0. The safety factor reduction for static loading with liquefaction is about

0.02, from 0.27 to 0.25; however, because the safety factor for this condition is already below 1.0, increasing the dam crest by one foot will not adversely affect stability.

According to the results of this analysis, raising the crest to elevation 6202 feet will not produce instability under normal operating conditions. We believe such an increase is technically acceptable, considering that the pipe drain system to mitigate the liquefaction potential will be installed in the near future.

If you have any questions regarding this matter, please contact me.

Very truly yours,

Alan K. Kuhn

AKK:mcs

ALAN K. KUHN
NEW MEXICO
6798
REGISTERED PROFESSIONAL ENGINEER