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September 22, 1983
Project 81907
File 2.0
Ref: 81907-28

Mr. Joseph Kane
NRR Project Officer
U. S. Nuclear Regulatory Commission
Division of Engineering, M/S P-214
Washington, D.C. 20555

Subject: Comment on Slope Layback during Underpinning

Re: Letter dated July 15, 1983 From Consumers
Power Co. to NRC Region III, Serial CSC-6792

Dear Mr. Kane:

This letter will confirm comments previously provided to you verbally concerning Item E on page 5 of the referenced letter.

Item E expresses the concern by Stone & Webster inspectors that the slope layback under the Unit 1 EPA was greater than intended in the design drawings. Consumers Power has indicated that the Resident Geotechnical Engineer may authorize changes necessitated by field conditions and that the changes were properly authorized.

In the notes of the June 27, 1983 meeting at the site, Bechtel indicated that the layback apparently was greater than originally planned but that no structural problem arises due to this change.

During the various audits in 1982, Mr. Reuben Samuels and the undersigned conveyed the opinions expressed below relative to material removal.

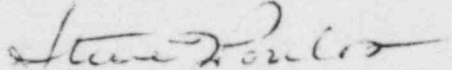
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The intent of any underpinning operation is to remove the minimum amount of material possible prior to supporting the structure in that vicinity. The reason for this general observation is that the movements and the consequent stresses induced in the structure to be underpinned will increase with the amount of material removed. Each time such movements occur there is an increased probability of cracking and a decreased probability that the stresses induced in critical locations during excavation will be relieved when the structure is resupported.

For the above reason, any field decision to remove more material prior to providing support should be made only if it is necessary and only after a careful check is made of the overall behavior of the system. Removal of material merely for field convenience was not the intent that was conveyed during the audits. In addition, it was stated during the audits that slope layback should not be used except near the very top (the last foot or less) of each drift, where it was unavoidable.

Sincerely yours,

GEOTECHNICAL ENGINEERS INC.



Steve J. Poulos
Principal

SJP:ms