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GLENN L. KOESTER
VICE PRESIDENT-OPERATIONS

October 26, 1979

Mr. Karl V. Seyfrit
Director, Region IV
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76012

Re: Docket No. STN 50-482
Subj: Wolf Creek Reactor Building
Base Mat

Dear Mr. Seyfrit:

In accordance with a commitment made to the NRC during our meeting on March 15, 1979, please find attached a copy of Portland Cement Association (PCA) Report dated September 24, 1979. This report contains the results of a field investigation program described in my letter to you dated February 28, 1979. The program involved a duplication of the basemat concrete batching and test cylinder preparation operations, except that rigid molds were used to cast cylinders in place of flexible molds; and, the newly cast cylinders were not temporarily stored in the field prior to being transported to the QC lab curing room. The test cylinders were capped by PCA using the same type compound utilized on the base mat cylinders, and then tested by PCA on their test machine. Results of this investigation show that:

- a) The mix design, materials, and batch plant will produce concrete exhibiting an average strength of 6096 psi at 90 days with a standard deviation of 286 psi. This is more than adequate to meet the technical specification requirement of 5000 psi;
- b) The computed coefficient of variation of 4.70 indicates that the batch plant and materials are capable of producing very uniform concrete with an excellent concrete control rating per ACI214.
- c) The empirically formulated correction factor for converting 2x2 inch bottom remnant cube strength to corresponding 6x12 inch cylinder strength is .85 for cylinders tested at 90 days and cubes broken at 110 days. This confirms that the

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Mr. Karl V. Seyfrit

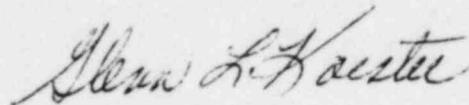
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.8 factor used in previous analyses was appropriate for the concrete in question.

Kansas Gas and Electric Company feels that the latest PCA results further support our contention that the basemat concrete is uniform and of high quality with an actual in-situ strength which exceeds 5000 psi. Also, since the investigation duplicated the mix design, materials and batching aspects of the basemat pour, we again submit that the erroneous low concrete strength results were attributable to inaccuracies in measuring the true strength.

Sincerely yours,



GLK:bb
Attach