

Docket File - 50-482

NRC PDR  
Local PDR  
NRR Reading  
LWR #3 File  
HDenton ECase  
WRussell  
DVassallo  
SVarga  
OParr  
ELicitra  
MRushbrook  
MGroff (NRR-2990) ←  
EHughes  
EMoore

Docket No: STN 50-482

Ms. Beth Matthew  
2355 Forestview Drive  
Wichita, Kansas 67223

Dear Ms. Matthew:

Your mailgram of June 27, 1979, to Mr. Harold Denton, concerning the concrete in the base mat at Wolf Creek, has been referred to me for a reply. In your mailgram, you state that further analysis of the test data from concrete at Wolf Creek is needed since the concrete is "getting weaker over a 90-day period". You also indicate that the concrete is sub-standard.

With regard to your statement about the base mat concrete getting weaker, we believe you are referring to the fact that for some of the 90-day tests performed on the concrete, the results indicated lower strengths than those obtained with the 28-day tests. In order to determine if the concrete was becoming weaker with time, the Kansas Gas & Electric Company (the lead applicant for the Wolf Creek plant) had a number of strength tests and petrographic analyses performed on the concrete samples originally tested at 28 days and 90 days. The applicant concluded that the results of these tests and analyses indicated no signs of inadequate mixing or adverse chemical reaction, or that the concrete was getting weaker with time.

At our request, an independent petrographic analysis was also performed on the concrete samples by the U.S. Army Corps of Engineers. The results of the analysis performed by the Corps of Engineers agreed with the applicant's results.

Additionally, the applicant performed a reanalysis of the base mat, at our request, to determine if the indicated strength of the concrete based on the 90-day test results would satisfy the design criteria specified in the Wolf Creek Preliminary Safety Analysis Report (PSAR). The applicant calculated this strength to be 4,460 pounds per square inch as compared to the 5,000 pounds per square inch value which was originally specified by the architect-engineer to meet the design criteria in the Wolf Creek PSAR. The applicant then performed a reanalysis of the base mat based on a concrete strength of 4,460 pounds per square inch to demonstrate that the design criteria in the PSAR were met.

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We have performed an evaluation of the Wolf Creek base mat, including the tests and analyses discussed above. The results of our evaluation were issued in a document, dated July 12, 1979. A copy of this document is enclosed for your information. As stated in the document, we conclude that the base mat concrete strength has not retrogressed, that the strength of the base mat meets the original design criteria in the Wolf Creek PSAR, and that the mat will withstand the specified design loads and loading combinations without impairment of its structural integrity or its safety function.

I am pleased to have had this opportunity to respond to the comments in your mailgram.

Sincerely,

Steven A. Varga, Acting Assistant Director  
for Light Water Reactors  
Division of Project Management

Enclosure:  
As stated

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DATE	8/30/79	8/30/79	8/30/79		