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January 4, 1984  
NRC/TMI 84-002

Docket No. 50-320

Mr. B. K. Kanga  
Director, TMI-2  
GPJ Nuclear  
P. O. Box 480  
Middletown, PA 17057

Dear Mr. Kanga:

Reference: Letter from B. K. Kanga to B. J. Snyder, 4410-83-L-0276,  
dated November 30, 1983.

In response to the above referenced letter, we have evaluated your proposed revision to the Fuel Pool "A" (FPA) Refurbishment Safety Evaluation Report (SER). The proposed revision deleted the prerequisite to conduct lift operations only after the tanks remaining in the fuel pool were empty. In the same letter you also proposed to modify the shield slab lift rigging by replacing a 24 inch turnbuckle with a 6 inch turnbuckle to obtain more clearance while lifting concrete shield slabs.

Based on additional data collected during decontamination of the fuel pool tanks, it is apparent that the existing safety evaluation envelopes the consequences of liquid releases from the tanks under postulated load drop accidents. Radiation surveys indicate that the upper four tanks are the most highly contaminated. Liquid samples taken from flush water in these tanks indicate that cesium contamination was less than .02 uCi/ml. This amount of activity in water with the relatively small volume released to the spent fuel pool following a load drop accident would not significantly increase radiation levels in the Fuel Handling Building. The area radiation increase would be well below the worse case conditions postulated in your previous safety evaluation. Likewise, the liquid released from the FPA tanks following a load drop accident would not significantly add to the increase in airborne radiation postulated in your analysis. The staff therefore concurs with your proposal to conduct lifting operations without first emptying water from the spent fuel pool tanks.

Your letter to revise the FPA SER also addressed a proposed change in the rigging for lifting the fuel pool shield slabs. In your evaluation you concluded, that since a 24 inch turnbuckle was replaced by a 6 inch turnbuckle of equal load rating, the change falls within the constraints of the FPA SER. Your evaluation overlooked the fact that the shorter turnbuckle causes the angle between the lifting slings to increase thereby increasing the load on

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the slings. We have independently measured the rigging components and analyzed the rigging geometry and associated forces. Based on our calculations we conclude that a maximum force of 13 1/2 tons could be exerted on a single member of the four point lift rig. The wire rope slings which makeup the rig have a load rating of 15 tons and are the lowest rated components in the lift chain. Based on our evaluation the lift can be performed safely, and therefore we concur with your proposed revision and continued refurbishment activities of the "A" Spent Fuel Pool.

Original signed by

Lake H. Barrett

Lake H. Barrett

Deputy Program Director

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