

DCD-016

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Docket No. 50-289

Mr. Marvin I. Lewis
6504 Bradford Terrace
Philadelphia, Pennsylvania 19149

Dear Mr. Lewis:

In your letter of October 25, 1982, you requested further explanation of my letter to you of August 9, 1982. Your previous correspondence to Mr. H. R. Denton raised some concerns with respect to the performance of the steam generators in the event of transients and/or accidents. One area which you addressed was the temperature difference (ΔT) developed between the tubes and tubesheet during an accident which might cause leakage and/or failure of the repaired joint. As you correctly point out, temperature differences of several hundred degrees between the tubes and tubesheet might cause slippage of the joint.

While the temperature difference between the tubes and the steam generator shell may reach a few hundred degrees during an accident such as a main steam line break, the tube to tubesheet ΔT will remain small due to the thin tubewall and tubesheet ligaments and heat transfer properties of tube and tubesheet materials. Preliminary information indicates that the maximum tube to tubesheet ΔT during the worst case postulated accident will be less than 30°F. Foster Wheeler, in the TMI-1 repair qualification program, evaluated the repaired joint with up to a 50°F ΔT and indicated that no effect was seen on the performance of the joint. We intend to verify this information as part of our ongoing review. Thank you for your interest.

Sincerely,

"ORIGINAL SIGNED BY:"

Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation

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