



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

September 24, 1979

MEMORANDUM FOR: A. Thadani, Task Manager, A-9

FROM: R. O. Meyer, Section Leader
Reactor Fuels Section,
Core Performance Branch, DSS

SUBJECT: SUBMITTAL OF INFORMATION REQUIRED FOR VERIFICATION OF
ADEQUACY OF ATWS ALTERNATIVE #3 FIX

Perusal of (a) your recent September 13 memoranda to Dr. Hanauer regarding summaries of meetings held with the various LWR vendors, along with (b) vendor communications, such as the September 13 letter from James H. Taylor (B&W) to Dr. Hanauer, prompt us to ask you to take whatever action is necessary to ensure that the vendors will submit adequate analyses of the estimated fuel failure (including PCI) for their respective worst-case scenarios. We are concerned that the aforementioned meeting summaries (NRC/CE meeting, NRC/BWR 3-Owners/GE meeting, and NRC/W-Owners meeting) do not mention fuel failure estimates at all. And, where fuel failure is mentioned in vendor responses (as in the B&W letter to Dr. Hanauer), it is in terms of estimates of the number of fuel pins experiencing DNB only.

As we have unswervingly reiterated both verbally and in numerous memoranda, we believe that there is a significant probability for PCI failure during power-increasing ATWS events. We, therefore, strongly urge you to ensure that the PWR vendors, in particular, are aware of the fact that (a) we expect them to provide estimates of the number of rods that would fail due to PCI during worst-case power-increasing ATWS events, and (b), if acceptable estimates are not provided, we will make the estimates ourselves, using the PCI model PROFIT. As we have indicated in previous ATWS staff positions, the BWR fuel failure analysis situation is in somewhat better shape, in the sense that we believe that the number of rods predicted to be in boiling transition will approximate the number that fail due to overheating and PCI combined.

Ralph O. Meyer
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