



March 2, 1994
JPN-94-012

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-137
Washington, D. C. 20555

Subject: James A. FitzPatrick Nuclear Power Plant
Docket No. 50 - 333
Updated Response to Bulletin 93-03
BWR Reactor Vessel Water Level Instrumentation Issues

- References:
1. NRC Bulletin 93-03 "Resolution of Issues Related to Reactor Vessel Water Level Instrumentation in BWRs," dated May 28, 1993.
 2. NYPA letter R. E. Beedle to NRC "Revised Response to Bulletin 93-03 BWR Reactor Vessel Water Level Instrumentation Issues," JPN-93-066 dated September 20, 1993.
 3. NYPA letter R. E. Beedle to NRC "Response to Bulletin 93-03 - BWR Reactor Vessel Water Level Instrumentation Issues," JPN-93-053 dated July 30, 1993.

Dear Sir:

Reference 1 requested notification to the NRC upon completion of the reactor vessel water level instrumentation modifications. The modification chosen by the Authority is described in Reference 2. This modification was installed, pre-operationally tested, and placed into service in December 1993.

Additional operational testing has been in progress since that time. Data collection and analysis is continuing using thermocouples installed on the condensing chambers. Temporary high speed recording instrumentation remains connected to the back-fill and reference leg systems. The testing program to demonstrate adequacy of the modification will not be complete until final operational tests are conducted during the plant cool-down and depressurization for the scheduled April, 1994 maintenance outage.

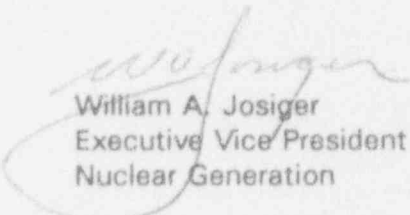
As installed, the back-fill modification may result in thermal stratification in the existing condensing chamber steam supply lines. A fatigue evaluation was performed in accordance with subsection NB, Section III of the ASME code. The tee junctions of the steam leg piping (from the two condensing chambers in each of the reference leg systems) have a calculated fatigue cycle life of 5.4 years at an assumed capacity factor of 80 percent. The Authority currently intends to reroute the condensing chamber steam piping prior to start-up from the 1994 refueling outage. The modified design will have a fatigue life exceeding the remaining life of the plant.

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The Authority's response (Reference 3), to Reference 1, item 1. (a) (2), described short term compensatory actions in Operations Department Standing Order (OSDO-32) "Shutdown Operation," as requiring cessation of forced cool-down operations and notification of management if level indication inaccuracies were observed. A subsequent revision to this procedure removed the requirement to cease cool down because it was determined to be unnecessarily conservative. The revision directs operators to declare systems associated with affected reference legs to be inoperable, and to frequently monitor diverse and unaffected level instrumentation. The cool-down will continue unless the shift supervisor concludes that the magnitude of the level error is so severe or widespread that confidence in the ability to determine water level is lost. If level cannot be determined with certainty, the operators are directed to enter Emergency Operating Procedure EOP-2 "Reactor Pressure Vessel Control," and take the actions directed by that procedure.

If you have any questions, please contact Mr. J. A. Gray, Jr. at 914-681-6089.

Very truly yours,



William A. Josiger
Executive Vice President (Acting)
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cc: Regional Administrator
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