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New York Power Authority

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JPN-93-048

U.S. Nuclear Regulatory Commission
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SUBJECT: James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
Revision 7 of the Second Interval
Inservice Testing Program for Pumps and Valves

References:
1. NYPA letter, R. E. Beedle to NRC (JPN-93-001), dated January 21, 1993, "Revision 6 of the Second Interval Inservice Test Program for Pumps and Valves."
2. NRC Generic Letter 89-04, dated April 3, 1989, "Guidance on Developing Acceptable Inservice Testing Programs."
3. NYPA letter, R. E. Beedle to NRC (JPN-91-054), dated September 27, 1991, "Revision 4 of the Second Interval IST Program for Pumps and Valves."
4. NRC letter, R. A. Capra to R. E. Beedle, dated January 8, 1992, "Safety Evaluation of Certain Relief Requests."
5. NYPA letter, R. E. Beedle to NRC (JPN-92-026), dated June 1, 1992, "Revision 5 of the Second Interval IST Program for Pumps and Valves."

Dear Sir:

An updated package for revision 7 of the FitzPatrick Second Interval Inservice Testing (IST) Program is attached. The thirteen pages contained in this package supersede and replace those in Revision 6 (Reference 1). This transmittal documents the conclusion of earlier telephone discussions between the NRC and the Authority concerning the testing of certain check valves. This material is for information only and does not require NRC approval.

Revision 7 contains a minor correction. Two valves are added to Note V29 which lists "fast-acting" valves that are exempt from stroke time trending requirements in accordance with Generic Letter 89-04, position 6 (Reference 2).

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The primary purpose of Revision 7 is to add Valve Relief Request Note V32 to reflect recent changes in how the RHR (Residual Heat Removal) pump minimum flow check valves are tested. Note V32 specifies that disassembly and inspection will be used in lieu of flow measurement through the minimum flow line. NRC review and approval is not requested because the new test method qualifies for preapproval under position 2 of Generic Letter 89-04.

The paragraphs below summarize the history and necessity of the change related to Note V32.

Background

ASME Section XI, paragraph IWV-3521 requires that check valves be exercised at least once every three months. The RHR pump minimum flow check valves are exercised during quarterly pump testing.

Since no instrumentation is installed to verify the open position, the disassembly and inspection approach for these valves was initially included in the IST Program (Reference 3). The NRC accepted this approach on an interim basis, but requested that the Authority explore alternative methods (Reference 4). The Authority used ultrasonic flow detectors to confirm valve operation. Some difficulty was encountered with this method, but we believed that test performance would improve with experience. The Authority removed Note V32 regarding the disassembly and inspection approach from Revision 5 of the IST program (Reference 5).

Subsequent attempts with the ultrasonic instrumentation encountered continuing difficulty, primarily due to piping configuration and flow turbulence. Repeated attempts involving repositioning of ultrasonic transducers and multiple start/stop cycles with the pumps operating at minimum flow conditions, yielded inconsistent and unreliable results. These attempts resulted in increased radiation exposure to personnel. Because of these difficulties, the Authority explored other alternative methods such as correlation with pump discharge pressure and use of seismic probes to detect check valve disk motion.

The Authority has concluded that none of the various methods investigated to verify the open position provide consistent results. The disassembly and inspection alternative described in position 2 of Generic Letter 89-04 will be used for these valves.

If you have any questions, please contact Mr. J. A. Gray, Jr.

Very truly yours,

Ralph E. Beedle

cc: next page

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