

Mr. James Knubel
 Chief Nuclear Officer
 Power Authority of the State of
 New York
 123 Main Street
 White Plains, NY 10601

April 30, 1998

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT - REQUEST FOR
 ADDITIONAL INFORMATION REGARDING THE INSERVICE TESTING PROGRAM
 (TAC NO. MA0096)

Dear Mr. Knubel:

On October 21, 1997, the New York Power Authority submitted the Third Interval Inservice Testing Program for Pumps and Valves at the James A. FitzPatrick Nuclear Power Plant. The NRC staff has determined that additional information, as described in the enclosure, will be required in order to complete its review of this submittal.

Please contact me at (301) 415-1470 if you have any questions on this topic.

Sincerely,

Original Signed by:

Joseph F. Williams, Project Manager
 Project Directorate I-1
 Division of Reactor Projects - I/II
 Office of Nuclear Reactor Regulation

Docket No. 50-333

Enclosure: Request for Additional
 Information

cc w/encl: See next page

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OFFICE	PM:PDI-1	E	LA:PDI-1	EMEB	D:PDI-1		
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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 30, 1998

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A handwritten signature in cursive script that reads "Joseph F. Williams".

Joseph F. Williams, Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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James Knubel
Power Authority of the State
of New York

James A. FitzPatrick Nuclear
Power Plant

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REQUEST FOR ADDITIONAL INFORMATION
THIRD INTERVAL INSERVICE TESTING PROGRAM
FOR PUMPS AND VALVES
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
DOCKET NO. 50-333

1. RELIEF REQUEST PRR-02:

PRR-02 states that the standby liquid control pump (11P-2A or B) flow rate is determined by measuring the change in the test tank water level. Does the accuracy of the flow rate determined by this method meet ± 2 percent, which is the OM-6 requirement for flow measurement instrumentation? If the accuracy does not meet ± 2 percent, provide a justification for the alternative accuracy.

2. RELIEF REQUEST PRR-03:

Provide documentation that demonstrates that the standby liquid control pumps 11P-2A and B are not susceptible to the following degradation mechanisms that could result in increased vibration levels seen at frequencies near and below the pump rotational speed frequency: looseness of the bearings, misalignment, rubbing, oil whip, and impacts from rolling element bearing cage defects.

3. RELIEF REQUEST PRR-05:

PRR-05 states that it is not practical to establish a single repeatable reference point for the emergency service water pumps (46P-2A and B) because the pumps operate under a variety of flow rate and differential pressure conditions. As discussed in Draft NUREG-1482, "Guidelines for Inservice Testing at Nuclear Power Plants," Section 5.2, "Use of Variable Reference Values for Flow Rate and Differential Pressure During Pump Testing," the use of pump curves may be acceptable provided the following elements are performed in preparing the pump curves:

- (1) Curves are developed, or manufacturer's pump curves are validated, when the pumps are known to be operating acceptably.
- (2) The reference points used to develop or validate the curve are measured using instruments at least as accurate as required by the Code.
- (3) Curves are based on an adequate number of points, with a minimum of five.
- (4) Points are beyond the "flat" portion (low flow rates) of the curve in a range which includes or is as close as practicable to design basis flow rates.

- (5) Acceptance criteria based on the curves do not conflict with Technical Specification or Facility Safety Analysis Report operability criteria, for flow rate and differential pressure, for the affected pumps.
- (6) If vibration levels vary significantly over the range of pump conditions, a method for assigning appropriate vibration acceptance criteria should be developed for regions of the pump curve.
- (7) When the reference curve may have been affected by repair, replacement, or routine service, a new reference curve shall be determined or the previous curve revalidated by an inservice test.

Address each of these seven elements in the relief request and provide justification if the proposed alternative is not consistent with NUREG-1482, Section 5.2, guidelines.

4. RELIEF REQUESTS VRR-01 and VRR-03:

It is not evident based on the information presented for the valves (02RV-71 A, B, C, D, E, F, G, H, J, K, and L; and 07SOV-104A, B, and C) that assigning a reasonable, objective acceptance criterion to an observable parameter, such as acoustics, temperature, flow rate, or ΔP , to measure stroke times is impractical or would result in hardship without a compensating increase in the level of quality and safety. If the stroke timing requirements cannot be met, please provide a basis in sufficient detail to justify a proposed alternative, following the applicable guidelines in NUREG-1482, Section 4.2, "Powered Operated Valves," and NUREG-1482, Appendix A, pp A-24 to A-34.

5. RELIEF REQUEST VRR-02:

OM-1, section 3.3.1.1, states that "[tests prior to maintenance or set pressure adjustment, or both, shall be performed in the following sequence: (a) visual examination; (b) seat tightness determination; (c) set pressure determination; (d) determination of compliance with the Owner's set tightness criteria; (e) determination of electrical characteristics and pressure integrity of solenoid valves; (f) determination of pressure integrity and stroke capability of air actuator; (g) determination of operation and electrical characteristics of position indicators; (h) determination of operation and electrical characteristics of bellows alarm switch; and (i) determination of actuating pressure of auxiliary actuating device sensing element, where applicable, and electrical continuity. For the ADS valves 02RV-71 A, B, C, D, E, F, G, H, J, K, and L, the licensee states that "the plant's test practices ensure that applicable tests specified in ANSI/ASME OM-1, section 3.3.1.1, 'Main Steam Pressure Relief Valves with Auxiliary Actuating Devices,' are performed and the entire valve operability is verified in accordance with Technical Specifications, but not in the sequence specified by OM-1, section 3.3.1.1." Provide details with respect to which of the above tests are out of sequence and the ramification of each out of sequence testing.

6. RELIEF REQUEST VRR-06:

With regard to valves 66PCV-101, 66TCV-107E, 66TCV-107F, 70TCV-120A, 70TCV-120B, 70TCV-121A, 70TCV-121B, and 67PCV-101, specify the safety (including fail-safe) position(s) of each valve. If the valves are used only for system control, no relief is required since, OM-10, paragraph 1.2, excludes such valves from inservice testing. If a valve has a safety function to open and/or close and the stroke timing requirements cannot be met, please provide a basis in sufficient detail to justify a proposed alternative, following the applicable guidelines in NUREG-1482, section 4.2.9, "Control Valves with a Safety Function," section 4.2.3, "Measurement of Valve Stroke Time," and NUREG-1482, Appendix A, pp A-24 to A-34.

7. Provide piping and instrumentation drawings for the relief requests discussed in the October 21, 1997 submittal.