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Executive Vice President  
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March 9, 1988  
JPN-88-007

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

Subject: James. A. FitzPatrick Nuclear Power Plant  
Docket No. 50-333  
Inservice Inspection Program for Welds and Supports  
Hydrostatic Testing of HPCI and RCIC

- References:
1. NYPA letter, J.C. Brons to NRC, dated April 10, 1987 (JPN-87-019), requested schedular relief for completion of hydrostatic and functional tests for Class 3 systems.
  2. NYPA letter, J.C. Brons to NRC, dated August 6, 1987 (JPN-87-043) transmitted summary ISI report.

Dear Sirs:

This letter requests relief from the requirement to perform certain hydrostatic tests on the High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) steam supply and exhaust piping. An inservice test is proposed as an alternative examination. The inservice test will demonstrate the adequacy of the pressure boundary and reduce radiation exposure to test personnel.

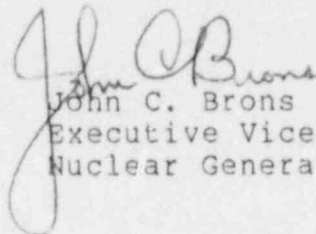
Justification is detailed in Attachment 1. The inservice tests are scheduled prior to the next refueling outage currently planned as part of the first 10-year ISI interval. This relief request also applies to the second 10-year ISI interval currently in place for the FitzPatrick plant.

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Should you or your staff have any questions regarding our response, please contact Mr. J. A. Gray, Jr. of my staff.

Very truly yours,



John C. Brons  
Executive Vice President  
Nuclear Generation

Enclosure

cc: Office of the Resident Inspector  
U.S. Nuclear Regulatory Commission  
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## ATTACHMENT 1

### Relief Request for High Pressure Coolant Injection (HPCI) and Reactor Core Injection Cooling (RCIC) Hydrostatic Tests

#### A. SYSTEM

HPCI  
RCIC

#### B. NUMBER OF ITEMS

Turbine supply and exhaust piping

#### C. ISI CLASS

HPCI (Class II)  
RCIC (Class III)

#### D. SCOPE

The Authority requests relief from the requirements of IWC-5000 and IWD-5000 of ASME Section XI, 1974 Edition through Summer 1975 Addenda, system hydrostatic tests for the HPCI and RCIC systems for the first inservice inspection (ISI) interval. This relief request applies to HPCI and RCIC turbine steam exhaust and supply piping. It does not include the pump suction or discharge which will be tested in accordance with Code requirements.

This relief request also applies for the second ISI interval. The ASME Code which governs the second 10-year interval is the 1980 Edition through Winter 1981 Addenda. The Authority is presently within the first inspection period of the second 10 year interval.

#### E. BASIS FOR RELIEF

Hydrostatic testing of the HPCI and RCIC turbine steam piping requires installation of blank flanges and temporary supports to allow the use of water as the hydrostatic fluid. Although the radiation fields are not extremely high (5 to 20 mr/hr), extensive craft labor is required for the following

- scaffolding,
- insulation removal,
- blank flange installation,
- temporary support installation and removal,
- hydrostatic test pump connections.

The estimated time required for this work is 1334.5 person hours. The "as low as reasonably achievable" (ALARA) estimate for this work is 9.29 person-rem. (See Attachment 1C).

A maximum exposure of 650 person-rem is the established goal for the FitzPatrick plant for 1988. The estimated exposure savings of 9 person-rem represents a 3-4% exposure reduction from the last year's average.

During the hydrostatic test, the turbine section of the HPCI and RCIC systems would not be tested due to the possibility of damage to the pump seals and the gland seal exhauster. These areas are color coded on Attachment 1-A, drawings FM-25B and FM-22B. In addition, the HPCI and RCIC steam exhaust lines discharge to the torus, drawings FM-25A and FM-22A, and thus these portions of the system are exempt from hydrostatic testing in accordance with IWC-5220 (d) and IWD 5200 (c) of ASME Section XI of the 1974 Code through Summer of 1975 Addenda and IWC-5222(d) and IWD-5223(d) of the 1980 code through Winter of 1981 Addenda.

#### F. IN LIEU OF EXAMINATION

The Authority proposes a system inservice test performed in accordance with IWA-5211 of ASME Section XI. The inservice test would include portions of the system (i.e., turbine and turbine exhaust to the torus) as discussed in detail above that would not be tested during a hydrostatic test examination. The system inservice test boundary is shown in Attachment 1-B. A VT-2 examination will be conducted during the inservice test.

The Authority considers an inservice test superior to a system hydrostatic test for the following reasons

- The inservice test would include the complete ISI system boundary including exempt components, the RCIC and HPCI turbines and steam exhaust piping.
- The inservice test is performed at the systems' operating pressure and temperature, and, thus, is as effective for leakage detection during a VT-2 examination.
- The radiation exposure of approximately 9.29 person-rem would be avoided. An exposure to the inspection personnel of 0.25 person-rem is anticipated due to operating at the design temperature and pressure. The overall ALARA reduction is about 9 person-rem.
- During the installation of temporary supports and blank flanges, there is a possibility, however slight, of damage to the mating flange surfaces or to permanent supports.

G. SUMMARY

The Authority requests relief from the requirements of hydrostatic testing for the HPCI and RCIC steam supply and exhaust lines. The Authority proposes an inservice test in lieu of hydrostatic testing based on the above reasons.

The completion of the inservice test would complete the requirements for the hydrostatic test of the HPCI and RCIC systems for the first 10-year ISI interval.

This relief request also applies to the second 10-year ISI interval. The Authority is presently within the first inspection period of the second 10-year interval.

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