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April 21, 1982  
JPN-82-38

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Director of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20055

Attention: Mr. Domenic B. Vassallo  
Operating Reactors Branch No. 2  
Division of Licensing

Subject: James A. FitzPatrick Nuclear Power Plant  
Docket No. 50-333  
Post-TMI Requirements  
Generic Letter No. 82-05



Reference: NRC Letter, D.G. Eisenhower to All Licensees  
of Operating Power Reactors, dated March 17, 1982

Dear Sir:

Enclosure 1 contains the status or schedule, as requested  
by the reference letter, of the following NUREG-0737 items:

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|-----------|--|
| I.A.3.1   | Simulator Exams  |
| II.B.2.2  | Plant Shielding Modifications                              |
| II.B.3.2  | Postaccident Sampling Modifications                        |
| II.B.4    | Training for Mitigating Core Damage                        |
| II.E.4.2  | Containment Isolation Dependability<br>(Positions 5 and 7) |
| II.F.1.1  | Noble Gas Effluent Monitors                                |
| II.F.1.2  | Postaccident Sampling for Iodine and Particulates          |
| II.F.1.3  | Containment High-range Radiation Monitor                   |
| II.F.1.4  | Containment Pressure Monitor                               |
| II.F.1.5  | Containment Water Level Monitor                            |
| II.F.1.6  | Containment Hydrogen Concentration Monitor                 |
| II.K.3.15 | Spurious Isolation of HPCI and RCIC                        |

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II.K.3.22 Automatic Switchover of RCIC Suction  
II.K.3.24 HPCI and RCIC Space Cooling  
II.K.3.27 Common Reference Level for Vessel Level Instrumentation

The Power Authority considers the following items complete: I.A.3.1; II.B.2.2; II.B.4; II.E.4.2 (positions 5 and 7); II.F.1.4; II.K.3.15; and, II.K.3.24. The plant modifications and technical specifications changes required by Item II.K.3.27 are complete. The procedures which refer to reactor vessel water level will be revised on an ongoing basis to include the level above the top of active fuel. This effort will be completed before the end of the next refueling outage which is tentatively scheduled for May of 1983.

The hardware installations required by Items II.F.1.1, II.F.1.3 and II.F.1.5 are complete. However operating difficulties have been experienced with the new components. Enclosure 1 describes the problems and provides a schedule for their resolution.

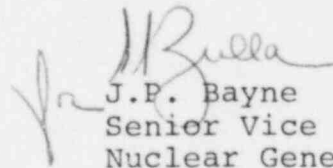
The modification required by Item II.K.3.22 has been completed using partially qualified components, in order to meet the scheduled implementation date. Appendix B acknowledges the acceptability of this approach.

Items II.B.3.2 and II.F.1.6 could not be completed by the scheduled implementation date. Enclosure 1 describes the reasons for the delays; identifies a new completion date; provides justifications for the new date; and, describes compensatory measures which will be in effect in the interim.

Item II.F.1.2 also could not be completed by the scheduled implementation date. For reasons explained in Enclosure 1, the Power Authority will submit the plan and schedule for the implementation of this item by May 31, 1982. This change in submittal date has been discussed with your staff.

If you have any further questions, please do not hesitate to contact us.

Very truly yours,

  
J.P. Bayne  
Senior Vice President  
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POWER AUTHORITY OF THE STATE OF NEW YORK  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

DOCKET No. 50-333

NUREG-0737-38

POST - TMI REQUIREMENTS  
(GENERIC LETTER No. 82-05)

ENCLOSURE 1 TO JPN-82-

#### I.A.3.1. Simulator Exams

This NUREG item has been fully implemented by the Power Authority. All license examinations after the October 1, 1981 implementation date will include simulator exams. A schedule for 1981 and 1982 simulator exams was provided in a letter from J. P. Bayne to P. F. Collins, dated September 15, 1981 (JPN-81-70), in response to Generic Letter No. 81-29.

#### II.B.2.2 Plant Shielding Modifications

The Power Authority's shielding review was submitted in a letter from J. P. Bayne to T. A. Ippolito dated June 5, 1981 (JPN-81-39). This report concluded that no shielding modifications were required to meet the NUREG acceptance criteria for this item.

One modification, required to meet Item II.B.2.3 - Equipment Qualification, was completed during the recent 1981 Reload 4/Cycle 5 refueling outage. This consisted of replacing the packing in valves which previously had packing containing teflon.

#### II.B.3.2 Postaccident Sampling

A Postaccident Sampling System modification to the FitzPatrick plant is currently in progress. Due to delays in obtaining qualified equipment, particularly solenoid valves; additional engineering and procurement necessary to provide an alternate power supply to the system; and, the magnitude of the installation, this modification could not be completed by the scheduled implementation date. In a letter from J. P. Bayne to T. A. Ippolito dated January 11, 1982 (JPN-82-7), the Power Authority requested that the due date for the completion of this item be extended to December 31, 1982.

In the January 11 letter, the Power Authority also discussed existing compensating factors which justify the extension. Further clarification of these factors is provided in the following discussion, which supercedes the January 11 submittal.

NUREG-0737 requires licensees to provide the capability to: sample reactor coolant; sample the containment atmosphere; and quantify radionuclides that are indicators of the degree of core damage. The postaccident containment atmosphere cannot be sampled until the modification is complete. However, the capability exists to obtain and analyze reactor coolant samples utilizing installed hardware and special approved procedures.

In addition, existing instrumentation provides information which is indicative of core damage. The Containment Atmosphere Monitoring System provides continuous indication of the concentrations of hydrogen and oxygen in containment. New containment high range radiation monitors have been installed in accordance with NUREG-0737 Item II.F.1.3 (discussed below).

The Power Authority considers the information provided by this instrumentation, in conjunction with reactor coolant samples, adequate to assure the capability to assess core damage, until the modification is completed.

#### II.B.4 Training for Mitigating Core Damage

The Power Authority considers this item complete for the FitzPatrick plant. Training for mitigating core damage has been completed by all Senior Reactor Operators, Reactor Operators, Shift Technical Advisors, and licensed staff members. The Resident Manager and some additional staff personnel have also completed this training.

This item was implemented in accordance with the schedule requirements of NUREG-0737.

#### II.E.4.2 Containment Isolation Dependability (Positions 5 and 7)

The FitzPatrick containment isolation pressure setpoint, Position 5 of this NUREG item, has been reviewed by the NRC. In a letter from T. A. Ippolito to G. T. Berry, dated December 15, 1981, the Power Authority was informed that the NRC staff considers this item complete for the FitzPatrick plant.

The Power Authority described a modification to the FitzPatrick plant, to isolate the vent and purge valves on high radiation in containment, in a letter from J. P. Bayne to T. A. Ippolito, dated July 7, 1981 (JPN-81-49). This modification, which is required by Position 7 of Item II.E.4.2., was completed during the recent 1981 Reload 4/Cycle 5 refueling outage.

#### II.F.1.1 Noble Gas Effluent Monitors

As described in a letter from J. P. Bayne to D. B. Vassallo dated March 19, 1982 (JPN-82-30), the Power Authority installed new high range noble gas effluent monitors for the stack, turbine building vent and radwaste building vent. When complete, these modifications will meet all of the NUREG acceptance criteria, including the requirement for an unspecified amount of range overlap between the new and existing monitors.

Completion of these modifications was scheduled for the 1981 Reload 4/Cycle 5 refueling outage which is now over. Two new high range stack monitors were installed and one is operational. The new high range monitors for the turbine and radwaste building vents are installed and operable, but do not have the expected low range sensitivity. Therefore, the new and existing monitors do not overlap. The new monitors are being modified to overlap the existing units.

The Power Authority expects the new monitors to be modified, or repaired, and returned to service by December 31, 1982.

#### II.F.1.2 Postaccident Effluent Sampling for Iodine and Particulates

Members of the NRC Emergency Preparedness Appraisal Implementation team, and other Region I personnel, met with Power Authority personnel at the FitzPatrick plant on February 25, 1982. During this meeting, and a subsequent March 23 telephone conversation, the Power Authority committed to provide a plan and schedule for the implementation of this item by May 31, 1982. This commitment was confirmed in an NRC letter from G. H. Smith to C. A. McNeill, Jr. dated April 1, 1982.

Since recent efforts to develop a plan and schedule were intended to meet the agreed May 31st date, they could not be completed for submittal at this time. The Power Authority will submit the plan and schedule, and the additional information requested by Generic Letter 82-05, no later than May 31, 1982. This matter has been discussed with your staff.

#### II.F.1.3. Containment High-range Radiation Monitors

As described in the March 19 letter referred to above, the Power Authority installed two new monitors meeting the NUREG acceptance criteria, during the recent 1981 Reload 4/Cycle 5 refueling outage. One of the new monitors is fully operational and will isolate the containment vent and purge lines. The second monitor, however, was generating spurious containment isolation signals and has been removed from service. This monitor will be returned to service during the first outage of sufficient duration in which a drywell entry can be made, but not later than the Reload 5/Cycle 6 refueling outage. This outage is tentatively scheduled to begin in May of 1983.

#### II.F.1.4. Containment Pressure Monitor

This modification was completed during the recent 1981 Reload 4/Cycle 5 refueling outage. The Power Authority considers this item complete for the FitzPatrick plant.



#### II.F.1.5 Containment Water Level Monitor

This modification, consisting of new over-lapping level instrumentation for the drywell and suppression pool, was installed during the 1981 Reload 4/Cycle 5 refueling outage. Although installation is complete, the suppression pool monitor was removed and returned to the manufacturer for recalibration, as explained in a letter from J. P. Bayne to D. B. Vassallo dated March 8, 1982 (JPN-82-27). Due to delays in the return of the unit, the Power Authority now expects to place this monitor into service by May 30, 1982.

#### II.F.1.6 Containment Hydrogen Concentration Monitor

As stated in a letter from J. P. Bayne to T. A. Ippolito dated January 11, 1982 (JPN-82-7), the Power Authority is developing a design package for installation of a hydrogen monitor in the FitzPatrick plant. However, substantial delays have been encountered in obtaining solenoid valves and qualified electrical, instrumentation and control equipment. Although the Authority has made efforts to expedite the procurement of the necessary equipment, this modification could not be completed by the scheduled implementation date.

The objective of hydrogen monitoring is to provide the capability to detect the potential for breaching containment, due to hydrogen build up. The hydrogen and oxygen monitoring equipment now installed in the FitzPatrick plant provides this capability, although it does not meet the requirements of Regulatory Guide 1.97 Revision 2. Operability of this equipment is assured by Technical Specification 3.7.A.9. In addition, Technical Specification 3.7.A.6 requires containment inerting during power operation. The FitzPatrick plant also has safety related systems designed to mitigate hydrogen build up in containment.

A qualified hydrogen monitor has been received at the plant. The Power Authority considered returning the unit to the manufacturer and obtaining a qualified unit to monitor both hydrogen and oxygen levels in containment. However, to minimize potential delays and expedite completion of this NUREG item, the Authority has decided to proceed with the installation of the hydrogen monitor which is now on hand.

Due to difficulties in obtaining materials and the magnitude of the installation, the Power Authority does not expect to complete this modification until December 31, 1982.

#### II.K.3.15 Spurious Isolation of HPCI and RCIC

The Power Authority completed a plant modification in March of 1975 which consisted of installation of fluid snubbers and

wider ranged differential pressure switches on the HPCI and RCIC high steam flow sensors. During a NUREG-0737 review of this item, an error was discovered in the HPCI switch setpoint calculation (LER 82-001/OIT-0).

The HPCI setpoint was recalculated and verified by the NSSS vendor. A request for a technical specification change was submitted. A letter from D. B. Vassallo to L. W. Sinclair dated March 4, 1982, transmitted Amendment 68 to the FitzPatrick operating license which incorporated the requested change. Following correction of the setpoint and adjustment of the snubber setting, the HPCI system was successfully tested.

The RCIC setpoint was recalculated and the existing setpoint was verified to be correct. Operating history (both testing and actual initiations of the system) from 1975 to the present has demonstrated that the system will not spuriously isolate.

The March 4, 1982 NRC letter, referred to above, concluded that Item II.K.3.15 is complete for the FitzPatrick plant.

#### II.K.3.22 Automatic Switchover of RCIC Suction

The Power Authority completed a modification to provide automatic switchover of the RCIC pump suction from the condensate storage tank to the suppression pool, during the 1981 Reload 4/Cycle 5 refueling outage. As described in a letter from J. P. Bayne to T. A. Ippolito dated January 11, 1982 (JPN-82-7), partially qualified level switches were installed to meet the implementation schedule. Appendix B of NUREG-0737 acknowledges the acceptability of this approach.

The Authority intends to review and resolve the qualification of the installed equipment, in accordance with the schedule requirements of I&E Bulletin 79-01B.

#### II.K.3.24 HPCI and RCIC Space Cooling

The Power Authority has reviewed the cooling of the HPCI and RCIC equipment spaces. A description of the existing design was provided in the January 11 letter referenced above. This letter also stated the Authority's conclusion that the existing design meets the NUREG-0737 acceptance criteria and that no plant modifications are required.



II.K.3.27 Common Reference Level for Vessel Level Instrumentation

In a letter from J. P. Bayne to T. A. Ippolito dated November 25, 1981 (JPN-81-96), the Power Authority provided a description of plant modifications and a schedule for their implementation. These modifications necessitated changes to the technical specifications which were proposed in letter from J. P. Bayne to D. B. Vassallo dated February 8, 1982 (JPN-82-18).

The NRC responded in a letter from P. J. Polk to L. W. Sinclair dated February 26, 1982. This letter: transmitted Amendment 67 to the FitzPatrick operating license which incorporated the requested technical specification changes; and, stated that Item II.K.3.27 is complete for the FitzPatrick plant.