October 4, 2000

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

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT - AMENDMENT RE: SURVEILLANCE TEST INTERVALS FOR RESIDUAL HEAT REMOVAL AND CORE SPRAY PUMP START INTERLOCK TIMERS AND AUTOMATIC DEPRESSURIZATION SYSTEM AUTO-BLOWDOWN TIMERS (TAC NO. MA8931)

Dear Mr. Knubel:

The Commission has issued the enclosed Amendment No. 263 to Facility Operating License No. DPR-59 for the James A. FitzPatrick Nuclear Power Plant. The amendment consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated April 27, 2000, as supplemented by letter dated September 5, 2000.

The amendment would change the Trip Level Settings for the Residual Heat Removal (RHR) and Core Spray (CS) Pump Start Timers as well as the Automatic Depressurization System (ADS) Auto-Blowdown Timer. The proposed change also would extend the Logic System Functional Test surveillance test intervals for the RHR, CS and ADS systems from 6 months to 24 months.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly *Federal Register* notice.

Sincerely,

/RA/

Guy S. Vissing, Sr. Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-333

Enclosures: 1. Amendment No. 263 to DPR-59
2. Safety Evaluation

cc w/encls: See next page

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POWER AUTHORITY OF THE STATE OF NEW YORK

DOCKET NO. 50-333

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 263
License No. DPR-59

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by The Power Authority of the State of New York (the licensee) dated April 27, 2000, as supplemented by letter dated September 5, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-59 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 263, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Marsha Gamberoni, Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 4, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 263

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages	Insert Pages
67	67
68	68
80	80
81	81

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 263 TO FACILITY OPERATING LICENSE NO. DPR-59

POWER AUTHORITY OF THE STATE OF NEW YORK

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

DOCKET NO. 50-333

1.0 INTRODUCTION

By letter dated April 27, 2000, as supplemented by letter dated September 5, 2000, the Power Authority of the State of New York (PASNY or the licensee) submitted a request for changes to the James A. FitzPatrick Nuclear Power Plant Technical Specifications (TSs). The requested changes would change the Trip Level Settings for the Residual Heat Removal (RHR) and Core Spray (CS) Pump Start Timers as well as the Automatic Depressurization System (ADS) Auto-Blowdown Timer. The proposed change also would extend the Logic System Functional Test surveillance test intervals for the RHR, CS and ADS systems from 6 months to 24 months. The September 5, 2000, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

This particular proposed change involves changes to the allowable values of the RHR and CS pump start timers as well as the ADS auto-blowdown timer. The calibration interval of the timers is proposed to be changed from 6 months to 24 months, and the allowable values of the timers are proposed to be changed to reflect the additional drift associated with the longer interval and provide a wider, more achievable as-left calibration tolerance band for field technicians. The purpose of the RHR and CS pump start timers is to sequentially load (stagger) the electrical motor driven pumps, associated with the RHR and CS systems, onto the emergency diesel generators (EDGs) for a concurrent loss of offsite power and loss-of-coolant accident event. Sequential loading of these electrical loads during this event is necessary to avoid the overloading of the EDGs that might occur if multiple motors were simultaneously energized from the EDGs.

2.1 Evaluation Addressing Changes to Trip Level Settings

The first part of this evaluation addresses the sequential loading aspect associated with changes to the RHR and CS pump start timers. As indicated above, the RHR and CS pump start timers are sequential loading timers used to preclude overloading of the EDGs during certain design-basis events. They are, therefore, necessary to ensure the EDGs are capable of performing their required function in accordance with the FitzPatrick licensing basis requirements specified for the onsite electric power system. If the tolerance of the timers is too

large, a potential can be created that there will not be a sufficient time interval allowed for recovery of the EDG voltage and frequency from one group of motor starts to the subsequent group of motor starts.

Table 3.2-2 in the FitzPatrick CTS specifies the time delays for one group of RHR (LPCI) pump timers as 1.0 + 0.5 (-) 0 seconds (nominally 1 second). The time delays for the second group of RHR (LPCI) pump timers is specified as 6.0 ± 0.5 seconds (nominally 6 seconds). The time delays for the CS pump timers is specified as 11 ± 0.6 seconds (nominally 11 seconds).

The proposed Table 3.2-2 specifies the corresponding time delays for the nominal 1 second timers as $\geq$0.99 seconds and $\leq$1.51 seconds. The corresponding time delays specified for the nominal 6 second timers are $\geq$5.27 seconds and $\leq$6.73 seconds. The time delays specified for the nominal 11 second timers are $\geq$9.66 seconds and $\leq$12.34 seconds.

Comparison of the above changes indicates that the worst case minimum time interval between the nominal 1-second timers and nominal 6 second timers has been reduced from 4 seconds to 3.76 seconds. The worst case time interval between the nominal 6-second timers and 11-second timers has been reduced from 3.9 seconds to 2.93 seconds.

The licensee's safety evaluation (SE) attached to its April 27, 2000, letter, states that the uncertainty analysis for the RHR and CS pump start timers assumed a voltage and frequency recovery time which envelopes the maximum allowable recovery time after motor loading as specified in Table 16.3-7 of the FitzPatrick updated final safety analysis report. The SE states that the proposed trip setting values for these relays therefore account for this critical function.

The staff examined the FitzPatrick UFSAR Table 16.3-7. It found that item number 7 in the table provides the parameter for the FitzPatrick EDG "AC voltage recovery time after motor loading," and item number 8 provides the "frequency recovery time after motor loading." For each of these parameters there are two limits specified that are pertinent to the load sequencing timer intervals. They are the "maximum expected" limit and the "maximum allowable" limit.

The FitzPatrick UFSAR states that the "expected" limits, as shown in Table 16.3-7, were developed from the EDG factory test program results, and represent the maximum and minimum values recorded under the conditions of the factory testing program. It states that the "allowable" limits were developed from specifications and calculated values, the boundaries of which define the limits of normal machine operation.

The values specified in Table 16.3-7 for the maximum expected and maximum allowable limits of the FitzPatrick EDG "AC voltage recovery time after motor loading" are 1.5 seconds and 2.0 seconds, respectively. The values specified for "frequency recovery time after motor loading" are 1.75 seconds and 2.5 seconds. Both the maximum expected and maximum allowable limits for voltage recovery and frequency recovery are less than the minimum worst case time interval (2.93 seconds) of the RHR and CS pump sequencing timers specified in the proposed FitzPatrick ITS. This therefore verifies that, during automatic emergency loading of the FitzPatrick EDGs, the EDG voltage and frequency will recover in sufficient time following the starting of one RHR or CS pump motor group to allow successful starting of the subsequent group. The FitzPatrick licensing basis requirements specified for the onsite electric power system are therefore met, and this FitzPatrick proposed TS change is acceptable.

With regard to the changes to the ADS auto blowdown timer settings, the proposed values for the ADS auto blowdown Interlock timer relay settings are based on quantitative uncertainty analyses which were conducted in accordance with the licensee's design control program. The licensee's uncertainty analysis methodology is based on ISA-S67.04, Part 1, "Methodologies for the Determination of Setpoints for Nuclear Safety-Related Instrumentation, 9/94." The staff has determined that the proposed set point values for the automatic depressurization system auto blowdown timer and associated TS change are acceptable.

2.2 Evaluation Addressing the Proposed Change in Surveillance Interval from 6 Months to 24

Item No. 1. CTS Table 3.2-2 Item 11, Core Spray Pump Start Timer (each loop) - Time Delay Relay

Proposed change: Change Allowable Value from "11 ± 0.6 sec." to "≥ 9.66 seconds and ≤ 12.34 seconds".

Item No. 2. CTS Table 3.2-2 Item 12, RHR (LPCI) Pump Start Timer - Time Delay Relay

Proposed changes: Change CTS "1st Pump (A Loop)" Allowable Value from "1.0 + 0.5 sec. (-) 0 sec." to CTS "1st Pump (A loop)" ≥ 0.99 seconds and ≤ 1.51 seconds".

Change CTS "1st Pump (B Loop)" Allowable Value from "1.0 + 0.5 sec. (-) 0 sec." to CTS "1st Pump (B loop)" ≥ 0.99 seconds and ≤ 1.51 seconds".

Change CTS "2nd Pump (A Loop)" Allowable Value from "6.0 ± 0.5 sec." to CTS "2nd Pump (A loop)" ≥ 5.27 seconds and ≤ 6.73 seconds".

Change CTS "2nd Pump (B Loop)" Allowable Value from "6.0 ± 0.5 sec." to ≥ CTS "2nd Pump (B loop)" 5.27 seconds and ≤ 6.73 seconds".

Item No. 3. CTS Table 3.2-2 Item 13, Auto Blowdown Timer

Proposed change: Change Allowable Value from "120 sec. ± 5 sec." to "≤ 134 seconds".

The proposed allowable values are being modified to reflect the appropriate values according to a change in calibration frequency from 6 months to 24 months. The proposed change in surveillance frequency is consistent with the CTS Table 4.2-2 Item 4, Auto Sequencing Timers, frequency. The licensee has analyzed the potential drift based on a calibration frequency of 30 months and determined that the drift values do not exceed the drift allowance provided for these instruments.

The proposed allowable values have been established consistent with the PASNY Engineering Standards Manual, IES-3, Revision 0, "Instrument Loop Accuracy and Setpoint Calculation Methodology." The methodology used to determine the allowable values is consistent with the methodology described in ISA-S67.04-1994, Part II, "Methodologies for the Determination of Setpoints for Nuclear Safety-Related Instrumentation."

The proposed allowable values were calculated by applying calibration based errors to the trip setpoints, thereby establishing an operability limit associated with the entire loop of each instrumentation function. The proposed allowable value changes are within the analytical limit for each function and do not affect the existing margins between operating conditions and reactor trip setpoints. Therefore, the proposed allowable value changes do not affect the existing licensing basis, and are, therefore, acceptable.

2.3 Conclusions

Based on the above evaluations, it is concluded that the proposed changes in instrumentation allowable values, and the surveillance interval, incorporated in the proposed TS changes are acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (65 FR 37428). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: October 4, 2000

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