

December 11, 1998

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

SUBJECT: ISSUANCE OF AMENDMENT FOR JAMES A. FITZPATRICK NUCLEAR POWER
PLANT (TAC NO. MA1372)

Dear Mr. Knubel:

The Commission has issued the enclosed Amendment No. 248 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 of March 30, 1998, and supplemented on October 27, 1998. The amendment revises the definition for logic system functional testing, and extends the surveillance interval for certain instrumentation.

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,

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

Enclosures: 1. Amendment No. 248 DPR-59
2. Safety Evaluation

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DATE	12/9/98		12/9/98	12/9/98	12/9/98

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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Sincerely,

A handwritten signature in black ink, appearing to read "Joseph F. Williams".

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

Docket No. 50-333

Enclosures: 1. Amendment No. 248 to DPR-59
2. Safety Evaluation

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DATED: December 11, 1998

AMENDMENT NO. 248 TO FACILITY OPERATING LICENSE NO. DPR-59-FITZPATRICK

Docket File

PUBLIC

PDI-1 R/F

J. Zwolinski (A)

S. Bajwa

S. Little

J. Williams

I. Ahmed

OGC

G. Hill (2), T-5 C3

W. Beckner, 013/H15

ACRS

J. Rogge, Region I

T. Harris (e-mail SE only, TLH3)

cc: Plant Service list

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cc: Plant Service list

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James A. FitzPatrick Nuclear
Power Plant

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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. ²⁴⁸
License No. DPR-59

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Power Authority of the State of New York (the licensee) dated March 30, 1998, as supplemented October 27, 1998, 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:

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(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 248 and the Environmental Protection Plan contained in Appendix B are incorporated into Facility License No. DPR-59. PASNY shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION


S. Singh Bajwa, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications

Date of Issuance: December 11, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 248

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Revise Appendix A as follows:

Remove Pages

2
79
81

Insert Pages

2
79
81

Revise Appendix B as follows:

Remove Pages

38

Insert Pages

38

JAFNPP

1.0 (cont'd)

- C. Cold Condition - Reactor coolant temperature $\leq 212^{\circ}\text{F}$.
- D. Hot Standby Condition - Hot Standby condition means operation with coolant temperature $> 212^{\circ}\text{F}$, the Mode Switch in Start-up/Hot Standby and reactor pressure $< 1,040$ psig.
- E. Immediate - Immediate means that the required action will be initiated as soon as practicable considering the safe operation of the unit and the importance of the required action.
- F. Instrumentation
1. Functional Test - A functional test is the manual operation or initiation of a system, subsystem, or component to verify that it functions within design tolerances (e.g., the manual start of a core spray pump to verify that it runs and that it pumps the required volume of water).
 2. Instrument Channel Calibration - An instrument channel calibration means the adjustment of an instrument signal output so that it corresponds, within acceptable range, and accuracy, to a known value(s) of the parameter which the instrument monitors. Calibration shall encompass the entire instrument channel including actuation, alarm or trip.
 3. Instrument Channel - An instrument channel means an arrangement of a sensor and auxiliary equipment required to generate and transmit to a trip system a single trip signal related to the plant parameter monitored by that instrument channel.
 4. Instrument Check - An instrument check is a qualitative determination of acceptable operability by observation of instrument behavior during operation. This determination shall include, where possible, comparison of the instrument with other independent instruments measuring the same variable.
 5. Instrument Channel Functional Test - An instrument channel functional test means the injection of a simulated signal into the instrument primary sensor where possible to verify the proper instrument channel response, alarm and/or initiating action.
 6. Primary Containment Isolation Actuation Instrumentation Response Time for Main Steam Line isolation is the time interval which begins when the monitored parameter exceeds the isolation actuation set point at the channel sensor and ends when the Main Steam Isolation Valve solenoids are de-energized (16A-K14, K16, K51, & K52 pilot solenoid relay contacts open). The response time may be measured in one continuous step or in overlapping segments, with verification that all components are tested.
 7. Logic System Functional Test - A logic system functional test shall be a test of all required logic components (i.e., all required relays and contacts, trip units, solid state logic elements, etc.) of a logic circuit, from as close to the sensor as practicable up to, but not including, the actuated device, to verify operability. The logic system functional test may be performed by means of any series of sequential, overlapping, or total system steps so that the entire logic system is tested.
 8. Protective Action - An action initiated by the Protection System when limiting safety system setting is reached. A protective action can be at a channel or system level.

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TABLE 4.2-1 (Cont'd)

PRIMARY CONTAINMENT ISOLATION SYSTEM INSTRUMENTATION
TEST AND CALIBRATION REQUIREMENTS

Logic System Functional Test (Notes 7 & 9)	Frequency
1) Main Steam Line Isolation Valves Main Steam Line Drain Valves Reactor Water Sample Valves	R
2) RHR - Isolation Valve Control Shutdown Cooling Valves	R
3) Reactor Water Cleanup Isolation	R
4) Drywell Isolation Valves TIP Withdrawal Atmospheric Control Valves	R
5) Standby Gas Treatment System Reactor Building Isolation	R
6) HPCI Subsystem Auto Isolation	R
7) RCIC Subsystem Auto Isolation	R

NOTE: See notes following Table 4.2-5.

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TABLE 4.2-2 (Cont'd)

**CORE AND CONTAINMENT COOLING SYSTEM INSTRUMENTATION
TEST AND CALIBRATION REQUIREMENTS**

Logic System Functional Test	Frequency
1) Core Spray Subsystem	SA (Notes 7 & 9)
2) Low Pressure Coolant Injection Subsystem	SA (Notes 7 & 9)
3) Containment Cooling Subsystem	R
4) HPCI Subsystem	R (Notes 7 & 9)
5) ADS Subsystem	SA (Notes 7 & 9)

NOTE: See notes following Table 4.2-5.

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TABLE 3.10-2

MINIMUM TEST AND CALIBRATION FREQUENCY FOR RADIATION MONITORING SYSTEMS^(a)

Instrument Channels	Instrument Check ^(b)	Instrument Channel Functional Test ⁽ⁱ⁾	Instrument Channel Calibration	Logic System Function Test ^{(f)(h)}
Main Stack Exhaust Monitors and Recorders	Daily	Quarterly	Quarterly	--
Refuel Area Exhaust Monitors and Recorders	Daily	Quarterly	Quarterly	--
Reactor Building Area Exhaust Monitors, Recorders, and Isolation	Daily	Quarterly	Quarterly	Once per 24 Months
Turbine Building Exhaust Monitors and Recorders	Daily	Quarterly	Quarterly	--
Radwaste Building Exhaust Monitors and Recorders	Daily	Quarterly	Quarterly	--
SJAE Radiation Monitors/Offgas Line Isolation	Daily	Quarterly	Quarterly	Once per 24 Months
Main Control Room Ventilation Monitor	Daily	Quarterly	Quarterly	--
Mechanical Vacuum Pump Isolation ^(g)	--	--	--	Once per 24 Months
Liquid Radwaste Discharge Monitor/ Isolation ^{(c)(d)(e)(f)}	Daily When Discharging	Quarterly	Quarterly	Once per 24 Months
Liquid Radwaste Discharge Flow Rate Measuring Devices ^(d)	Daily	Quarterly	Once per 18 Months	--
Liquid Radwaste Discharge Radioactivity Recorder ^(d)	Daily	Quarterly	Once per 18 Months	--
Normal Service Water Effluent	Daily	Quarterly	Quarterly	--
SBGTS Actuation	--	--	--	Once per 24 Months



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 248 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

On March 30, 1998, the Power Authority of the State of New York (the licensee, also known as the New York Power Authority) requested changes to the technical specifications (TS) for the James A. FitzPatrick Nuclear Power Plant. The proposed TS consist of a revised definition for logic system functional tests (LSFT) and changes in LSFT frequency for certain instrumentation. The licensee provided supplemental information on October 27, 1998, documenting completion of a commitment to recalibrate an instrument. The supplemental information does not affect the NRC staff's proposed finding of no significant hazards consideration.

2.0 BACKGROUND

Improved reactor fuels allow licensees to consider an increase in the duration of the fuel cycle for their facilities. The NRC staff has reviewed requests for individual plants to modify TS surveillance intervals to be compatible with a 24-month fuel cycle. Generic Letter (GL) 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," was issued on April 2, 1991, providing generic guidance to the licensees for preparing such license amendment requests. By following the GL 91-04 guidance, surveillance interval TS would be revised to require performance of instrument surveillance testing on a refueling interval. Additionally, the TS provision to extend surveillances by 25 percent of the specified interval would extend the time limit for completing these surveillance from the proposed 24 months to a maximum of 30 months. GL 91-04 also includes requirements to evaluate the effect on safety for an increase in surveillance intervals to accommodate a 24-month fuel cycle. This evaluation should support a conclusion that the effect on safety is small, and the historical maintenance and surveillance data do not invalidate this conclusion. GL 91-04 also required addressing the issue of instrument uncertainties, instrument drift, equipment qualification, and vendor maintenance requirements in order to ensure that an extended surveillance interval does not result in exceeding safety analysis assumptions. GL 91-04 also specified that the licensee incorporate a plant-specific program to monitor and assess the long-term effects of instrument drift and provide continuing data to evaluate the surveillance extension.

Additionally, to address the problems of testing safety-related logic circuits, the staff issued GL 96-01, "Testing of Safety-Related Logic Circuits," on January 10, 1996. GL 91-06 required licensees to compare certain safety-related system instrument logic against plant surveillance

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test procedures to ensure that all portions of the logic circuitry are adequately covered in the surveillance procedures to fulfill the TS requirements.

The licensee prepared a report (JAF_RPT_MULTI-02903, Revision 0, dated February 13, 1998) to justify the proposed extension of surveillance intervals for instrumentation LSFTs, documenting the evaluations required by GL 91-04 and GL 96-01.

3.0 EVALUATION

3.1 Revised LSFT Definition

The first proposed change is to revise the LSFT definition to read as follows:

A LSFT shall be a test of all required logic components (i.e., all required relays and contacts, trip units, solid state logic elements, etc.) of a logic circuit, from as close to the sensor as practicable up to, but not including, the actuated device, to verify operability. The LSFT may be performed by means of any series of sequential, overlapping, or total system steps so that the entire logic system is tested.

The current TS definition of LSFT calls for testing a logic circuit from sensor to activated device. The current definition further states that the action will go to completion, (i.e., pumps will be started and valves operated). The proposed change eliminates the requirement to test the actuated device and pumps and valves operated as part of the LSFT. Acceptable performance of these devices is demonstrated by surveillance testing per other TS requirements, and therefore is not required for LSFT performance. This change is consistent with the improved TS definition given in NUREG-1433, and is, therefore, acceptable.

3.1 Extension of Surveillance Intervals

The licensee also proposes to extend the LSFT interval from semiannually to a 24-month interval for Primary Containment Isolation System (PCIS) instrumentation for all seven functions listed in TS Table 4.2-1, "Core and Containment Cooling System(CCCS)," for the containment cooling subsystem and high pressure coolant injection subsystem in TS Table 4.2-2, and Radiation Monitoring System (RMS) for the following four functions in Table 3.10-2 of the environmental TS, Appendix B.

- 1) Reactor Building Area Exhaust Monitors, Recorders, and Isolation
- 2) Steam Jet Air Ejector (SJAE) Radiation Monitors/Offgas Line Isolation
- 3) Liquid Radwaste Discharge Monitor/Isolation
- 4) Standby Gas Treatment System (SBGTS) Actuation

The NRC staff reviewed the licensee's March 30, 1998, submittal, and audited the licensee's report JAF_RPT_MULTI-02903, Revision 0, to evaluate the licensee's justifications for the proposed changes. The licensee evaluated the plant LSFT data collected in the past 22.5 years to establish if any failure of the components that receive the actuation signal involved logic systems that were being tested. The licensee's review identified only two failures out of

44 tests on Radiation Monitoring System Instrumentation that involved LSFT. Both failures were of a timer included in the SJAЕ Radiation Monitor/Offgas Line Isolation Logic. The first failure of the timer was due to the controller time adjustment being set too high. As a corrective action, the controller was manually adjusted to actuate in less time. The second failure of the timer was a blown circuit fuse. The licensee concluded that this was an isolated occurrence with no generic implication. However, based on the drift data, the timer setting had to be lowered in order to extend the LSFT interval from semiannually to once per 24 months. This new setting of the timer was confirmed by the licensee's October 27, 1998 letter. No instrument drift for all other systems included in the proposed amendment was addressed since no analog or digital setpoints are involved in those logic systems.

The licensee concluded that, based on the plant historical and maintenance data, the effect on safety of extending LSFT performance interval to once per 24 months is insignificant. The staff agrees with the licensee's conclusion, and finds the proposed changes to the plant TS acceptable.

3.3 Summary

Based on the above review and justifications for TS changes, the NRC staff concludes that the licensee has evaluated the proposed TS changes to extend the LSFT performance interval consistent with the guidance of GL 91-04. The staff also finds the proposed LSFT definition to be consistent with the standard given in NUREG-1433. Therefore, the proposed changes are revising the LSFT definition and extending the LSFT performance interval are acceptable.

4.0 STATE CONSULTATION

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

5.0 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 and changes surveillance requirements. The NRC staff has determined that the amendments involve 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 amendments involve no significant hazards consideration, and there has been no public comment on such finding (63 FR 19978). 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 amendments.

6.0 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: I. Ahmed

Date: December 11, 1998