

October 10, 1996

Mr. William J. Cahill, Jr.
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. M95524)

Dear Mr. Cahill:

The Commission has issued the enclosed Amendment No. 235 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 May 30, 1996, as supplemented by letter dated October 11, 1996.

The amendment proposes to eliminate selected response time testing requirements for certain sensors and specified loop 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,

/s/

Karen R. Cotton, Acting 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. 235 to DPR-59
- 2. Safety Evaluation

cc w/encls: See next page

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*See previous concurrence

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

October 28, 1996

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

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Sincerely,

A handwritten signature in cursive script that reads "Karen R. Cotton".

Karen R. Cotton, Acting Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-333

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2. Safety Evaluation

cc w/encls: See next page

William J. Cahill, Jr.
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of New York

James A. FitzPatrick Nuclear
Power Plant

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DATED: October 28, 1996

AMENDMENT NO. 235 TO FACILITY OPERATING LICENSE NO. DPR-59-FITZPATRICK

Docket File

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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. 235
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 May 30, 1996, as supplemented by letter dated October 11, 1996, 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. 235, 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 to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



S. Singh Bajwa, Acting 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: October 28, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 235

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Revise Appendix A as follows:

Remove Pages

30g
38
49
61

Insert Pages

30g
38
49
61

3.1 LIMITING CONDITIONS FOR OPERATION

3.1 REACTOR PROTECTION SYSTEM

Applicability:

Applies to the instrumentation and associated devices which initiate the reactor scram.

Objective:

To assure the operability of the Reactor Protection System.

Specification:

- A. The setpoints and minimum number of instrument channels per trip system that must be operable for each position of the reactor mode switch, shall be as shown in Table 3.1-1.

JAFNPP

4.1 SURVEILLANCE REQUIREMENTS

4.1 REACTOR PROTECTION SYSTEM

Applicability:

Applies to the surveillance of the instrumentation and associated devices which initiate reactor scram.

Objective:

To specify the type of frequency of surveillance to be applied to the protection instrumentation.

Specification:

- A. Instrumentation systems shall be functionally tested and calibrated as indicated in Tables 4.1-1 and 4.1-2 respectively.

The response time of the reactor protection system trip functions listed below shall be demonstrated to be within its limit once per 24 months. Neutron detectors are exempt from response time testing. Each test shall include at least one channel in each trip system. All channels in both trip systems shall be tested within two test intervals.

1. Reactor High Pressure (02-3PT-55A, B, C, D) *
2. Drywell High Pressure (05PT-12A, B, C, D)
3. Reactor Water Level-Low (L3) (02-3LT-101A, B, C, D) *
4. Main Steam Line Isolation Valve Closure
(29PNS-80A2, B2, C2, D2)
(29PNS-86A2, B2, C2, D2)
5. Turbine Stop Valve Closure (94PNS-101, 102, 103, 104)
6. Turbine Control Valve Fast Closure (94PS-200A, B, C, D)
7. APRM Fixed High Neutron Flux
8. APRM Flow Referenced Neutron Flux

* Sensor is eliminated from response time testing for the RPS actuation logic circuits. Response time testing and conformance to the test acceptance criteria for the remaining channel components includes trip unit and relay logic.

4.1 BASES (cont'd)

The individual sensor response time may be measured by simulating a step change of the particular parameter. This method provides a conservative value for the sensor response time, and confirms that the instrument has retained its specified electromechanical characteristics. When sensor response time is measured independently, it is necessary to also measure the remaining portion of the response time in the logic train up to the time at which the scram pilot valve solenoids de-energize. The channel response time must include all component delays in the response chain to the ATTS output relay plus the design allowance for RPS logic system response time. A response time for the RPS logic relays in excess of the design allowance is acceptable provided the overall response time does not exceed the response time limits specified in the UFSAR. The basis for excluding the neutron detectors from response time testing is provided by NRC Regulatory Guide 1.118, Revision 2, section C.5.

The sensors for the Reactor High Pressure and Reactor Water Level - Low (L3) trip functions are exempted from response time testing based on analyses provided in NEDO-32291-A, "System Analyses for the Elimination of Selected Response Time Testing".

Two instrument channels in Table 4.1-1 have not been included in Table 4.1-2. These are: mode switch in shutdown and manual scram. All of the devices or sensors associated with these scram functions are simple on-off switches and, hence, calibration during operation is not applicable.

- B. The MFLPD is checked once per day to determine if the APRM scram requires adjustment. Only a small number of control rods are moved daily and thus the MFLPD is not expected to change significantly and thus a daily check of the MFLPD is adequate.

The sensitivity of LPRM detectors decreases with exposure to neutron flux at a slow and approximately constant rate. This is compensated for in the APRM system by calibrating twice a week using heat balance data and by calibrating individual LPRM's every 1000 effective full power hours, using TIP traverse data.

JAFNPP

3.2 LIMITING CONDITIONS FOR OPERATION

3.2 INSTRUMENTATION

Applicability:

Applies to the plant instrumentation which either (1) initiates and controls a protective function, or (2) provides information to aid the operator in monitoring and assessing plant status during normal and accident conditions.

Objective:

To assure the operability of the aforementioned instrumentation.

Specifications:

A. Primary Containment Isolation Functions

When primary containment integrity is required, the limiting conditions of operation for the instrumentation that initiates primary containment isolation are given in Table 3.2-1.

4.2 SURVEILLANCE REQUIREMENTS

4.2 INSTRUMENTATION

Applicability:

Applies to the surveillance requirement of the instrumentation which either (1) initiates and controls protective function, or (2) provides information to aid the operator in monitoring and assessing plant status during normal and accident conditions.

Objective:

To specify the type and frequency of surveillance to be applied to the aforementioned instrumentation.

Specifications:

A. Primary Containment Isolation Functions

Instrumentation shall be functionally tested and calibrated as indicated in Table 4.2-1. System logic shall be functionally tested as indicated in Table 4.2-1.

The response time of the main steam isolation valve actuation instrumentation isolation trip functions listed below shall be demonstrated to be within their limits once per 24 months. Each test shall include at least one channel in each trip system. All channels in both trip systems shall be tested within two test intervals.

1. MSIV Closure - Reactor Low Water Level (L1) *
(02-3LT-57A,B and 02-3LT-58A,B)
2. MSIV Closure - Low Steam Line Pressure *
(02PT-134A,B,C,D)
3. MSIV Closure - High Steam Line Flow *
(02DPT-116A-D, 117A-D, 118A-D, 119A-D)

* Sensor is eliminated from response time testing for the MSIV actuation logic circuits. Response time testing and conformance to the test acceptance criteria for the remaining channel components includes trip unit and relay logic.

4.2 BASES

The instrumentation listed in Tables 4.2-1 through 4.2-8 will be functionally tested and calibrated at regularly scheduled intervals. The same design reliability goal as the Reactor Protection System is generally applied. Sensors, trip devices and power supplies are tested, calibrated and checked at the same frequency as comparable devices in the Reactor Protection System.

The surveillance test interval for the instrumentation channel functional tests are once/three months for most instrumentation. This surveillance interval is based on the following NRC approved licensing topical reports:

1. GE Topical Report NEDC-30851P-A, "Technical Specification Improvement Analysis for BWR Reactor Protection System," March 1988.
2. GE Topical Report NEDC-30851P-A, Supplement 1 "Technical Specification Improvement Analysis for BWR Control Rod Block Instrumentation," October 1988.
3. GE Topical Report NEDC-30851P-A, Supplement 2 "Technical Specification Improvement Analysis for BWR Isolation Instrumentation Common to RPS and ECCS Instrumentation," July 1986.
4. GE Topical Report NEDC-31677P-A, "Technical Specification Improvement Analysis for BWR Isolation Actuation Instrumentation," July 1990.

5. GE Topical Report NEDC-30936P-A, Parts 1 and 2, "BWR Owners Group Technical Specification Improvement Methodology (With Demonstration for BWR ECCS Actuation Instrumentation)," December 1988.
6. GE Topical Report GENE-770-06-1-A, "Bases for Changes to Surveillance Test Intervals and Allowed Out-Of-Service Times For Selected Instrumentation Technical Specifications," December 1992.
7. GE Topical Report GENE-770-06-2-A, "Addendum to Bases for Changes to Surveillance Test Intervals and Allowed Out-Of-Service Times For Selected Instrumentation Technical Specifications," December 1992.

The measurement of the response time interval for the Main Steam Isolation Valve (MSIV) isolation actuation instrumentation begins when the monitored parameter exceeds the isolation actuation setpoint at the channel sensor and ends when the MSIV pilot solenoid relay contacts open. With the exception of the MSIVs, response time testing is not required for any other primary containment isolation actuation instrumentation. The safety analyses results are not sensitive to individual sensor response times of the logic systems to which the sensors are connected for isolation actuation instrumentation. The sensors for the MSIV actuation isolation trip functions are exempted from response time testing based on analyses provided in NEDO-32291-A, "System Analyses for the Elimination of Selected Response Time Testing".



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 235 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 May 30, 1996, as supplemented by letter dated October 11, 1996, the Power Authority of the State of New York (PASNY) proposed an amendment to the James A. Fitzpatrick Technical Specifications (TSs) to eliminate selected response time testing (RTT) requirements for certain sensors and specified loop instrumentation. The affected TSs are TS 4.1.A, "Surveillance Requirements, Reactor Protection System," and TS 4.2.A, "Surveillance Requirements, Instrumentation, Primary Containment Isolation Functions." The proposed changes are supported by analyses performed by the Boiling Water Reactor Owners Group (BWROG) which demonstrate that other periodic tests required by TS, such as functional tests and calibrations, in conjunction with the actions taken in response to NRC Bulletin 90-01, "Loss of Fill-Oil in Transmitters Manufactured by Rosemount," and Supplement 1, are adequate to ensure that instrument response times are within acceptable limits.

2.0 EVALUATION

An analysis performed by the BWROG to assess the impact of elimination of RTT for selected instrument loops was documented as a Licensing Topical Report (LTR) NEDO-32291 and was submitted for NRC's approval in January 1994. The NRC approved the BWROG LTR by a generic Safety Evaluation Report (SER) dated December 28, 1994, and a supplemental SER (SSER) dated May 31, 1995. The SER included Tables 1 and 2, which respectively lists instruments/components and systems which were evaluated in the BWROG LTR for RTT elimination. In addition to approving elimination of RTT for selected instrumentation, the SER stipulated certain conditions that licensees must meet to apply the SER pre-approved changes to their plant-specific TS.

During 1996, the Fitzpatrick Nuclear Power Plant became a participating plant in addition to those listed in Appendix A of NEDO-32291-A. By letter dated May 30, 1996, the licensee confirmed that they followed the guidance in NEDO-32291-A and met the conditions in the staff's SER and supplemental SER. As a result, the licensee requested the following TS changes to support selected RTT elimination.

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2.1 TS 4.1.A - Surveillance Requirements, Reactor Protection System

1. Reactor High Pressure (02-3PT-55A, B, C, D)
2. Reactor Water Level-Low (L3) (02-3LT.-101A, B, C, D)

The licensee proposed to add a note to 4.1.A Surveillance Requirements, Reactor Protection System that reads: "Sensor is eliminated from response time testing for the RPS actuation logic circuits. Response time testing and conformance to the test acceptance criteria for the remaining channel components includes trip unit and relay logic."

2.2 TS 4.1 - Bases

The licensee proposed to insert a paragraph after the first paragraph that reads: "The sensors for the Reactor High Pressure and Reactor Water Level - Low (L3) trip functions are exempted from response time testing based on analyses provided in NEDO-32291-A, System Analyses for the Elimination of Selected Response Time Testing."

2.3 TS 4.2.A - Surveillance Requirements, Primary Containment Isolation Functions

1. MSIV Closure - Reactor Low Water Level (L1)
2. MSIV Closure - Low Steam Line Pressure
3. MSIV Closure - High Steam Line Flow

The licensee proposed to add a note to 4.2.A which reads: "Sensor is eliminated from response time testing for the MSIV actuation logic circuits. Response time testing and conformance to the test acceptance criteria for the remaining channel components includes trip unit and relay logic."

2.4 TS 4.2 - Bases

The licensee proposed to insert a paragraph after the last paragraph which reads: "The sensors for the MSIV actuation isolation trip functions are exempted from response time testing based on analyses provided in NEDO-32291-A, "System Analyses for the Elimination of Selected Response Time Testing."

3.0 DISCUSSION AND EVALUATION

The staff stipulated several conditions which must be met by the licensee before the pre-approved changes of the generic SER and SSER could be applied to any plant-specific TS. From the licensee's submittal, the staff verified that the licensee has met all applicable conditions stipulated by the staff's SER and SSER for the NEDO-32291-A. Details of this verification are discussed below.

3.1 Confirm the applicability of the generic analyses to the plant

In their submittal, the licensee stated that the NEDO-32291-A analysis was performed for two representative boiling-water reactor plants and its applicability to the JAF Nuclear Plant has been verified. During 1996, JAF

became a participating plant, in addition to those listed in Appendix A of NEDO-32291-A. The staff reviewed this information and verified the applicability of the generic analyses to JAF.

3.2 EPRI NP-7243 Recommendations

The licensees shall state that they are following the recommendations from EPRI NP-7243 and, therefore, shall perform the following actions:

- (a) Prior to installation of new transmitters/switches or following maintenance of transmitters/switches in selected instrument loops addressed in NEDO-32291-A, a hydraulic RTT shall be conducted to determine the initial sensor specific response time value. Procedures will be changed to incorporate this method following amendment issuance.
- (b) JAF does not utilize capillary tube transmitters or switches for instrument loops required for RTT as specified in the TS.

In their submittal, the licensee stated that PASNY has followed the recommendations of EPRI NP-7243, "Investigation of Response Time Testing Requirements," May 1991, and stated their conformance to the actions described in items (a) and (b) above. The staff reviewed the licensee's statements and verified that the licensee is following these recommendations.

3.3 Device Applicability

The BWROG concluded that the RTT requirements for the devices identified in Table 1 of NEDO-32291-A can be removed from TSs when the devices are used in systems listed in Table 2 of NEDO-32291-A. Therefore, for the devices which RTT elimination is requested, the licensee should verify that these devices are of the same model and make as indicated in Table 1 of the generic SER and are part of the systems shown on Table 2 of the generic SER. In case the licensee's submittal for RTT elimination include any device(s) which is (are) not included in Table 1 of the SER, the licensee shall provide a justification for each device on a case-by-case basis.

The licensee has confirmed that the sensors within the scope of this request were evaluated in NEDO-32291-A. The staff noted that these sensors were identified in an Addendum to Appendix G of NEDO-32291-A and were of the same make and model as described in Table 1 of the generic SER. The staff also verified that all devices for which elimination of RTT requested were part of systems described in Table 2 of the generic SER. These devices were evaluated by the BWROG in NEDO-32291-A, and were included in Table 1 of the generic SER. The staff has concluded that the pre-approved SER changes can be applied to these plant-specific devices.

3.4 Rosemount oil-filled pressure transmitters

In case elimination of any RTT associated with Rosemount oil-filled pressure transmitters is requested, the licensee shall be in full compliance with the guidelines of Supplement 1 to Bulletin 90-01, "Loss of Fill-Oil in Transmitters Manufactured by Rosemount."

In their submittal, the licensee stated that they are following the guidance of Supplement 1 to NRC Bulletin 90-01, "Loss of Fill-Oil in Transmitters Manufactured by Rosemount," for all Rosemount transmitters for which the RTT is eliminated. This is acceptable to the staff.

3.5 Additional plant-specific conditions

The licensee provides the following additional information in response to the NRC request for information regarding certain conditions.

- (a) Calibration procedures will be revised to include steps for fast ramp or step change to the input of the system components during calibrations. The response check will be performed prior to the instrument being calibrated.
- (b) Training has been performed in response to NRC Bulletin 90-01 action item 4.a to ensure operators and technicians have been made aware of consequences of instrument response time degradation.
- (c) I&C technicians are stationed during calibration and functional surveillance tests to allow for simultaneous monitoring of both input and output of the channel under test.
- (d) JAF has reviewed the manufacturer's requirements for Rosemount 1153 series B transmitters, and has determined that the transmitters do not require periodic component response checks as specified by the vendor manual.

The NRC staff has reviewed this information and concluded that it is acceptable.

Based upon the above review, the NRC staff finds that the licensee has confirmed the applicability of the generic analysis of NEDO-32291-A to JAF and followed the provisions of the generic SER and Supplement SER for RTT elimination. Therefore, the staff has concluded that the proposed TS modifications to eliminate the selected response time requirements as discussed above 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 amendment. 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 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 (61 FR 34896). 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.

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

Principal Contributor: Sang Rhow

Date: October 28, 1996