December 16, 1994

Mr. William J. Cahill, Jr.
Executive Vice President - Nuclear Generation
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. M90592)

Dear Mr. Cahill:

The Commission has issued the enclosed Amendment No. 219 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 October 7, 1994.

The amendment revises TS 4.6E.4 and the associated Bases to establish that the manual cycling of reactor coolant system safety/relief valves (SRVs) during plant startups is to be accomplished within 12 hours after steam pressure and flow are adequate to perform the testing. TS 4.6E.4 had previously required that this testing be performed within 12 hours of continuous power operation at a reactor steam dome pressure of at least 940 psig. The amendment also makes several editorial changes to clarify the intent of TSs involving SRV testing and performance requirements.

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

Nicola F. Conicella, 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. 219 to DPR-59
2. Safety Evaluation

cc w/encls: See next page

*See previous concurrence

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

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N. F. Conicella

Nicola F. Conicella, 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. 219 to DPR-59
2. Safety Evaluation

cc w/encls: See next page

William J. Cahill, Jr.
Power Authority of the State of New York
James A. FitzPatrick Nuclear
Power Plant

cc:

Mr. Gerald C. Goldstein
Assistant General Counsel
Power Authority of the State
of New York
1633 Broadway
New York, NY 10019

Resident Inspector's Office
U. S. Nuclear Regulatory Commission
P.O. Box 136
Lycoming, NY 13093

Mr. Harry P. Salmon, Jr.
Resident Manager
James A. FitzPatrick Nuclear
Power Plant
P.O. Box 41
Lycoming, NY 13093

Ms. Charlene D. Faison
Director, Nuclear Licensing
Power Authority of the State
of New York
123 Main Street
White Plains, NY 10601

Supervisor
Town of Scriba
Route 8, Box 382
Oswego, NY 13126

Mr. Robert G. Schoenberger,
First Executive Vice President
and Chief Operating Officer
Power Authority of the State
of New York
123 Main Street
White Plains, NY 10601

Charles Donaldson, Esquire
Assistant Attorney General
New York Department of Law
120 Broadway
New York, NY 10271

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Ms. Donna Ross
New York State Energy Office
2 Empire State Plaza
16th Floor
Albany, NY 12223

Mr. Richard L. Patch, Director
Quality Assurance
Power Authority of the State
of New York
123 Main Street
White Plains, NY 10601

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. 219
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 October 7, 1994, 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. 219 , 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

Michael J. Case

Michael J. Case, 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: December 16, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 219

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Revise Appendix A as follows:

Remove Pages	Insert Pages
142a	142a
143	143
152	152

3.6 (cont'd)

E. Safety/Relief Valves

1. During reactor power operating conditions and prior to startup from a cold condition, or whenever reactor coolant pressure is greater than atmosphere and temperature greater than 212 °F, the safety mode of at least 9 of 11 safety/relief valves shall be operable. The Automatic Depressurization System valves shall be operable as required by specification 3.5.D.

4.6 (cont'd)

E. Safety/Relief Valves

1. At least 5 of the 11 safety/relief valves shall be bench checked or replaced with bench checked valves once each operating cycle. All valves shall be tested every two operating cycles.* The testing shall demonstrate that each valve tested actuates at 1110 psig ±3%. Following testing, lift settings shall be 1110 psig ±1%

* The current surveillance interval for bench checking safety/relief valves is extended until the end of R11/C12 refueling outage scheduled for January, 1995. This is a one-time extension, effective only for this surveillance interval. The next surveillance interval will begin after the completion of the bench check testing and after the safety/relief valves are declared operable.

3.6 (cont'd)

2. If Specification 3.6.E.1 is not met, the reactor shall be placed in a cold condition within 24 hours.

3. Low power physics testing and reactor operator training shall be permitted with inoperable components as specified in Specification 3.6.E.1 above, provided that reactor coolant temperature is ≤212 °F and the reactor vessel is vented or the reactor vessel head is removed.

4. The provisions of Specification 3.0.D are not applicable.

5. The safety and safety/relief valves are not required to be operable during hydrostatic pressure and leakage testing with reactor coolant temperatures between 212 °F and 300 °F and irradiated fuel in the reactor vessel provided all control rods are inserted.

4.6 (cont'd)

2. At least one safety/relief valve shall be disassembled and inspected once/operating cycle.*

3. The integrity of the nitrogen system and components which provide manual and ADS actuation of the safety/relief valves shall be demonstrated at least once every 3 months.

4. Manually open each safety/relief valve while bypassing steam to the condenser and observe a ≥10% closure of the turbine bypass valves, to verify that the safety/relief valve has opened. This test shall be performed at least once each operating cycle while in the RUN mode and within the first 12 hours after steam pressure and flow are adequate to perform the test.

* The current surveillance interval for disassembling and inspecting at least one safety/relief valve is extended until the end of R11/C12 refueling outage scheduled for January, 1995. This is a one-time extension, effective only for this surveillance interval. The next surveillance interval will begin upon completion of this surveillance.

3.6 and 4.6 BASES (cont'd)

E. Safety/Relief Valves

The safety/relief valves (SRVs) have two modes of operation; the safety mode or the relief mode. In the safety mode (or spring mode of operation) the spring loaded pilot valve opens when the steam pressure at the valve inlet overcomes the spring force holding the pilot valve closed. The safety mode of operation is required during pressurization transients to ensure vessel pressures do not exceed the reactor coolant pressure safety limit of 1,375 psig.

In the relief mode the spring loaded pilot valve opens when the spring force is overcome by nitrogen pressure which is provided to the valve through a solenoid operated valve. The solenoid operated valve is actuated by the ADS logic system (for those SRVs which are included in the ADS) or manually by the operator from a control switch in the main control room or at the remote ADS panel. Operation of the SRVs in the relief mode for the ADS is discussed in the Bases for Specification 3.5.D.

Experiences in safety/relief valve testing have shown that failure or deterioration of safety/relief valves can be adequately detected if at least 5 of the 11 valves are bench tested once per operating cycle so that all valves are tested every two operating cycles. Furthermore, safety/relief valve testing experience has demonstrated that safety/relief valves which actuate within ±3% of the design pressure setpoint are considered operable (see ANSI/ASME OM-1-1981). The safety bases for a single nominal valve opening pressure of 1110 psig are described in NEDC-31697P, "Updated SRV Performance Requirements for the JAFNPP." The single nominal setpoint is set below the reactor vessel design pressure (1250 psig) per the requirements of Article 9 of the ASME Code - Section III, Nuclear Vessels. The setting of 1110 psig preserves the safety margins associated with the HPCI and RCIC turbine overspeed systems and the Mark I torus loading analyses. Based on safety/relief valve testing experience and the analysis referenced above, the safety/relief valves are bench tested to demonstrate that in-service opening pressures are within the nominal pressure setpoints ±3% and then the valves are returned to service with opening pressures at the nominal setpoints ±1%. In this manner, valve integrity is maintained from cycle to cycle.

The analyses with NEDC-31697P also provide the safety basis for which 2 SRVs are permitted inoperable during continuous power operation. With more than 2 SRVs inoperable, the margin to the reactor vessel pressure safety limit is significantly reduced, therefore, the plant must enter a cold condition within 24 hours once more than 2 SRVs are determined to be inoperable. (See reload evaluation for the current cycle).

A manual actuation of each SRV is performed to demonstrate that the valves are mechanically functional and that no blockage exists in the valve discharge line. Valve opening is confirmed by monitoring the response of the turbine bypass valves and the SRV acoustic monitors. Adequate reactor steam dome pressure must be available to avoid damaging the valve. Adequate steam flow is required to ensure that reactor pressure can be maintained during the test. Testing is performed in the RUN mode to reduce the risk of a reactor scram in response to small pressure flucuations which may occur while opening and reclosing the valves.

Low power physics testing and reactor operator training with inoperable components will be conducted only when the safety/relief valves are

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 219 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 October 7, 1994, the Power Authority of the State of New York (the licensee) submitted a request for changes to the James A. FitzPatrick Nuclear Power Plant Technical Specifications (TSs). The requested changes would revise TS 4.6E.4 and the associated Bases to establish that the manual cycling of reactor coolant system safety/relief valves (SRVs) during plant startups is to be accomplished within 12 hours after steam pressure and flow are adequate to perform the testing. TS 4.6E.4 currently requires that this testing be performed within 12 hours of continuous power operation at a reactor steam dome pressure of at least 940 psig. The amendment would also make several editorial changes to clarify the intent of certain TSs involving SRV testing and performance requirements.

2.0 EVALUATION

2.1 Change to TS 4.6E.4 and Associated Bases Section

TS 4.6E.4 requires that at least once each operating cycle each SRV must be manually opened while bypassing steam to the main condenser and observing at least a 10 percent closure of the turbine bypass valves. This testing must be performed within the first 12 hours of continuous power operation at a reactor steam dome pressure of at least 940 psig. The licensee has proposed that TS 4.6E.4 be modified to require the testing to be performed within the first 12 hours after steam pressure and flow are adequate to perform the test.

The purpose of TS 4.6E.4 is to demonstrate that the SRVs are functional and that no blockage is present in the valve discharge piping. The testing is performed on the 11 SRVs during the early stages of power ascension, with reactor power less than 25 percent and at a steaming rate which can be accommodated by the turbine bypass valves. Steaming rate is an important parameter for maintaining reactor pressure control during this testing, and testing cannot be performed until the required steam flow conditions are achieved.

TS 4.6E.4 currently requires that the manual opening of the SRVs start within 12 hours of achieving a reactor steam dome pressure of 940 psig. However, as previously discussed, the testing cannot actually be performed until the required steam flow conditions are also achieved. A period of time is required after pressure reaches 940 psig to establish adequate steam flow. Part of the allotted 12-hour period to perform testing is, thus, expended to establish the appropriate test conditions before manual opening of the SRVs can actually begin. The proposed change to TS 4.6E.4 would alleviate unnecessary stress and time pressure on the reactor operators during reactor startups by allowing the 12-hour clock for manual opening of the SRVs to start when the required test conditions have actually been established. The proposed revision to TS 4.6E.4 would involve no change in the test method or conditions under which the SRV testing may be performed.

The staff has reviewed the proposed change to TS 4.6E.4 and concluded that it is acceptable since it will provide for manual opening of the SRVs during reactor startups within a reasonable time period (i.e., 12 hours) after the appropriate test conditions have been established and alleviate unnecessary time pressures on reactor operators during reactor startups. The licensee also proposed accompanying changes to Bases Section 3/4.6E. The staff has no objections to these proposed changes to the TS Bases.

2.2 Editorial Changes to TS 4.6E.1

The licensee has proposed certain editorial changes to TS 4.6E.1. The proposed editorial changes are described below.

A. In TS 4.6E.1 the phrase "the 11 safety/relief valves actuate at 1110 psig $\pm$3%" would be replaced with "each valve actuates at 1110 psig $\pm$3%." TS 4.6E.1 describes the surveillance requirement for demonstrating the lift setpoint of the SRVs. Approximately half of the 11 SRVs are tested each operating cycle. The current wording in TS 4.6E.1 could be misinterpreted to require that the lift setpoint must be demonstrated for all 11 SRVs each operating cycle. The proposed change would make it clear that the lift setpoint can only be demonstrated for those valves that are tested that cycle.

B. A new sentence would be added to TS 4.6E.1 that would read as follows:

   Following testing, lift settings shall be set at 1110 psig $\pm$1%.

   This proposed change would more clearly establish that the acceptance criterion for the as-found SRV lift setpoint is different from that for the as-installed setpoint.

The staff has reviewed the proposed editorial changes to TS 4.6E.1 and determined that they are administrative in nature and are, therefore, acceptable.

2.3 Editorial Changes to Bases Section 3/4.6E

The licensee has proposed several editorial changes to Bases Section 3/4.6E to clarify the intent of certain SRV testing and to eliminate the reference to two spring safety valves which are no longer installed at the facility. The staff has no objections to these proposed Bases changes.

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 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 (59 FR 55889). 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.

Principal Contributor: J. Menning

Date: December 16, 1994

DATED: December 16, 1994

AMENDMENT NO. 219 TO FACILITY OPERATING LICENSE NO. DPR-59-FITZPATRICK

Docket File
PUBLIC
PDI-1 Reading
S. Varga, 14/E/4
J. Zwolinski, 14/H/1
M. Case
C. Vogan
N. Conicella
OGC
D. Hagan, 3302 MNBB
G. Hill (2), P1-22
C. Grimes, 11/F/23
ACRS (10)
OPA
OC/LFDCB
PD plant-specific file
C. Cowgill, Region I
R. Jones

cc: Plant Service list