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

November 3, 2000

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT - AMENDMENT ISSUED UNDER EMERGENCY CIRCUMSTANCES RE: LEAKAGE AND HYDROSTATIC TESTING CONDITIONS (TAC NO. MB0416)

Dear Mr. Knubel:

The Commission has issued the enclosed Amendment No. 267 to Facility Operating License No. DPR-59 for the James A. FitzPatrick Nuclear Power Plant. The amendment is issued under emergency circumstances and consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated November 2, 2000, as supplemented by two letters both dated November 3, 2000.

The amendment revises the TSs to allow reactor coolant system pressure tests, at reactor coolant temperatures above 212 $^{o}$F, to be performed while remaining in the cold shutdown mode.

The staff notes that your justification for issuance of the amendment under emergency circumstances is deficient in meeting the requirement of 10 CFR 50.91(a)(5). Such deficiency led to much additional review efforts and delay. The deficiency was corrected by your November 3, 2000, supplement.

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 by P. Tam/**

Guy S. Vissing, Senior 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. 267 to DPR-59
2. Safety Evaluation
cc w/encls: See next page

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DOCUMENT NAME: **ML003766380**

| OFFICE | PM:PDI-1 | LA:PDI-1 | BC:TSB | OGC | SC:PDI-1 |
|---|---|---|---|---|---|
| NAME | GVissing** | SLittle* | WBeckner* | MYoung | MGamberoni*** |
| DATE | 11/3/00 | 11/3/00 | 11/3/00 | 11/3/00 | 11/3/00 |

Official Record Copy

*See previous concurrence
**P. Tam concurred for G. Vissing.
***P. Milano concurred for M. Gamberoni.

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DATED: November 3, 2000

AMENDMENT NO. 267 TO FACILITY OPERATING LICENSE NO. DPR-59-FITZPATRICK

PUBLIC
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cc: Plant Service list

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. 267
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 November 2, 2000, as supplemented by letter dated November 3, 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. 267, 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 by P. Milano/**

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: November 3, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 267

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Replace the following pages of 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 |
|---|---|
| ii | ii |
| iii | iii |
| 30b | 30b |
| 30e | 30e |
| 118 | 118 |
| 120 | 120 |
| 121 | 121 |
| 137 | 137 |
| 143 | 143 |
| 148 | 148 |
| 244a | 244a |
| ---- | 244b |
| ---- | 244c |

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 267 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 November 2, 2000, 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 the TSs to allow reactor coolant system (RCS) pressure tests, at reactor coolant temperatures above 212 $^{o}$F, to be performed while remaining in the cold shutdown mode. By two letters both dated November 3, 2000, the licensee provided the justification to request the amendment under emergency circumstances.

## 2.0 EVALUATION

Primary containment integrity is not required in the cold shutdown mode, thus allowing unrestricted access to the primary containment for the performance of inspections. The licensee's proposed changes, with minor exceptions, adopt Special Operations Section 3.10.1, "Inservice Leak and Hydrostatic Testing Operation," of Standard Technical Specifications (STS), NUREG-1433, Revision 1. The minor exceptions are required to ensure consistency within the FitzPatrick TS, reflect differences between FitzPatrick TS and STS, and ensure the same level of emergency core cooling system (ECCS) redundancy afforded by STS during pressure testing.

The NRC staff finds the justifications and discussion of safety implications of the proposed TS changes to be acceptable. Allowing the reactor to be considered in the cold shutdown mode during RCS pressure tests, with reactor coolant temperature between 212 $^{o}$F and 300 $^{o}$F, effectively provides an exception to hot shutdown requirements, including maintaining primary containment integrity and operability of the full complement of redundant ECCS. Amendment No. 179 was issued on March 9, 1992, to allow the High-Pressure Coolant Injection, Reactor Core Isolation Cooling, Safety Relief Valves, and Automatic Depressurization Systems to be inoperable during the performance of RCS pressure tests at temperatures up to 300 $^{o}$F. These exceptions to the normal system operability requirements are permissible because pressure tests are performed nearly water solid, at low decay heat values, and near cold shutdown conditions; the stored energy in the reactor core will be low. Under these conditions, the potential for failed fuel and a subsequent increase in coolant activity is minimized.

These licensee's proposed changes, with minor exceptions, adopt Special Operations Section 3.10.1, "Inservice Leak and Hydrostatic Testing Operation," from the STS. The differences

between proposed Specification 3/4.12.A and STS Section 3.10.1 stem primarily from differences in mode definitions, differences in presenting system operability requirements, and plant-specific design differences in which the current TS requirements are retained. The adoption of TS 3/4.12.A entails the consolidation of TS exceptions that currently exist in various other TS. The following TS paragraphs are deleted and the associated exemptions during hydrostatic testing are consolidated into TS 3/4.12.A: TS 3.5.C.3, High Pressure Core Injection (HPCI) System; TS 3.5.D.4, Automatic Depressurization System (ADS); TS 3.5.E.4, Reactor Core Isolation Cooling (RCIC) System; TS 3.6.A.2, cross references to other supporting systems; and, 3.6.E.5 Safety/Relief Valves (S/RVs). These systems are not required to be operable during hydrostatic testing, and the requirements of the associated TS are temporarily suspended during hydrostatic testing, while the requirements of TS 3/4.12.A are invoked.

The adoption of the Special Operations TS 3/4.12.A necessitates the adoption of an associated specification (FitzPatrick TS 3.0.G) that defines and limits the use of the Special Operations TS. FitzPatrick TS 3.0.G is technically identical to the corresponding STS 3.0.7 on the use of the Special Operations TS. The overall effect of the differences result in the requirements of the proposed FitzPatrick TS changes being equivalent to the STS, and in some instances more conservative than the STS. Editorial changes necessitated by the differences in format between the FitzPatrick TS and the STS do not alter the intent of any operability or surveillance requirements contained in the STS and have no effect on safety. Editorial changes occur primarily in section headers and system descriptors (i.e., SR 4.5.C.1 and SR 4.5.D.2.a), in addition to the movement of information from one page to another. These changes are consistent with the STS, and these clarifications are acceptable.

The NRC staff has reviewed the licensee's proposed FitzPatrick TS changes, finds them to be in conformance with the STS, and concludes that the proposed changes are acceptable. The staff also reviewed the associated changes to the TS Bases and found that they are consistent with the TS changes.

## 3.0 JUSTIFICATION FOR EMERGENCY CIRCUMSTANCES

In its November 2, 2000, application, the licensee requested the subject amendment to the Technical Specifications be granted on an emergency basis. The licensee states that:

> The basis for this request is that failure to approve this proposed amendment in a timely manner will prevent conducting the reactor vessel pressure test until repairs are complete on the "B" inboard low pressure coolant injection valve (10MOV-25B). This repair activity is therefore preventing resumption of power operation for a time period equal to that required to complete the repair.

The licensees November 3, 2000, letter provides additional details regarding the basis for requesting approval on an emergency basis. Portions of the licensee's justification is reproduced below:

> 10MOV-25B is a 24 inch diameter gate valve. This valve is the B division, inboard low-pressure coolant injection (LPCI) valve and also functions as a primary containment isolation valve (PCIV).

> During the current Refuel Outage (RO14), this valve was subjected to a Type C Local Leak Rate Test (LLRT) as part of the plant 10CFR50 Appendix J Containment Leakage Rate Testing Program. This valve failed LLRT. The cause of the LLRT failure was determined to be a cracked seat. The repair activity required replacement of the valve disc. The tolerances of the valve internals are such that in order to achieve satisfactory LLRT results, the seat and disc must be "machined to fit" in the field. Proper tolerances are determined based on a "blue check" of the mating surfaces between the seat and disk.
>
> Due to the machine to fit nature of this repair activity, achieving proper tolerances is an iterative process which requires a geometrically complex machining operation in the shop, followed by a check of tolerances in the field. This process is slow and meticulous because over-machining the disk would render the disc unusable and the process would have to start all over with a new disk. The difficulty in this process is compounded by the large size of the parts involved. The disk weighs approximately 1000 pounds and therefore must be handled with appropriate rigging.
>
> Once proper tolerances are achieved, the valve must be reassembled and the valve operator must be mounted and set-up. Following this assembly process, the valve must be post-work tested. Post work testing involves an operator thrust test and LLRT.
>
> The difficulties described above make accurate schedule estimates for the LLRT repair activity impractical. This activity could not have been accurately accounted for in designing the RO14 schedule and therefore provide the basis for the requesting approval of the subject amendment on an emergency basis.

In the second November 3, 2000, letter the licensee states that it began repair of 10MOV-25B on October 25, 2000. The initial phase of the repair period involves disassembly, inspection and planning the repair (the details of this repair are discussed above). The repair activity has proceeded uninterrupted since that time. On November 2, 2000, at approximately 6:30 a.m., a review of the projected repair duration for 10MOV-25B identified that the repair activity would prevent plant restart on an hour-for-hour basis for a period of time equivalent to that required to complete the repair of 10MOV-25B. The licensee discussed with the staff the possible need for an amendment under emergency circumstances later in the morning, and submitted the formal application in the afternoon.

The staff concludes that an emergency condition exists in that failure to act in a timely way to approve the proposed TS changes would result in prevention of resumption of operation from the current refueling outage, given that the licensee is currently undertaking activities related to restart. In addition, the staff has assessed the licensee’s reasons for failing to file an application sufficiently in advance to preclude an emergency, and concludes that the licensee promptly performed the valve repair described above, promptly notified the staff of the complications associated with the repair, and proposed this amendment to remedy the situation. Thus, the staff concludes that the licensee has not abused the emergency provisions

by failing to make timely application for the amendment. Thus, emergency circumstances exist, and the amendment is being processed on an emergency basis in accordance with 10 CFR 50.91(a)(5).

## 4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION (NSHC) DETERMINATION

In accordance with the criteria set forth in 10 CFR 50.91 and 50.92, the licensee performed an NSHC analysis, which is reproduced below. The licensee stated that based on its analysis, operation of FitzPatrick in accordance with the proposed amendment would not involve a significant hazards consideration. The following text is provided by the licensee in support of this conclusion.

1. involve a significant increase in the probability or consequences of an accident previously evaluated.

   The probability of a leak in the reactor coolant pressure boundary during reactor coolant system pressure testing is not increased by considering the reactor to be in Cold Shutdown. Since the pressure tests are performed nearly water solid, at low decay heat values, and near Cold Shutdown conditions, the stored energy in the reactor core will be low. Under these conditions, the potential for failed fuel and a subsequent increase in coolant activity is minimized. In addition, Special Operations LCO [limiting condition for operation] 3.12.A requires supporting LCOs for ECCS-Cold Condition, Standby Gas Treatment, Secondary Containment isolation and Standby Gas Treatment initiation instrumentation, and Auxiliary Electrical Systems to be met to ensure secondary containment integrity is maintained and capable of handling any airborne radioactivity or steam leaks that could occur during the performance of hydrostatic or leak testing. A listing of secondary containment isolation valves required to maintain Secondary Containment Integrity is included in plant controlled procedures. The required pressure testing conditions provide adequate assurance that the consequences of a steam leak will be conservatively bounded by the consequences of the postulated main steam line break outside of primary containment. In the event of a large primary system leak, the reactor vessel would rapidly depressurize, allowing the low pressure core cooling systems to operate. The capability of these systems would be adequate to keep the core flooded under this low decay heat load condition. Small system leaks would be detected by leakage inspections before significant inventory loss occurred. Therefore, the consequences of an accident previously evaluated are not significantly increased.

2. create the possibility of a new or different kind of accident from those previously evaluated.

   The proposed changes do not introduce any new accident initiators or failure mechanisms since the changes do not involve any changes to structures, systems, or components, do not involve any change to the operation of systems, and alter procedures only to the extent that the 212$^{o}$F limit may be exceeded during reactor coolant system pressure testing with certain systems inoperable. There are no alterations to plant systems designed to mitigate the consequences of accidents. The only difference is that a different subset of plant systems would be utilized for accident mitigation than those utilized during the Hot Shutdown Mode. Therefore, the proposed

changes do not create the possibility of a new or different kind of accident from those previously evaluated.

3. involve a significant reduction in the margin of safety.

Since pressure tests are performed nearly water solid, at low decay heat values, and near Cold Shutdown conditions, the stored energy in the reactor core will be low. Under these conditions, the potential for failed fuel and a subsequent increase in coolant activity is minimized. Since secondary containment integrity will be maintained, in accordance with the Special Operations LCO, the secondary containment will be capable of handling any airborne radioactivity or steam leaks that could occur during the performance of hydrostatic or leak testing. Therefore, the proposed change does not involve a significant reduction in the margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff determines that the proposed amendment involves no significant hazards consideration.

## 5.0 STATE CONSULTATION

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

## 6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to use of facility components 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 inindividual or cumulative occupational radiation exposure. 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.

## 7.0 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 Contributors: R. Tjader
P. Tam

Date: November 3, 2000