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Docket No. 50-333

MAR 4 1982

Mr. Leroy W. Sinclair
President & Chief Operating Officer
Power Authority of the
State of New York
10 Columbus Circle
New York, New York 10019

Dear Mr. Sinclair:

The Commission has issued the enclosed Amendment No. 68 to Facility Operating License No. DPR-59 for the James A. FitzPatrick Nuclear Power Plant. The amendment consists of changes to the Technical Specifications in response to your request dated February 24, 1982 as modified by subsequent discussions with your staff.

The amendment revises the High Pressure Coolant Injection (HPCI) high steam flow trip differential pressure setting. Please be advised that the Power Authority is expected to verify the new trip setpoint by test during plant startup at the end of the current refueling outage.

We have determined that the proposed Technical Specifications and existing plant modifications satisfy the requirements of NUREG-0737, Item II.K.3.15, Isolation of HPCI/RCIC Modification.

Copies of the Safety Evaluation and Notice of Issuance are also enclosed.


Sincerely,

ORIGINAL SIGNED BY

Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Enclosures:
1. Amendment No. 68 to DPR-59
2. Safety Evaluation
3. Notice

cc: w/enclosures
See next page

*Previous Concurrence sheet concurred on by: S. Norris 3/2/82
P. Polk 3/1/82

There is no LPM currently assigned. While I have not been officially assigned LPM for II.K.3.15, I did participate in this review with P. Polk. Concur FR Notice & Amdt only

| OFFICE | *ORB#2 | *ORB#2 | ORB#2 | AD/OR | LPM | OELD | RSB |
|---|---|---|---|---|---|---|---|
| SURNAME | SNorris | PPolk:ms | DVassallo | TNovak | REmch | Gossard | MHodges |
| | 3/ /82 | 3/2/82 | 3/2/82 | 3/ /82 | 3/2/82 | 3/3/82 | 3/2/82 |

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USGPO: 1981—335-960

Mr. Leroy W. Sinclair
Power Authority of the State
of New York

cc:

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

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. 68
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 February 24, 1982, 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. 68 , 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.

FOR THE NUCLEAR REGULATORY COMMISSION

Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 4, 1982

ATTACHMENT TO LICENSE AMENDMENT NO. 68

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Revise Appendix A by removing page 70b and inserting revised page 70b.

TABLE 3.2-2 (cont'd)

INSTRUMENTATION THAT INITIATIONS OR CONTROLS THE CORE AND CONTAINMENT COOLING SYSTEMS

| Item No. | Minimum No. of Operable Instrument Channels Per Trip System (1) | Trip Function | Trip Level Setting | Total Number of Instrument Channels Provided by Design for Both Trip Systems | Remarks |
|---|---|---|---|---|---|
| 29 | 1 | RCIC Steam Line/ Area Temperature | $\leq$ 40° F Above max. ambient | 2 Inst. Channels | Close Isolation Valve in RCIC Subsystem |
| 30 | 1 | RCIC Steam Line Low Pressure | 100> P> 50 psig | 2 Inst. Channels | Close Isolation Valves in RCIC Subsystem |
| 31 | 1 | HPCI Turbine Steam Line High Flow | $\leq$ 106 in $H_2O$ | 2 Inst. Channels | Close Isolation Valves in HPCI Subsystem |
| 32 | 1 | RCIC Turbine High Exhaust Diaphragm Pressure | $\leq$ 10 psig | 2 Inst. Channels | Close Isolation Valves in RCIC Subsystem |
| 33 | 1 | HPCI Turbine High Exhaust Diaphragm Pressure | $\leq$ 10 psig | 2 Inst. Channels | Close Isolation Valves in HPCI Subsystem |
| 34 | 1 | LPCI Cross-Connect Position | NA | 1 Inst. Channels | Initiates annunication when valve is not closed |
| 35 | 1 | HPCI Steam Line Low Pressure | 100>P>50 psig | 2 Inst. Channels | Close Isolation Valve in HPCI Subsystems |
| 36 | 1 | HPCI Steam Line/ Area Temperature | $\leq$ 40° F above max. ambient | 2 Inst. Channels | Close Isolation Valve in HPCI Subsystem |

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

# SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

## SUPPORTING AMENDMENT NO. 68 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

Authors: Philip J. Polk, Marvin W. Hodges

## 1.0 Introduction

Item II.K.3.15 of NUREG-0737, Clarification of TMI Action Plan Requirements, required that by July 1, 1981 the High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) Systems be modified to prevent inadvertent isolation due to starting steam flow transients. A post implementation review was necessary to support a finding that modifications accomplished this goal.

By letter dated January 8, 1981 (reference 1) the Power Authority of the State of New York (the licensee) stated that modifications to HPCI and RCIC had been accomplished in March 1975. Furthermore, by license amendment No. 48 to Facility Operating License DPR-59, the FitzPatrick Technical Specifications were revised to reflect HPCI and RCIC high steam flow trips of 230 in. $H_2O$ psid and 282 in $H_2O$ psid, respectively.

The licensee, by reference (1), indicated that testing and actual HPCI/RCIC initiations from 1975 to the present had demonstrated the effectiveness of the modifications. However, by reference (3) we requested additional information to support the licensee's finding. By reference (4) the licensee responded to this request and indicated that a calculational error in determining the HPCI trip setpoint had been uncovered. In addition, the licensee requested that plant Technical Specifications be revised to reflect the correct setpoint.

## 2.0 Evaluation

The high-pressure coolant injection (HPCI) and reactor core isolation cooling (RCIC) systems use differential pressure sensors on elbow taps in the steam lines to their turbine drives to detect and isolate pipe breaks. This pipe-break-detection circuitry has resulted in spurious isolation of the HPCI and RCIC systems due to the pressure spike which accompanies startup of the systems; i.e., the startup pressure spike is sensed by the instrumentation as a pipe break. Therefore, NUREG-0737 required that the pipe-break-detection circuitry be modified so that pressure spikes resulting from HPCI and RCIC system initiation will not cause inadvertent system isolation.

There are several methods that can result in reducing or precluding spurious isolation of the RCIC and HPCI systems. The BWR Owners Group proposed, by reference (2), to modify the electrical portion of the trip logic by the addition of a time delay. Such an addition would allow pump turbine startup during the delay interval after which the steam lines high flow logic will cause an isolation valve closure if flow exceeds 300% of rated.

The Power Authority of the State of New York has already modified the FitzPatrick Plant with snubbers (adjustable orifices) located in the instrumentation sensing lines as well as with wider range instruments. The snubbers will reduce the pressure spike sensed by the instrumentation during pump startup and therefore reduce the possibility of receipt of a spurious isolation signal. The instruments themselves have setpoints which will initiate a trip signal at 300% rated flow for both the HPCI and RCIC systems. This in conjunction with the snubbers will satisfy the requirements of II.K.3.15 of NUREG-0737.

The General Electric (GE) Co. has performed an analysis for the worst case double-ended guillotine steam line break. This analysis is based upon a steam flow in excess of the 300% trip setpoint. The analysis concludes, assuming a single failure of one of the steam isolation valves concurrent with the loss of off-site power, that the remaining isolation valve will close and that the adverse effects during steam line blowdown are acceptable.

In addition to the GE worst case analysis, the licensee has addressed those accidents which result in a steam blowdown which is less than the 300% isolation valve trip setpoint. In this event the high steam flow instrumentation will not isolate the steam supply valves. However, two area temperature monitors are provided for HPCI and RCIC. These monitors will sense elevated temperature (40°F above maximum ambient temperature) and will initiate an isolation of the steam supply valves.

Based upon the aforementioned, we conclude that the proposed Technical Specifications and existing plant modifications satisfy the requirements of NUREG-0737, item II.K.3.15. Furthermore, we conclude that there are no adverse effects on overall plant safety design being introduced as a result. Therefore, we find the licensee's modifications acceptable.

## 3.0 Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made

this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR 51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

4.0 Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: March 4, 1982

References:

(1) Letter from J. P. Bayne (PASNY) to T. A. Ippolito re: Post-TMI Requirements, dated January 8, 1981.

(2) BWR Owners Group Evaluation of NUREG-0737, Item II.K.3.15.

(3) Letter from T. A. Ippolito (NRC) to G. T. Berry (PASNY) re: NUREG-0737, Item II.K.3.15 dated October 7, 1981.

(4) Letter from L. W. Sinclair (PASNY) re: NUREG-0737, Item II.K.3.15 dated February 24, 1982.

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-333

POWER AUTHORITY OF THE STATE OF NEW YORK

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 68 to Operating License No. DPR-59 issued to the Power Authority of the State of New York which revises the Technical Specifications for operation of the James A. FitzPatrick Nuclear Plant (the facility) located in Oswego County, New York. The amendment is effective as of the date of its issuance.

The amendment revises the Technical Specifications to correct the High Pressure Coolant Injection (HPCI) high steam flow trip differential pressure setting.

The application for the Amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of the amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of the amendment will not result in any significant environmental impact and that pursuant to 10 CFR 51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of the amendment.

For further details with respect to this action, see (1) the application for amendment dated February 24, 1982, (2) Amendment No. 68 to License No. DPR-59, and (4) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, NW., Washington, D. C., and at the Penfield Library, State University College at Oswego, Oswego, New York 13126. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 4th day of March 1982.

FOR THE NUCLEAR REGULATORY COMMISSION

Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing