February 7, 1989

Docket No. 50-333

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Mr. John C. Brons
Executive Vice President - Nuclear Generation
Power Authority of the State of New York
123 Main Street
White Plains, New York 10601

Dear Mr. Brons:

The Commission has issued the enclosed Amendment No. 122 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 application transmitted by letter dated September 13, 1988 (TAC 69372).

The amendment reflects deletion of pressure switches used to bypass the main steam line isolation valve (MSIV) reactor scram signal and to bypass the MSIV isolation signal on low main condenser vacuum when reactor pressure was below the setpoint, with the mode switch in the refuel or startup positions. The effect of the changes is to make the bypass dependent on the position of the mode switch alone, and independent of reactor pressure.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice.

Sincerely,

ORIGINAL SIGNED BY

David E. LaBarge, Project Manager
Project Directorate I-1
Division of Reactor Projects, I/II

Enclosures:
1. Amendment No. 122 to DPR-59
2. Safety Evaluation

cc: w/enclosures
See next page

*SEE PREVIOUS CONCURRENCE

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Mr. John C. Brons
Executive Vice President - Nuclear Generation
Power Authority of the State of New York
123 Main Street
White Plains, New York 10601

Dear Mr. Brons:

The Commission has issued the enclosed Amendment No. 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 application transmitted by letter dated September 13, 1988 (TAC 69372).

The amendment reflects deletion of pressure switches used to bypass the main steam line isolation valve (MSIV) reactor scram signal and to bypass the MSIV isolation signal on low main condenser vacuum when reactor pressure was below the setpoint, with the mode switch in the refuel or startup positions. The effect of the changes is to make the bypass dependent on the position of the mode switch alone, and independent of reactor pressure.

A copy of the related Safety Evaluation, which includes the Final No Significant Hazards Consideration Determination, is enclosed. A Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice.

Sincerely,

David E. LaBarge, Project Manager
Project Directorate I-1
Division of Reactor Projects, I/II

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

cc: w/enclosures
See next page

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Power Authority of the State of New York
James A. FitzPatrick Nuclear
Power Plant

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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. 122
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 September 13, 1988, 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. 122, 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

Robert A. Capra

Robert A. Capra, Director
Project Directorate I-1
Division of Reactor Projects, I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 7, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 122

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Revise Appendix A as follows:

Remove Pages	Insert Pages
4	4
41a	41a
42	42
64	64
65	65

1.0 (cont'd)

1. Refuel Mode - The reactor is in the refuel mode when the Mode Switch is in the Refuel Mode position. When the Mode Switch is in the Refuel position, the refueling interlocks are in service.

2. Run Mode - In this mode the reactor system pressure is at or above 850 psig and the Reactor Protection System is energized with APRM protection (excluding the 15 percent high flux trip) and the RBM interlocks in service.

3. Shutdown Mode - The reactor is in the shutdown mode when the Reactor Mode Switch is in the Shutdown Mode position.

   a. Hot shutdown means conditions as above with reactor coolant temperature $>212°F$.

   b. Cold shutdown means conditions as above with reactor coolant temperature $\leq 212°F$. and the reactor vessel vented.

4. Startup/Hot Standby - In this mode the low pressure main steam line isolation valve closure trip is bypassed, the Reactor Protection System is energized with APRM (15 percent) and IRM neutron monitoring system trips and control rod withdrawal interlocks in service.

J. Operable - A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).

K. Operating - Operating means that a system or component is performing its intended functions in its required manner.

L. Operating Cycle - Interval between the end of one refueling outage and the end of the subsequent refueling outage.

M. Primary Containment Integrity -
Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:

   1. All manual containment isolation valves on lines connected to the Reactor Coolant System or containment which are not required to be open during plant accident conditions are closed. These valves may be

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TABLE 3.1-1 (cont'd)

REACTOR PROTECTION SYSTEM (SCRAM) INSTRUMENTATION REQUIREMENT

Minimum No. of Operable Instrument Channels per Trip System (1)	Trip Function	Trip Level Setting[1]	Modes in Which Function Must be Operable			Total Number of Instrument Channels Provided by Design for Both Trip Systems	Action (1)
			Refuel (6)	Startup	Run		
2	APRM Downscale	≥ 2.5 indicated on scale (9)			X	6 Instrument Channels	A or B
2	High Reactor Pressure	≤ 1045 psig	X(8)	X	X	4 Instrument Channels	A
2	High Drywell Pressure	≤ 2.7 psig	X(7)	X(7)	X	4 Instrument Channels	A
2	Reactor Low Water Level	≥ 12.5 in. indicated level (≥ 177 in. above the top of active fuel)	X	X	X	4 Instrument Channels	A
3	High Water Level in Scram Discharge Volume	≤ 34.5 gallons per Instrument Volume	X(2)	X	X	8 Instrument Channels	A
2	Main Steam line High Radiation	≤ 3x normal full power background (16)	X	X	X	4 Instrument Channels	A
4	Main Steam Line Isolation Valve Closure	≤ 10% valve closure			X(5)	8 Instrument Channels	A

TABLE 3.1-1 (cont'd)

REACTOR PROTECTION SYSTEM (SCRAM) INSTRUMENTATION REQUIREMENT

Minimum No. of Operable Instrument Channels per Trip System (1)	Trip Function	Trip Level Setting	Modes in Which Function Must be Operable			Total Number of Instrument Channels Provided by Design for Both Trip Systems	Action (1)
			Refuel (6))16)	Startup	Run		
4	Turbine Stop Valve Closure	≤ 10% valve closure			X(4)(5)	8 Instrument Channels	A or C

NOTES OF TABLE 3.1-1

1. There shall be two operable or tripped trip systems for each function, except as specified in 4.1.D. From and after the time that the minimum number of operable instrument channel for a trip system cannot be met, that affected trip system shall be placed in the safe (tripped) condition, or the appropriate actions listed below shall be taken.
   A. Initiate insertion of operable rods and complete insertion of all operable rods within four hours.
   B. Reduce power level to IRM range and place Mode Switch in the Startup Position within eight hours.
   C. Reduce power to less than 30 percent of rated.
2. Permissible to bypass, if Refuel and Shutdown positions of the Reactor Mode Switch.
3. Deleted.
4. Bypassed when turbine first stage pressure is less than 217 psig or less than 30 percent of rated.
5. The design permits closure of any two lines without a scram being initiated.
6. When the reactor is subcritical and the reactor water temperature is less than 212°F, only the following trip functions need to be operable:
   A. Mode Switch in Shutdown
   B. Manual Scram

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TABLE 3.2-1

INSTRUMENTATION THAT INITIATES PRIMARY CONTAINMENT ISOLATION

Minimum Number of Operable Instrument Channels per Trip System (1)	Instrument	Trip Level Setting	Total Number of Instrument Channels Provided by Design for Both Trip Systems	Action 2
2 (6)	Reactor Low Water Level	≥ 12.5 in. Indicated Level (≥177 in. above the top of active fuel)	4 Inst. Channels	A
1	Reactor High Pressure (Shutdown Cooling Isolation)	≤75 psig	2 Inst. Channels	D
2	Reactor Low-Low-Low Water Level	≥ 18 in. above the TAF	4 Inst. Channels	A
2 (6)	High Drywell Pressure	≤ 2.7 psig	4 Inst. Channels	A
2	High Radiation Main Steam Line Tunnel	≤ 3 x Normal Rated Full Power Background (9)	4 Inst. Channels	B
2	Low Pressure Main Steam Line	≥ 825 psig (7)	4 Inst. Channels	B
2	High Flow Main Steam Line	≤ 140% of Rated Steam Flow	4 Inst. Channels	B
2	Main Steam Line Leak Detection High Temperature	≤40°F above max ambient	4 Inst. Channels	B
3	Reactor Cleanup System Equipment Area High Temperature	≤40°F above max ambient	6 Inst. Channels	C
2	Low Condenser Vacuum Closes MSIV's	≥ 8" Hg. Vac(7) (8)	4 Inst. Channels	B

Amendment No. ~~10, 31, 46, 51, 96, 103~~, 122

TABLE 3.2-1 (Cont'd)

INSTRUMENTATION THAT INITIATES PRIMARY CONTAINMENT ISOLATION

NOTES FOR TABLE 3.2-1

1. Whenever Primary Containment integrity is required by Section 3.7, there shall be two operable or tripped trip systems for each function.

2. From and after the time it is found that the first column cannot be met for one of the trip systems, that trip system shall be tripped or the appropriate action listed below shall be taken.

   A. Initiate an orderly shutdown and have the reactor in cold shutdown condition in 24 hours.

   B. Initiate an orderly load reduction and have main steam lines isolated within eight hours.

   C. Isolate Reactor Water Cleanup System.

   D. Isolate shutdown cooling.

3. Deleted

4. Deleted

5. Two required for each steam line.

6. These signals also start SBGTS and initiate secondary containment isolation.

7. Only required in run mode (interlocked with Mode Switch).

8. Bypassed when mode switch is not in run mode and turbine stop valves are closed.

9. The trip level setpoint will be maintained at ≤ 3 times normal rated full power background. See note 16 to Table 3.1-1 for re-setting trip level setpoint just prior to the Hydrogen Addition Test, and re-setting of the Main Steam Line Radiation Monitor for power levels below 20%.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 122 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

INTRODUCTION

By letter dated September 13, 1988, the Power Authority of the State of New York (PASNY) requested changes to the Technical Specifications (TS) for the James A. FitzPatrick Nuclear Power Plant. The proposed changes reflect deletion of four pressure switches which sense reactor vessel steam dome pressure. These switches establish the pressure setpoint below which the main steam isolation valve (MSIV) closure scram is bypassed when the reactor mode switch is in the refuel or startup positions. These switches also establish the pressure setpoint below which MSIV closure on low condenser vacuum is bypassed when the reactor mode switch is in the refuel or startup positions. The proposed changes to the TS consist of changes to the definition of Startup/Hot Standby, Table 3.1-1 and Table 3.2-1.

EVALUATION

The four pressure switches which provide the conditional bypass signals for a reactor scram on MSIV closure and MSIV isolation on low condenser vacuum were installed after instability was observed during startup of an early European Boiling Water Reactor. Subsequent startup tests at Browns Ferry, a BWR of similar design to FitzPatrick, showed that the instability observed in the European reactor was not a problem for this reactor design. Therefore, the tests showed that the switches were not necessary to provide protection for this event.

During normal startup conditions, the reactor pressure is below the setpoint and the MSIV closure scram is bypassed by the mode switch being in either the refuel or startup positions. Therefore, when the MSIVs are shut a scram will not occur. This allows the MSIVs to be shut for various maintenance purposes at a time when maximum reactor power is limited to a low value by other interlocks. Also, during normal startup conditions with the mode switch in either the refuel or startup positions, an MSIV isolation will not occur on low condenser vacuum. This allows the MSIVs to be open during outages and under other conditions before condenser vacuum has been established.

By virtue of the design of the plant, the setpoint of the pressure switches cannot be reached until reactor power has been raised to nearly full power.

Therefore, under normal conditions the switches do not actuate until full power is reached and then reset when power is reduced slightly. However, the status of the bypass has already been determined by changing the mode switch position - when the mode switch is placed into the run position the bypass is removed and when the mode switch is moved from the run position and placed into the refuel or startup positions the bypass is in effect. Therefore, the pressure dependence of the bypass is not necessary under normal operating conditions and the switches serve no useful purpose.

In startup mode, the reactor power is between approximately 0-15% of full power. The peak reactor pressure and the critical power ratio responses will be significantly below the limits established for transients during full power operation. In the startup mode, the Intermediate Range Monitor (IRM) subsystem and the Average Power Range Monitor (APRM) subsystem provide signals to the Reactor Protection System (RPS) to shut down the reactor. If MSIV closure occurs while the reactor is in the startup mode, the reactor will scram on high neutron flux or high reactor pressure. The overpressure protection analysis, for the limiting event of MSIV closure at 100% power terminated by the high neutron flux scram, provides the bounding analysis for the pressure transient. Therefore, the pressure dependence of MSIV scram and isolation bypass is not needed for mitigation of transients.

Therefore, removing the pressure switches and deleting the scram and isolation functions will have no impact on plant operation and is acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 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 this amendment.

CONCLUSION

We have 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, and (2) 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: February 7, 1989

PRINCIPAL CONTRIBUTOR:

David E. LaBarge

February 7, 1989

Docket No. 50-333

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Mr. John C. Brons
Executive Vice President - Nuclear Generation
Power Authority of the State of New York
123 Main Street
White Plains, New York 10601

Dear Mr. Brons:

The Commission has issued the enclosed Amendment No. 122 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 application transmitted by letter dated September 13, 1988 (TAC 69372).

The amendment reflects deletion of pressure switches used to bypass the main steam line isolation valve (MSIV) reactor scram signal and to bypass the MSIV isolation signal on low main condenser vacuum when reactor pressure was below the setpoint, with the mode switch in the refuel or startup positions. The effect of the changes is to make the bypass dependent on the position of the mode switch alone, and independent of reactor pressure.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice.

Sincerely,

ORIGINAL SIGNED BY

David E. LaBarge, Project Manager
Project Directorate I-1
Division of Reactor Projects, I/II

Enclosures:
1. Amendment No. 122 to DPR-59
2. Safety Evaluation

cc: w/enclosures
See next page

*SEE PREVIOUS CONCURRENCE

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8902130322

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Power Authority of the State of New York
James A. FitzPatrick Nuclear
Power Plant

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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. 122
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 September 13, 1988, 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:

8902130330

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 122, 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

Robert A. Capra

Robert A. Capra, Director
Project Directorate I-1
Division of Reactor Projects, I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 7, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 122

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Revise Appendix A as follows:

Remove Pages	Insert Pages
4	4
41a	41a
42	42
64	64
65	65

1.0 (cont'd)

1. Refuel Mode - The reactor is in the refuel mode when the Mode Switch is in the Refuel Mode position. When the Mode Switch is in the Refuel position, the refueling interlocks are in service.

2. Run Mode - In this mode the reactor system pressure is at or above 850 psig and the Reactor Protection System is energized with APRM protection (excluding the 15 percent high flux trip) and the RBM interlocks in service.

3. Shutdown Mode - The reactor is in the shutdown mode when the Reactor Mode Switch is in the Shutdown Mode position.

   a. Hot shutdown means conditions as above with reactor coolant temperature >212°F.

   b. Cold shutdown means conditions as above with reactor coolant temperature ≤212°F. and the reactor vessel vented.

4. Startup/Hot Standby - In this mode the low pressure main steam line isolation valve closure trip is bypassed, the Reactor Protection System is energized with APRM (15 percent) and IRM neutron monitoring system trips and control rod withdrawal interlocks in service.

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JAFNPP

TABLE 3.1-1 (cont'd)

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2	High Reactor Pressure	≤ 1045 psig	X(8)	X	X	4 Instrument Channels	A
2	High Drywell Pressure	≤ 2.7 psig	X(7)	X(7)	X	4 Instrument Channels	A
2	Reactor Low Water Level	≥ 12.5 in. indicated level (≥ 177 in. above the top of active fuel)	X	X	X	4 Instrument Channels	A
3	High Water Level in Scram Discharge Volume	≤ 34.5 gallons per Instrument Volume	X(2)	X	X	8 Instrument Channels	A
2	Main Steam line High Radiation	≤ 3x normal full power background (16)	X	X	X	4 Instrument Channels	A
4	Main Steam Line Isolation Valve Closure	≤ 10% valve closure			X(5)	8 Instrument Channels	A

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TABLE 3.1-1 (cont'd)

REACTOR PROTECTION SYSTEM (SCRAM) INSTRUMENTATION REQUIREMENT

Minimum No. of Operable Instrument Channels per Trip System (1)	Trip Function	Trip Level Setting	Modes in Which Function Must be Operable			Total Number of Instrument Channels Provided by Design for Both Trip Systems	Action (1)
			Refuel (6))16)	Startup	Run		
4	Turbine Stop Valve Closure	≤ 10% valve closure			X(4)(5)	8 Instrument Channels	A or C

NOTES OF TABLE 3.1-1

1. There shall be two operable or tripped trip systems for each function, except as specified in 4.1.D. From and after the time that the minimum number of operable instrument channel for a trip system cannot be met, that affected trip system shall be placed in the safe (tripped) condition, or the appropriate actions listed below shall be taken.
   A. Initiate insertion of operable rods and complete insertion of all operable rods within four hours.
   B. Reduce power level to IRM range and place Mode Switch in the Startup Position within eight hours.
   C. Reduce power to less than 30 percent of rated.
2. Permissible to bypass, if Refuel and Shutdown positions of the Reactor Mode Switch.
3. Deleted.
4. Bypassed when turbine first stage pressure is less than 217 psig or less than 30 percent of rated.
5. The design permits closure of any two lines without a scram being initiated.
6. When the reactor is subcritical and the reactor water temperature is less than 212°F, only the following trip functions need to be operable:
   A. Mode Switch in Shutdown
   B. Manual Scram

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TABLE 3.2-1

INSTRUMENTATION THAT INITIATES PRIMARY CONTAINMENT ISOLATION

Minimum Number of Operable Instrument Channels per Trip System (1)	Instrument	Trip Level Setting	Total Number of Instrument Channels Provided by Design for Both Trip Systems	Action 2
2 (6)	Reactor Low Water Level	≥ 12.5 in. Indicated Level (≥177 in. above the top of active fuel)	4 Inst. Channels	A
1	Reactor High Pressure (Shutdown Cooling Isolation)	≤75 psig	2 Inst. Channels	D
2	Reactor Low-Low-Low Water Level	≥ 18 in. above the TAF	4 Inst. Channels	A
2 (6)	High Drywell Pressure	≤ 2.7 psig	4 Inst. Channels	A
2	High Radiation Main Steam Line Tunnel	≤ 3 x Normal Rated Full Power Background (9)	4 Inst. Channels	B
2	Low Pressure Main Steam Line	≥ 825 psig (7)	4 Inst. Channels	B
2	High Flow Main Steam Line	≤ 140% of Rated Steam Flow	4 Inst. Channels	B
2	Main Steam Line Leak Detection High Temperature	≤40°F above max ambient	4 Inst. Channels	B
3	Reactor Cleanup System Equipment Area High Temperature	≤40°F above max ambient	6 Inst. Channels	C
2	Low Condenser Vacuum Closes MSIV's	≥ 8" Hg. Vac(7) (8)	4 Inst. Channels	B

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TABLE 3.2-1 (Cont'd)

INSTRUMENTATION THAT INITIATES PRIMARY CONTAINMENT ISOLATION

NOTES FOR TABLE 3.2-1

1. Whenever Primary Containment integrity is required by Section 3.7, there shall be two operable or tripped trip systems for each function.

2. From and after the time it is found that the first column cannot be met for one of the trip systems, that trip system shall be tripped or the appropriate action listed below shall be taken.

   A. Initiate an orderly shutdown and have the reactor in cold shutdown condition in 24 hours.

   B. Initiate an orderly load reduction and have main steam lines isolated within eight hours.

   C. Isolate Reactor Water Cleanup System.

   D. Isolate shutdown cooling.

3. Deleted

4. Deleted

5. Two required for each steam line.

6. These signals also start SBGTS and initiate secondary containment isolation.

7. Only required in run mode (interlocked with Mode Switch).

8. Bypassed when mode switch is not in run mode and turbine stop valves are closed.

9. The trip level setpoint will be maintained at ≤ 3 times normal rated full power background. See note 16 to Table 3.1-1 for re-setting trip level setpoint just prior to the Hydrogen Addition Test, and re-setting of the Main Steam Line Radiation Monitor for power levels below 20%.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 122 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

INTRODUCTION

By letter dated September 13, 1988, the Power Authority of the State of New York (PASNY) requested changes to the Technical Specifications (TS) for the James A. FitzPatrick Nuclear Power Plant. The proposed changes reflect deletion of four pressure switches which sense reactor vessel steam dome pressure. These switches establish the pressure setpoint below which the main steam isolation valve (MSIV) closure scram is bypassed when the reactor mode switch is in the refuel or startup positions. These switches also establish the pressure setpoint below which MSIV closure on low condenser vacuum is bypassed when the reactor mode switch is in the refuel or startup positions. The proposed changes to the TS consist of changes to the definition of Startup/Hot Standby, Table 3.1-1 and Table 3.2-1.

EVALUATION

The four pressure switches which provide the conditional bypass signals for a reactor scram on MSIV closure and MSIV isolation on low condenser vacuum were installed after instability was observed during startup of an early European Boiling Water Reactor. Subsequent startup tests at Browns Ferry, a BWR of similar design to FitzPatrick, showed that the instability observed in the European reactor was not a problem for this reactor design. Therefore, the tests showed that the switches were not necessary to provide protection for this event.

During normal startup conditions, the reactor pressure is below the setpoint and the MSIV closure scram is bypassed by the mode switch being in either the refuel or startup positions. Therefore, when the MSIVs are shut a scram will not occur. This allows the MSIVs to be shut for various maintenance purposes at a time when maximum reactor power is limited to a low value by other interlocks. Also, during normal startup conditions with the mode switch in either the refuel or startup positions, an MSIV isolation will not occur on low condenser vacuum. This allows the MSIVs to be open during outages and under other conditions before condenser vacuum has been established.

By virtue of the design of the plant, the setpoint of the pressure switches cannot be reached until reactor power has been raised to nearly full power.

Therefore, under normal conditions the switches do not actuate until full power is reached and then reset when power is reduced slightly. However, the status of the bypass has already been determined by changing the mode switch position - when the mode switch is placed into the run position the bypass is removed and when the mode switch is moved from the run position and placed into the refuel or startup positions the bypass is in effect. Therefore, the pressure dependence of the bypass is not necessary under normal operating conditions and the switches serve no useful purpose.

In startup mode, the reactor power is between approximately 0-15% of full power. The peak reactor pressure and the critical power ratio responses will be significantly below the limits established for transients during full power operation. In the startup mode, the Intermediate Range Monitor (IRM) subsystem and the Average Power Range Monitor (APRM) subsystem provide signals to the Reactor Protection System (RPS) to shut down the reactor. If MSIV closure occurs while the reactor is in the startup mode, the reactor will scram on high neutron flux or high reactor pressure. The overpressure protection analysis, for the limiting event of MSIV closure at 100% power terminated by the high neutron flux scram, provides the bounding analysis for the pressure transient. Therefore, the pressure dependence of MSIV scram and isolation bypass is not needed for mitigation of transients.

Therefore, removing the pressure switches and deleting the scram and isolation functions will have no impact on plant operation and is acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 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 this amendment.

CONCLUSION

We have 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, and (2) 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: February 7, 1989

PRINCIPAL CONTRIBUTOR:

David E. LaBarge