October 7, 1976

Docket No.. 50-333

DISTRIBUTION:
Docket File
NRC PDR
L PDR
ORB#4 Rdg
KRGoller/TJCarter
VStello
RIngram
MFairtile
Attorney, OELD
OI&E (5)
BJones (4)
BScharf (10)
JMcGough
ACRS (16)
OPA, Clare Miles
DRoss
TBAbernathy
JRBuchanan

R. Baer
W. Butler

Power Authority of the State
of New York
ATTN: Mr. George T. Berry
General Manager and
Chief Engineer
10 Columbus Circle
New York, New York 10019

Gentlemen:

The Commission has issued the enclosed Amendment No. 19 to Facility Operating License No. DPR-59 for the FitzPatrick Nuclear Power Plant. The amendment consists of changes to the Technical Specifications in response to your application for amendment submitted by letter dated August 10, 1976 and staff discussions.

The amendment provides for an increase in the High Drywell Pressure setpoint.

Copies of the Safety Evaluation and the Federal Register Notice are enclosed.

Sincerely,

Original

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Enclosures:
1. Amendment No. 19
2. Safety Evaluation
3. Federal Register Notice

cc w/enclosures: See next page

OFFICE ➤	ORB#4:DOR	ORB#4:DOR	OELD	C-ORB#4:DOR	C-PSB-OT.DOR	C-PSB-OT.DOR
SURNAME ➤	RIngram	MFairtile:rm	[redacted]	RReid	WButler	RBaer
DATE ➤	9/30/76	9/30/76	10/7/76	10/7/76	9/30/76	9/30/76

AEC-318 (Rev. 9-53) AECM 0240

Power Authority of the
State of New York

cc w/enclosure(s):
Scott B. Lilly, General Counsel
Power Authority of the State of New York
10 Columbus Circle
New York, New York 10019

Lex K. Larson, Esq.
LeBoeuf, Lamb, Leiby and MacRae
1757 N Street, N. W.
Washington, D. C. 20036

Lauman Martin, Esquire
Senior Vice President
and General Counsel
Niagara Mohawk Power Corporation
300 Erie Boulevard
Syracuse, New York 13202

Charles V. Mangan
Manager Production Plant Engineering
Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, New York 13202

Mr. Z. Chilazi
Power Authority of the State of New York
10 Columbus Circle
New York, New York 10019

Oswego City Library
120 East Second Street
Oswego, New York 13126

Mr. Robert P. Jones, Supervisor
Town of Scriba
R. D. #4
Oswego, New York 13126

Mr. Alvin L. Krakau
Chairman, County Legislature
County Office Building
46 East Bridge Street
Oswego, New York 13126

New York State Atomic Energy
Council
ATTN: Staff Coordinator
New York State Department
of Commerce
99 Washington Street
Albany, New York 12210

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

POWER AUTHORITY OF THE STATE OF NEW YORK

AND

NIAGARA MOHAWK POWER CORPORATION

DOCKET NO. 50-333

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 19
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 and Niagara Mohawk Power Corporation (the licensees) sworn to August 6, 1976, 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.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert W. Reid

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 7, 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 19

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Replace pages 41, 42, 64, 66, and 67 of the Appendix A Technical Specifications with the attached pages bearing the same numbers. Changes on these pages are shown by marginal lines. Page 42 is unchanged and is included for convenience only.

TABLE 3.1-1

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)	Startup	Run		
1	Mode Switch in Shutdown		X	X	X	1 Mode Switch (4 Sections)	A
1	Manual Scram		X	X	X	2 Instrument Channels	A
3	IRM High Flux	≤120/125 of full scale	X	X		8 Instrument Channels	A
3	IRM Inoperative		X	X		8 Instrument Channels	A
2	APRM High Flux	$S_N \leq (2.60/PF) \times S_0$			X	6 Instrument Channels	A or B
2	APRM Inoperative	(10)	X	X	X	6 Instrument Channels	A or B
2	APRM Downscale	≥2.5 indicated on scale (9)			X	6 Instrument Channels	A or B
2	APRM High Flux in Startup	≤15% power	X	X		6 Instrument Channels	A
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	X	X	X	4 Instrument Channels	A
2	High Water Level in Scram Discharge Volume	≤36 gal	X (2)	X	X	4 Instrument Channels	A
2	Main Steam Line High Radiation	≤3 X normal full power background	X	X	X	4 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)	Startup	Run		
4	Main Steam Line Isolation Valve Closure	≤10% valve closure	X(3) (5)	X(3) (5)	X(5)	8 Instrument Channels	A
2	Turbine Control Valve Fast Closure	500<P<850 psig control oil pressure between fast closure solenoid and disc dump valve			X(4)	4 Instrument Channels	A or C
4	Turbine Stop Valve Closure	≤10% valve closure			X(4) (5)	8 Instrument Channels	A or C

NOTES FOR 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 channels for a trip system cannot be met, the 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, in Refuel and Shutdown positions of the Reactor Mode Switch.

3. Bypassed when reactor pressure is < 1005 psig.

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

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 Channels	Action (2)
2 (6)	Reactor Low Water Level	≥ 12.5 Indicated Level (3)	4 Inst. Channels	A
1	Reactor High Pressure (Shutdown Cooling Isolation)	≤ 75 psig	2 Inst. Channels	D
2	Reactor Low-Low Water Level	≥-38 in. indicated level (4)	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	4 Inst. Channels	B
2	Low Pressure Main Steam Line	≥ 850 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 Tunnel Exhaust Duct High Temperature	≤ 40° F above max ambient	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
1	Reactor Cleanup System High Temperature	≤ 140° F	1 Inst. Channel	C
2	Low Condenser Vacuum closes MSIV's	≥ 8" Hg. vac. (8)	4 Inst. Channels	B

TABLE 3.2-2

INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT COOLING SYSTEMS

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 Channels	Remarks
2	Reactor Low-Low Water Level	≥-38 in. indicated level	4 HPCI & RCIC Inst. Channels	Initiates HPCI, RCIC & SGTS.
2	Reactor Low-Low-Low Water Level	≥-146.5 in. indicated level (4)	4 Core Spray & RHR Instrument Channels 4 ADS Instrument Channels	1. In conjunction with Low Reactor Pressure initiates Core Spray and LPCI. 2. In conjunction with confirmatory low level High Drywell Pressure, 120 second time delay and LPCI or Core Spray pump interlock initiates Auto Blowdown (ADS). 3. Initiates starting of Diesel Generator.
2	Reactor High Water Level	≤+58 in. indicated level	2 Inst. Channels	Trips HPCI and RCIC turbines.
1	Reactor Low Level (inside shroud)	≥ +352 in. above vessel zero	2 Inst. Channels	Prevents inadvertent operation of containment spray during accident condition.
2	Containment High Pressure	1 < p < 2.7 psig	4 Inst. Channels	Prevents inadvertent operation of containment spray during accident condition.
1	Confirmatory Low Level	≥ 12.5 in. indicated level	2 Inst. Channels	ADS Permissive.

Amendment No. [illegible]

TABLE 3.2-2 (Cont'd)

INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT COOLING SYSTEMS

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 Channels	Remarks
2	High Drywell Pressure	≤ 2.7psig	4 HPCI Inst. Channels 4 RHR & Core Spray Inst. Channels	1. Initiates Core Spray LPCI; HPCI & SGTS. 2. Initiates starting of Diesel Generators
2	Reactor Low Pressure	≥ 450 psig	4 Inst. Channels	Permissive for opening Core Spray and LPCI Admission valves. Coincident with high drywell pressure, starts LPCI and Core Spray pumps.
1	Reactor Low Pressure	50 ≤ P ≤ 75 psig	2 Inst. Channels	In conjunction with PCIS signal permits closure of RHR (LPCI) injection valves.
2	Reactor Low Pressure	≥ 900 psig	4 Inst. Channels	Prevents actuation of LPCI break detection circuit.
2	High Drywell Pressure	≤ 2.7 psig	4 Inst. Channels	1. In conjunction with Low-Low Reactor Water Level, 120 second time delay and LPCI or Core Spray pump running, initiates Auto Blowdown (ADS).
1	Core Spray Pump Start Timer	11 ± 0.6 sec	2 Timers 2 Timers	Initates starting of core spray and RHR pumps.
1	RHR Pump Start Timer Pump #1 Pump #2	 1.0 + 0.5, -0 sec 6.0 ± 0.5 sec	 2 Timers 2 Timers	

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 19 TO FACILITY OPERATING LICENSE NO. DPR-59

POWER AUTHORITY OF THE STATE OF NEW YORK

AND

NIAGARA MOHAWK POWER CORPORATION

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

DOCKET NO. 50-333

Introduction

By an application for amendment to Operating License, submitted by letter dated August 10, 1976, and as modified by staff discussions, the Power Authority of the State of New York and Niagara Mohawk Power Corporation (the licensees), proposed changes to the Technical Specifications appended to Facility Operating License No. DPR-59, for the James A. FitzPatrick Nuclear Power Plant. The proposed changes would provide an increase in the High Drywell Pressure setpoint from 2.0 to 2.7 psig.

Background

As a result of structural analyses performed in conjunction with a generic review of pool dynamic loads for Mark I pressure - suppression containments, and orally reported to NRC on January 28, 1976, it was determined that the consideration of pool dynamic loads resulting from a postulated loss-of-coolant accident had reduced the margin of safety in the containment design for the FitzPatrick Nuclear Power Plant. By letter dated February 27, 1976, Ben C. Rusche to PASNY, we stated that a minimum pressure differential of 1.0 psi between drywell and torus would restore the needed margin of safety. On March 1, 1976, by letter, the licensees agreed to institute "differential pressure control" to mitigate the pool dynamic loads and thereby restore the margin of safety in the containment design by instituting a 1.0 psi pressure difference. The differential pressure control establishes a positive pressure between the drywell and torus regions of the containment which reduces the height of the water leg in the downcomers and subsequently reduces the hydrodynamic loads. The licensee in a letter dated September 10, 1976, submitted a plant unique analysis stating that a differential pressure of 1.7 psi was now needed to maintain the safety margins on the torus and torus supports.

The proposed license amendment of August 10, 1976, requested a technical specification change increasing the high drywell pressure setpoint from 2.0 psig to 2.7 psig in order to permit the plant to increase the pressure difference between the drywell and torus to 1.7 psi lessening the probability of an inadvertent trip of the setpoint which would cause reactor scram, containment isolation and attempt initiation of certain ECCS components.

Evaluation

The high drywell pressure trip signal is used to initiate primary containment isolation and serves as a backup or conjunctive signal to initiate the ECCS systems. While it is proposed to raise the trip setpoint value from 2.0 psig to 2.7 psig, the differential pressure between drywell ambient and the trip setting remains at 1.0 psi, as the drywell pressure is increased from 1.0 psi to 1.7 psi concurrently.

We have reviewed the proposed change with respect to the time to achieve containment isolation, the performance of the ECCS systems, and the containment response to a postulated loss-of-coolant accident (LOCA). The higher initial containment pressure will slightly improve ECCS pump performance due to the small increase in the net positive suction head accompanied by a lesser increase in pump discharge pressure. In addition, the change in the containment isolation time and the containment pressure response will be small since they are primarily a function of the differential pressure from drywell ambient and the trip setting. The margins between the containment design pressure and temperature and the calculated results for a spectrum of breaks is sufficiently large to accommodate the small changes associated with the higher setpoint. Fuel peak clad temperatures would be unaffected in the event of the design basis accident by the 0.7 psi increase in containment ambient pressure as the rate of discharge from a postulated double-ended pipe rupture would be at choked-flow conditions and independent of discharge pressure.

Based on our review we find the licensees' proposal to increase the high drywell pressure setpoint from 2.0 psig to 2.7 psig acceptable.

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.

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: October 7, 1976

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-333

POWER AUTHORITY OF THE STATE OF NEW YORK

AND

NIAGARA MOHAWK POWER CORPORATION

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 19 to Facility Operating License No. DPR-59, issued to Power Authority of the State of New York and Niagara Mohawk Power Corporation (the licensees), which revised Technical Specifications for operation of the James A. FitzPatrick Nuclear Power Plant (the facility) located in Oswego County, New York. The amendment is effective as of its date of issuance.

The amendment provides for an increase in the High Drywell Pressure setpoint.

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 this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this 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 this amendment.

For further details with respect to this action, see (1) the application for amendment submitted by letter dated August 10, 1976, (2) Amendment No. 19 to License No. DPR-59, and (3) 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, N.W., Washington, D.C. and at the Oswego City Library, 120 East Second Street, Oswego, New York.

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 Operating Reactors.

Dated at Bethesda, Maryland, this 7th day of October 1976.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert W. Reid

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors