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Docket No. 50-333

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. 8 to Facility  
Operating License No. DPR-59 for the FitzPatrick Nuclear Power Plant.

The amendment modifies the license to authorize modifications that  
will improve the functioning of the Low Pressure Coolant Injection  
System (LPCIS) of the Emergency Core Cooling System (ECCS). This  
amendment is in partial response to your application for license  
amendment dated January 6, 1976 which also referenced a previous  
letter dated July 24, 1975.

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

Sincerely,

Original signed by  
Robert W. Reid

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

Enclosures:

1. Amendment No. 8
2. Safety Evaluation
3. Federal Register Notice

cc:

See next page

OFFICE➤	ORB4 <i>di</i>	ORB4 <i>MBZ</i>	OELD <i>RA</i>	<i>RMH</i> ORB4		
SURNAME➤	RIngram	MFairtile: <i>mt</i>	<i>TOURTELL</i>	<i>OTTE</i> RWReid		
DATE➤	1/13/76	1/13/76	1/14/76	1/15/76		

January 15, 1976

cc w/enclosures:

Scott B. Lilly, General Counsel  
Power Authority of the State  
of New York  
10 Columbus Circle  
New York, New York 10019

Arvin E. Upton, Esquire  
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 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

cc w/enclosures & incoming:

Dr. William E. Seymour  
Staff Coordinator  
New York State Atomic  
Energy Council  
New York State Department  
of Commerce  
112 State Street  
Albany, New York 12207

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



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. 8  
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 and Niagara Mohawk Power Corporation (the licensees) dated January 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, 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. An environmental statement or negative declaration need not be prepared in connection with the issuance of this amendment.

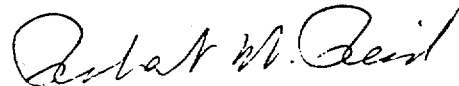
January 15, 1976

2. Accordingly, Facility Operating License No. DPR-59, as amended, is hereby further amended by adding a new paragraph 2.C.(3) as follows:

"(3) The licensees may perform modifications to the Low Pressure Coolant Injection System as described in the licensees' application for license amendment dated January 6, 1976. The licensees shall not operate the facility prior to receipt of the Commission's authorization."

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

FOR THE NUCLEAR REGULATORY COMMISSION



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

Date of Issuance:  
January 15, 1976



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

AMENDMENT NO. 8 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

As part of an application dated January 6, 1976 which also referenced a letter dated July 24, 1975, Power Authority of the State of New York and Niagara Mohawk Power Corporation requested authorization to modify the Low Pressure Coolant Injection System (LPCIS) of the Emergency Core Cooling System (ECCS) for the FitzPatrick Nuclear Power Plant. This request was made in order to improve the ECCS performance and was submitted in conjunction with the licensees' reanalysis of ECCS performance in conformance with the requirements of 10 CFR Part 50, Section 50.46.

The proposed modifications to the LPCIS involve:

1. The removal of the LPCIS recirculation loop selection logic;
2. Changing the action of the recirculation loop discharge valves such that they are required to close upon signal to the modified LPCIS to mitigate the consequences of a postulated Loss-of-Coolant Accident (LOCA);
3. Closing the cross-tie valve between the two LPCIS headers, key-locking the valve closed, and providing an annunciator to indicate an open condition;
4. Rewiring of the system so that the accident initiation signals direct both the normally closed LPCIS injection valves to open upon detection of LOCA conditions;

5. Changing the LPCI pump start signal to be initiated from two divisions instead of one.

We have reviewed and approved comparable modifications for the Vermont Yankee and Peach Bottom Units 2 and 3 facilities. Similarly for FitzPatrick, the proposed changes in the LPCIS as indicated above are being made to achieve a reduction in the peak cladding temperature following a LOCA that results from a postulated recirculation suction line break. The criteria set forth in 10 CFR Part 50, Section 50.46 require, in part, that the peak cladding temperature following a LOCA not exceed 2200°F. Since this limitation is more conservative than that previously imposed by the interim acceptance criteria, it would result in greater operating restrictions if the LPCIS were not modified as proposed. The proposed modification takes advantage of, and allows credit for, the flooding effect in the reactor vessel lower plenum achieved through the availability of additional LPCI pumps under the worst single failure condition and break location.

#### Discussion

The licensee will make the modifications in the LPCIS concurrent with the installation of plugs in the bypass flow holes in the lower core support plate for FitzPatrick. Authorization for performing the "plugging" operation will be considered by NRC as a separate action.

On December 23, 1975 the licensee submitted an ECCS evaluation, in accordance with the requirements of 10 CFR, Part 50, Section 50.46. This ECCS evaluation included both the plugging modification and modified LPCIS to determine acceptable reactor operating conditions with the criteria of 10 CFR Part 50, Section 50.46. We will evaluate the submittal and, if acceptable, will issue a license amendment with appropriate Technical Specifications for the revised ECCS analysis and LPCIS modification. This license amendment will be issued prior to the reactor start up.

#### Evaluation

The reactor will be shutdown before modification of the LPCI system begins and will remain shutdown until after the modification is completed and until NRC amends the FitzPatrick license authorizing operation of the reactor with the modified LPCI system. There is no requirement for the LPCI system to be operative while the reactor is shutdown. Our

authorization to permit installation of the changes discussed in the Introduction does not constitute a prejudgement of our granting authority to operate with the changes; however, since we have approved similar changes at many other comparable facilities the licensee may proceed with the changes, at his own risk, realizing that the license amendment authorizing operation has not been issued yet. The cost of installing the change and possibly restoring the plant to its original condition, if subsequent authorization to operate with the change is not granted is a small fraction of the cost, in terms of days of lost power production if the licensee has to install the change after we authorize operation with the change.

The LPCI system is, in part, a subsystem of the residual heat removal (RHR) system. We have determined that the operation of the RHR system, during reactor shutdown, will not be affected while work is in progress on modification of the LPCI system. The modification during reactor shutdown does not affect the safety of the reactor.

The above mentioned license amendment required for reactor operation with the modified LPCI system will be part of an overall license amendment authorizing operating limits based on the General Electric Thermal Analysis Basis, and conforming to the requirements of Section 50.46 of 10 CFR 50 (ECCS evaluation).

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 statement, negative declaration, or 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 change 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 change 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:

January 15, 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

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 8 to Facility Operating License No. DPR-59 issued to the Power Authority of the State of New York and the Niagara Mohawk Power Corporation for operation of the James A. FitzPatrick Nuclear Power Plant, located in Oswego County, New York. The amendment is effective as of its date of issuance.

The amendment modifies the license to authorize modifications that will improve the functioning of the Low Pressure Coolant Injection System (LPCIS) of the Emergency Core Cooling System (ECCS). This amendment is in partial response to the licensees' application dated January 6, 1976 which also referenced a previous letter dated July 24, 1975.

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 is 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 statement, negative declaration or environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) application for amendment dated January 6, 1976 and referenced letter dated July 24, 1975, (2) Amendment No. 8 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 Reactor Licensing.

Dated at Bethesda, Maryland, this 15th day of January, 1976.

FOR THE NUCLEAR REGULATORY COMMISSION



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