

Docket No.: ~~50-333~~

APR. 30 1976

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

The Commission has issued the enclosed Amendment No. 17 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 January 27, 1976.

This amendment revises the conductivity and chloride ion concentration limits of the reactor coolant water under certain operating conditions.

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

Sincerely,

*Original Signed by*

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

Enclosures:

1. Amendment No. 17
2. Safety Evaluation
3. Federal Register Notice

cc w/enclosures: See next page

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DATE →	4/19/76	4/19/76	4/21/76	4/30/76	

Power Authority of the State  
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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

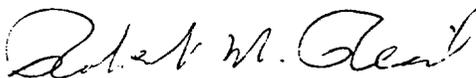
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 17  
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) sworn to January 27, 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. An environmental statement or negative declaration need not be prepared in connection with the issuance of this amendment.

2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment.
3. This license amendment is effective within thirty days of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



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

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: APR. 30 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 17

FACILITY OPERATING LICENSE NO. DPR-59

DOCKET NO. 50-333

Replace pages 139, 140, and 141 of the Appendix A Technical Specifications with the attached pages bearing the same numbers. Changes on these pages are shown by marginal lines. Page 139 is unchanged and is included for convenience only.

### C. Coolant Chemistry

1. The reactor coolant system radioactivity concentration in water shall not exceed the equilibrium value of  $3.1 \mu\text{Ci/gm}$  of dose equivalent I-131. This limit may be exceeded, following a power transient, for a maximum of 48 hr. During this iodine activity transient the iodine concentrations shall not exceed the equilibrium limits by more than a factor of 10 whenever the main steamline isolation valves are open. The reactor shall not be operated more than 5 percent of its annual power operation under this exception to the equilibrium limits. If the iodine concentration exceeds the equilibrium limit by more than a factor of 10, the reactor shall be placed in a cold condition within 24 hr.

### C. Coolant Chemistry

1. a. A sample of reactor coolant shall be taken at least every 96 hr and analyzed for gross gamma activity.
- b. Isotopic analysis of a sample of reactor coolant shall be made at least once/month.
- c. A sample of reactor coolant shall be taken prior to startup and at 4 hr intervals during startup and analyzed for gross gamma activity.
- d. During plant steady state operation and following an offgas activity increase (at the Steam Jet Air Ejectors) of  $10,000 \mu\text{Ci/sec}$  within a 48 hr period or a power level change of  $\geq 20$  percent of full rated power/hr reactor coolant samples shall be taken and analyzed for gross gamma activity. At least three samples will be taken at 4 hr intervals. These sampling requirements may be omitted whenever the equilibrium I-131 concentration in the reactor coolant is less than  $0.007 \mu\text{Ci/ml}$ .

2. The reactor coolant water shall not exceed the following limits with steaming rates less than 100,000 lb/hr except as specified in 3.6.C.3:

Conductivity	2 $\mu$ mho/cm
Chloride ion	0.1 ppm

3. For reactor startups the maximum value for conductivity shall not exceed 10  $\mu$  mho/cm and the maximum value for chloride ion concentration shall not exceed 0.1 ppm, for the first 24 hr after placing the reactor in the power operating condition. During reactor shutdowns, specification 3.6.C.4 will apply.

- e. If the gross activity counts made in accordance with a, c, and d above indicate a total iodine concentration in excess of 0.007  $\mu$  Ci/ml, a quantitative determination shall be made for I-131 and I-133.

2. During startups and at steaming rates below 100,000 lb/hr, and when the conductivity of the reactor coolant exceeds 2  $\mu$  mhos/cm, a sample of reactor coolant shall be taken every 4 hr and analyzed for conductivity and chloride content.
3. a. With steaming rates greater than or equal to 100,000 lb/hr, a reactor coolant sample shall be taken at least every 96 hr and whenever the continuous conductivity monitors indicate abnormal conductivity (other than short-term spikes), and analyzed for conductivity and chloride ion content.
- b. When the continuous conductivity monitor is inoperable, a reactor coolant sample shall be taken at least daily and analyzed for conductivity and chloride ion content.

- 4. Except as specified in 3.6.C.3 above, the reactor coolant water shall not exceed the following limits with steaming rates greater than or equal to 100,000 lb/hr and during reactor shutdowns.

Conductivity 5 µmho/cm  
Chloride ion 0.5 ppm

- 5. If Specification 3.6.C cannot be met, the reactor shall be placed in a cold condition within 24 hr.

D. Coolant Leakage

- 1. Any time irradiated fuel is in the reactor vessel and reactor coolant temperature is above 212°F, reactor coolant leakage into the primary containment from unidentified sources shall not exceed 5 gpm. In addition, the total reactor coolant system leakage into the primary containment shall not exceed 25 gpm.
- 2. The Reactor Coolant Leakage Detection System shall be operable during reactor power operation.
  - a. From and after the time that either the equipment drain pump, or the floor drain pump subsystems is

D. Coolant Leakage

Reactor coolant leakage rate inside the primary containment shall be established once/day utilizing the Equipment and Floor Drain Sump Systems.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 17 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 January 27, 1976, the Power Authority of the State of New York (PASNY) and Niagara Mohawk Power Corporation (NMPC) 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 revise the conductivity and chloride ion concentration limits of the reactor coolant water under certain operating conditions.

EVALUATION

In order to prevent the effects of corrosion from causing leakage through various heat exchangers which form a barrier between the high purity reactor water and heat sink cooling water it is necessary to limit the quantity of dissolved oxygen, measured as water conductivity, in the reactor water. Low conductivity also indicates the presence of dissolved solids which could cause crud buildup on fuel. The chloride ion concentration of the reactor water should be maintained as low as practical in order to protect austenitic stainless steel components of the reactor coolant system, in contact with the reactor water, from stress-corrosion cracking.

The licensee's proposed Technical Specification change would implement a requirement for conductivity and chloride ion concentration limits during reactor shutdowns. These limits are the same as the proposed limits for reactor operation at steaming rates greater than 100,000 lb/hr (100,000 lb/hr is about 1 to 2% of total steam flow at 100% power). At steam flow rates

above 100,000 lb/hr the licensees have reduced the conductivity and chloride ion concentration limits by a factor of 2. The new limits would be conductivity equal to or less than 5 micro mhos per centimeter and a chloride ion concentration equal to or less than 0.5 parts per million. These limits are equal to those in Table 2 of Regulatory Guide 1.56. As a consequence, the above changes are acceptable and will increase the integrity of the primary coolant system by reducing the potential for stress corrosion.

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), than 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: **APR. 30 1978**

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.     to Facility Operating License No. DPR-59 issued to the Power Authority of the State of New York and the Niagara Mohawk Power Corporation which revised the Technical Specifications for operation of the James A. FitzPatrick Nuclear Power Plant, located in Oswego County, New York. The amendment is effective within 30 days of its date of issuance.

The amendment changes the Technical Specifications to specify lower limits for the reactor coolant water conductivity and chloride ion concentration.

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 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 submitted by letter dated January 27, 1976, (2) Amendment No. 17 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 30th day of April 1976.

FOR THE NUCLEAR REGULATORY COMMISSION



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