

March 18, 1981

Docket No. 50-333

Mr. George T. Berry
President and Chief Operating
Officer
Power Authority of the State
of New York
10 Columbus Circle
New York, New York 10019

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Dear Mr. Berry:

The Commission has issued the enclosed Amendment No. 52 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 of March 11, 1981.

In your submittal, an extension of the maximum average fuel exposure was requested. The enclosed safety evaluation report approves an increase to 36,000 mega-watt-days per ton (MWD/t) with appropriate maximum average planar linear heat generation rate (MAPLHGR) penalty.

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

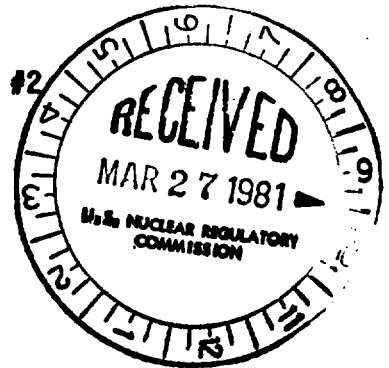
Sincerely,

Original signed by:

Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing

Enclosures:

1. Amendment No. 52 to DPR-59
2. Safety Evaluation
3. Notice



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OFFICE	DL:ORB#2	DL:ORB#2	DL:ORB#2	DL:ORB#2	OELD	CPB	CPB/CP
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DATE	3/16/81	3/16/81	3/17/81	3/17/81	3/18/81	3/17/81	3/16/81



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

March 18, 1981

Docket No. 50-333

Mr. George T. Berry
President and Chief Operating
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Power Authority of the State
of New York
10 Columbus Circle
New York, New York 10019


Dear Mr. Berry:

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Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing

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8103310011

Mr. George T. Berry
Power Authority of the State
of New York

cc:

Mr. Charles M. Pratt
Assistant General Counsel
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10 Columbus Circle
New York, New York 10019

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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. 52
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 March 11, 1981, 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 3.B of Facility Operating License No. DPR-59 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.52 , 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



Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 18, 1981

ATTACHMENT TO LICENSE AMENDMENT NO.52
FACILITY OPERATING LICENSE NO. DPR-59
DOCKET NO. 50-333

Replace the following pages of the Appendix "A" Technical Specifications
with the enclosed pages.

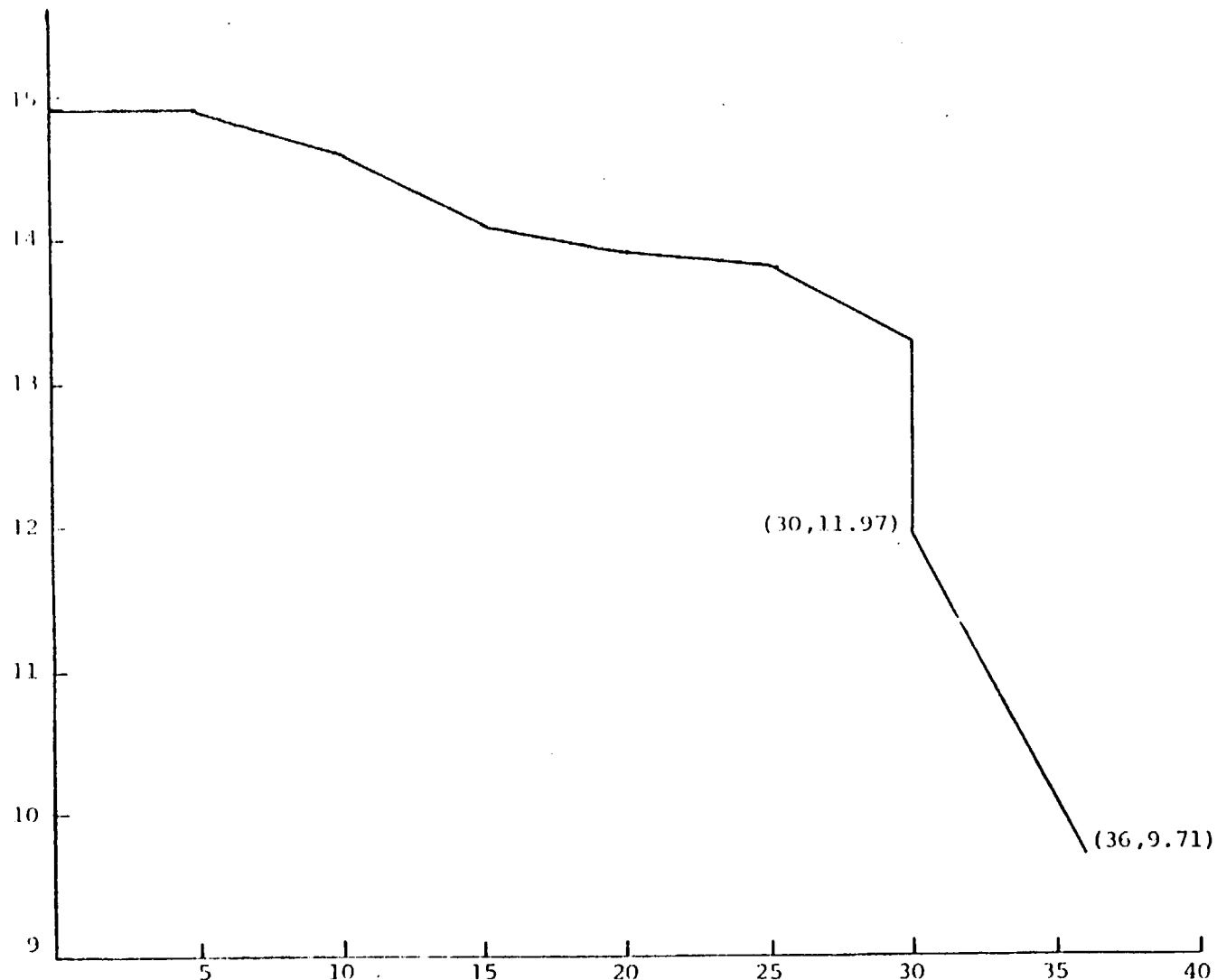
Remove

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MAXIMUM AVERAGE PLANAR
LINEAR HEAT GENERATION RATE (MW/FT)



PLANAR AVERAGE EXPOSURE (GWD/L)

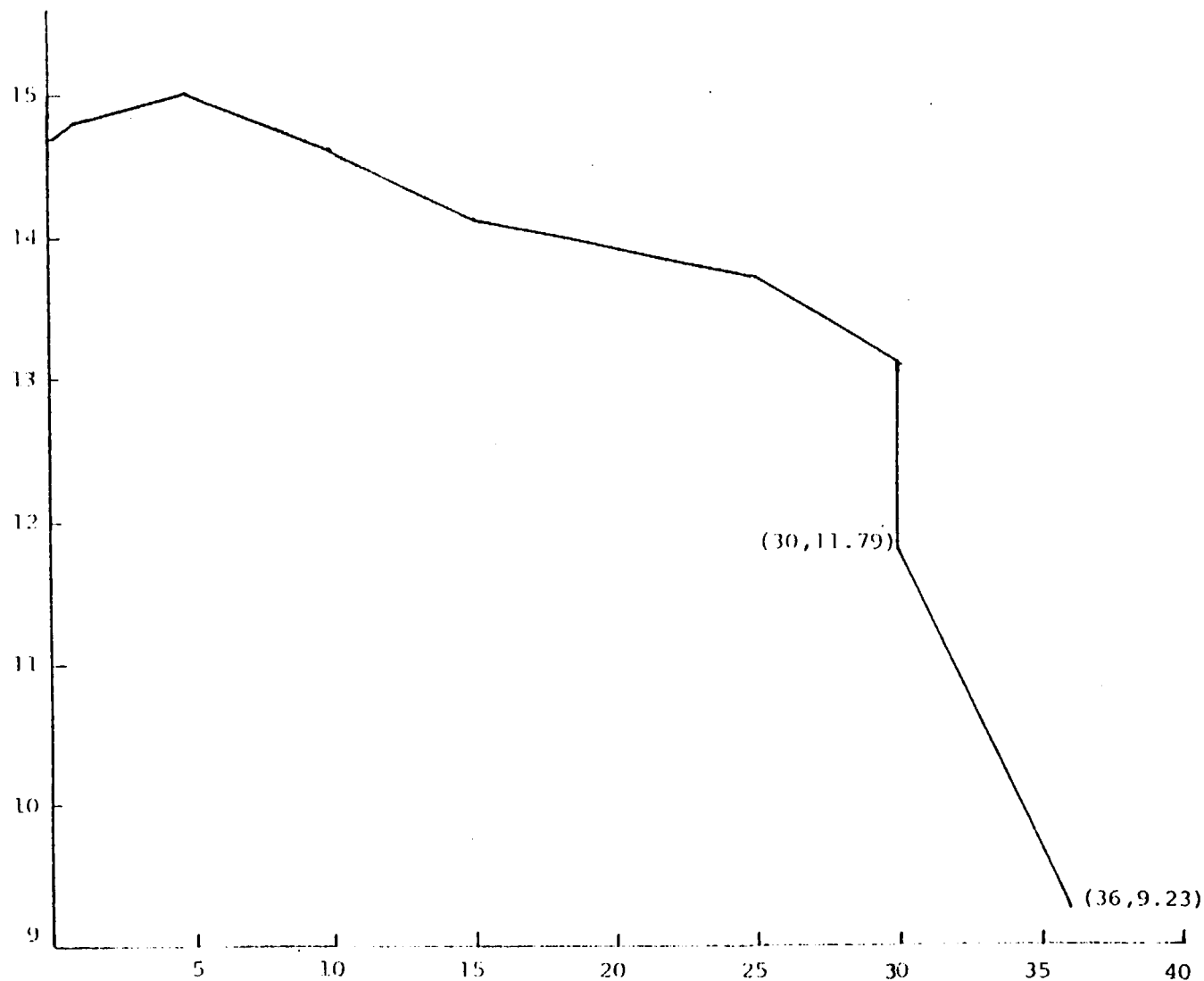
FIGURE 3.5-1 MAXIMUM AVERAGE PLANAR LINEAR HEAT GENERATION RATE (MAPLHGR) VERSUS PLANAR AVERAGE EXPOSURE

INITIAL CORE TYPE 2

FULL CORE DRILLED

REFERENCE
NEDO-21662-2
TABLE 5A

MAXIMUM AVERAGE PLANAR
LINEAR HEAT GENERATION RATE (MW/EE)



PLANAR AVERAGE EXPOSURE (GWD/t)

FIGURE 3.5-2 MAXIMUM AVERAGE PLANAR LINEAR HEAT GENERATION RATE (MAPLHGR) VERSUS PLANAR AVERAGE EXPOSURE

INITIAL CORE TYPE 3

FULL CORE DRILLED

REFERENCE

NEDO-21662-2

TABLE 5B



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO.52 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

1.0 Introduction

By letter dated March 11, 1981 (Reference 1) the Power Authority of the State of New York, the licensee, proposed changes to the James A. FitzPatrick Technical Specifications. The present Technical Specifications allow continued plant operation with fuel exposures up to 30,000 megawatt days per ton (MWD/t). Since this limit will be exceeded for some of the old fuel prior to the end of the current fuel cycle (Cycle 5), the licensee requested approval of exposures up to 36,000 MWD/t with appropriate interim reductions of allowable maximum average planar linear heat generation rate limits. The evaluation of this licensee request is provided below.

2.0 Maximum Average Planar Linear Heat Generation Rate (MAPLHGR)

The proposed new MAPLHGR limits are calculated out to higher exposures (from 30,000 MWD/STU to 40,000 MWD/STU) by the previously approved methods initially used for the fuel with exposures up to 30,000 MWD/STU. The changes in the two figures (Figures 3.5-1 and 3.5-2) are the result of extending the MAPLHGR limits to 36,000 MWD/STU for type 2 and 3.7 x 7 fuel.

Although the methodology used is generally applicable for an average planar exposure up to 36,000 MWD/t, the staff believes the effects of enhanced fission gas release in high burnup fuel (above 30,000 MWD/t) are not adequately accounted for in your submittals. To compensate for this deficiency, the staff has estimated the amount of MAPLHGR limits in Figures 3.5-1 and 3.5-2 of the proposed Technical Specifications should be reduced to assure the peak cladding temperature and local oxidation are below the limits allowed by 10 CFR 50.46. The reduction is based on the results of comparative calculations of fuel volume average temperature performed by General Electric using GEGAP III with and without an NRC correction for enhanced fission gas release and the relationship between peak cladding temperature and MAPLHGR increase presented in NEDE-23786-1-P. In estimating the MAPLHGR reduction, the staff conservatively assumed the change in volume average temperature can be translated

directly into a peak cladding temperature change. Table 1 gives the percent reduction in MAPLHGR as a function of exposure above 30,000 MWd/t for type 2 and 3 7 x 7 fuel in your submittals. We have limited the extension of the MAPLHGR to 36,000 MWd/t to account for the uncertainties in enhanced fission gas release above this exposure.

TABLE 1 - REDUCTION IN MAPLHGR AS A FUNCTION OF EXPOSURE

Exposure MWd/t	30,000	32,000	34,000	36,000
Reduction MAPLHGR, %	10.0	13.33	16.67	20.0

These MAPLHGR reductions to the licensee's proposed Technical Specifications in Figures 3.5-1 and 3.5-2 assures that the cladding temperature and local cladding oxidation would remain below the 2200°F (peak cladding temperature) and 17 percent (local cladding oxidation) limit allowed by 10 CFR 50.46 when the effects of enhanced fission gas release above 30,000 MWd/t are conservatively accounted for.

2.1 Conclusion

We have concluded that the changes to the James A. FitzPatrick Technical Specifications for the remainder of fuel cycle 5 are 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 §1.5(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 18, 1981

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-333POWER AUTHORITY OF THE STATE OF NEW YORKNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 52 to Operating License No. DPR-59, issued to the Power Authority of the State of New York, which revised 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 changes the Technical Specifications to extend the maximum average fuel exposure limits for the 7x7 (types 2 and 3) fuel assemblies for exposure values beyond those currently given in the Technical Specifications.

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 §1.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of the amendment.

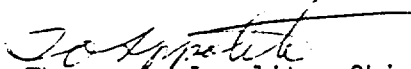
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- 2 -

For further details with respect to this action, see (1) the application for amendment dated March 11, 1981, (2) Amendment No.52 to License No. DPR-59 for the James A. FitzPatrick Nuclear Power Plant, 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, NW., Washington, D. C.; Penfield Library, State University College at Oswego, Oswego, New York 13126 for Fitzpatrick. 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, the 18th day of March 1981.

FOR THE NUCLEAR REGULATORY COMMISSION


Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing