

FEB 24 1977

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DRoss
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R. Clark

Docket No. 50-220

Niagara Mohawk Power Corporation
ATTN: Mr. Gerald K. Rhode
Vice President - Engineering
300 Erie Boulevard West
Syracuse, New York 13202

Gentlemen:

The Commission has issued the enclosed Amendment No. 13 to Facility Operating License No. DPR-63 for the Nine Mile Point Nuclear Station, Unit No. 1. This amendment identifies the currently approved industrial security plan for Nine Mile Point Nuclear Station, Unit No. 1 and incorporates the plan as a condition of the operating license. This license amendment, which we propose, was discussed with and concurred in by members of your staff.

With regard to future changes in the security plan, the provisions of 10 CFR Part 50, Section 50.54(p) remain applicable. Those changes which do not decrease the effectiveness of the security plan may continue to be made without prior Commission approval provided that (1) records of such changes are maintained, and (2) a report containing a description of the change is submitted within two months after the change is made. Following our review of your report and a finding of its acceptability, such changes to the security plan will be incorporated by us in the Operating License as a future license amendment. As in previous cases, a change to the security plan that decreases its effectiveness requires prior Commission approval via an application for license amendment pursuant to 10 CFR Part 50, Section 50.90.

We have reviewed the industrial security plan for Nine Mile Point Nuclear Station, Unit No. 1, including Revision 2 forwarded by Niagara Mohawk's letter dated November 8, 1974 as modified by letters dated December 12, 1975 and October 4, 1976. Based on our review, we find that the security plan as modified by Revision 2 is consistent with Regulatory Guide 1.17, "Protection of Nuclear Power Plants Against Industrial Sabotage", and is acceptable. An evaluation has been placed in the Commission's files. Pursuant to 10 CFR §2.790(d), this evaluation and the documents comprising the security plan are being withheld from public disclosure because they are deemed to contain commercial or financial information

OFFICE ➤					
SURNAME ➤					
DATE ➤					

FEB 24 1977

Niagara Mohawk Power Corporation - 2 -

within the meaning of 10 CFR §9.5(a)(4) and subject to disclosure only in accordance with the provisions of 10 CFR §9.12.

A copy of the FEDERAL REGISTER Notice is also enclosed.

Sincerely,

Original signed by

George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosures:

1. Amendment No. 13 to License DPR-63
2. FEDERAL REGISTER Notice

cc w/encls:
See next page

OFFICE	ORB #3	ORB #3	OED	ORB #3	ORSB
SURNAME	CParrish	SNowicki	Bm [unclear]	GLear	[unclear]
DATE	2/9/77	2/9/77	2/17/77	2/24/77	2/24/77

Niagara Mohawk Power Corporation - 3 -

cc: Arvin E. Upton, Esquire
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Washington, D. C. 20036

Anthony Z. Roisman, Esquire
Roisman, Kessler and Cashdan
1025 15th Street, N. W.
5th Floor
Washington, D. C. 20005

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

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

Niagara Mohawk Power Corporation
ATTN: Mr. Thomas Perkins
Plant Superintendent
Nine Mile Point Plant
300 Erie Boulevard West
Syracuse, New York 13202

Dr. Neill Thomasson (AW-459)
Chief, Energy Systems Analysis Branch
Office of Radiation Programs
Environmental Protection Agency
401 M Street S. W.
Washington, D. C. 20460

Paul A. Giardina
Regional Radiation Representative
U.S. Environmental Protection Agency
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New York, New York 10007

Mr. Eugene G. Saloga, Applicant Coordinator
Nine Mile Point Energy Information Center
P.O. BOX 81
Lycoming, New York 13093



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

NIAGARA MOHAWK POWER CORPORATION

DOCKET NO. 50-220

NINE MILE POINT NUCLEAR STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 13
License No. DPR-63

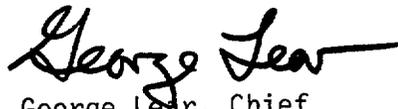
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - B. There is reasonable assurance (i) that the activities authorized by this amendment 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;
 - C. 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
 - D. 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 the addition of new paragraph
(4) Physical Security Plan

The licensee shall maintain in effect and fully implement all provisions of the NRC-approved physical security plan, including changes made pursuant to the authority of 10 CFR Section 50.54(p). The approved security plan consists of the proprietary document entitled "Industrial Security Plan," as revised and described in the following letters:

<u>Revision</u>	<u>Date of Licensee's Letters</u>
Original	NA
Revision 1	NA
Revision 2	November 8, 1974 (as modified by letters dated December 12, 1975 and October 4, 1976)

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

FOR THE NUCLEAR REGULATORY COMMISSION



George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Date of Issuance: February 24, 1977

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-220

NIAGARA MOHAWK POWER CORPORATION

NOTICE OF ISSUANCE OF FACILITY LICENSE AMENDMENT

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 13 to Facility Operating License No. DPR-63 to the Niagara Mohawk Power Corporation (the licensee) for operation of the Nine Mile Point Nuclear Station, Unit No. 1 (the facility) located in Oswego County, New York. The amendment is effective as of its date of issuance.

This amendment identifies the currently approved industrial security plan and incorporates the plan as a condition of the operating license for the Nine Mile Point Nuclear Station, Unit No. 1.

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, negative declaration,

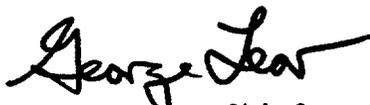
or environmental impact appraisal need not be prepared in connection with issuance of this amendment.

Pursuant to 10 CFR §2.790(d), the licensee's letter dated November 8, 1974 as modified by letters dated December 12, 1975 and October 4, 1976, and the security plan are being withheld from public disclosure because they are deemed to be commercial or financial information within the meaning of 10 CFR §9.5(a)(4). The withheld information is subject to disclosure in accordance with the provisions of 10 CFR §9.12.

For further details with respect to this action, see (1) Amendment No. 13 to License No. DPR-63 and (2) the Commission's related letters to the licensee dated December 10, 1974 and April 12, 1976. These items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. 20555, and at the Oswego City Library, 120 E. Second Street, Oswego, New York 13126. A copy 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 24th day of February, 1977.

FOR THE NUCLEAR REGULATORY COMMISSION



George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors

AUG 20 1976

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 CMiles

Docket No. 50-220

Niagara Mohawk Power Corporation
 ATTN: Mr. Gerald K. Rhode
 Vice President - Engineering
 300 Erie Boulevard West
 Syracuse, New York 13202

Gentlemen:

In response to your request dated May 19, 1976, the Commission has issued the enclosed Amendment No. 12 to Facility Operating License No. DPR-63 for Nine Mile Point Unit No. 1 (NMP-1).

This amendment will incorporate exposure-dependent, assembly-averaged, power-void relationship limits into the NMP-1 Technical Specifications.

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

Sincerely,

Original signed by

George Lear, Chief
 Operating Reactors Branch #3
 Division of Operating Reactors

Enclosures:

1. Amendment No. 12
2. Safety Evaluation
3. Federal Register Notice

OFFICE	ORB#3	ORB#3	DOR	OELD	ORB#3
SURNAME	CParrish	JGuibert:acr	RBaer (P.Woods)	B...	GLear
DATE	8/10/76	8/10/76	8/11/76	8/11/76	8/20/76

August 20, 1976

cc:

Arvin E. Upton, Esquire
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Dr. William Seymour, Staff Coordinator
New York State Atomic Energy Council
New York State Department of Commerce
99 Washington Street
Albany, New York 12207

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

Niagara Mohawk Power Corporation
ATTN: Mr. Thomas Perkins
Plant Superintendent
Nine Mile Point Plant
300 Erie Boulevard West
Syracuse, New York 13202

Oswego City Library
120 E. Second Street
Oswego, New York 13126



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

NIAGARA MOHAWK POWER CORPORATION

DOCKET NO. 50-220

NINE MILE POINT NUCLEAR STATION UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 12
License No. DPR-63

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Niagara Mohawk Power Corporation dated May 19, 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; and
 - 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.
 - 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 a change 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

A handwritten signature in cursive script, appearing to read "George Lear".

George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Attachment:
Changes to the
Technical Specifications

Date of Issuance: August 20, 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 12

TO THE TECHNICAL SPECIFICATIONS

FACILITY OPERATING LICENSE NO. DPR-63

DOCKET NO. 50-220

Replace page 64b with the attached revised page. Add pages 64c, 64d,
and 64e.

d. Assembly Averaged Power-Void Relationships (Cont'd)

$$\frac{(1-VF)}{PR \times FCP} \geq B$$

Where: VF = Bundle average void fraction
 PR = Assembly radial power factor
 FCP = Fractional core power relative to 1850 MWt
 B = Power-Void Limit (limiting values of "B" shall be specified for each fuel type in the core)

The limiting values of "B" for each fuel type are shown in the Figures below:

<u>Fuel Type(s)</u>	<u>"B"</u>
Type 1 - initial core	Figure 3.1.7.f
Type 2 - reload 1	Figure 3.1.7.g
Type 3 - reload 2	Figure 3.1.7.h
Type 4 - reload 3	Figure 3.1.7.i
Type 5 - reload 4 (2.50 enrichment) and reload 5	Figure 3.1.7.j
Type 6 - reload 4 (2.62 enrichment)	Figure 3.1.7.k

e. Reporting Requirements

If any of the limiting values identified in Specifications 3.1.7.a, b, or c are exceeded, a Reportable Occurrence report shall be submitted. If the corrective action is taken, as described, a thirty-day written report will meet the requirements of this specification.

Figure 3.1.7.f

Type 1 - Initial Core Fuel

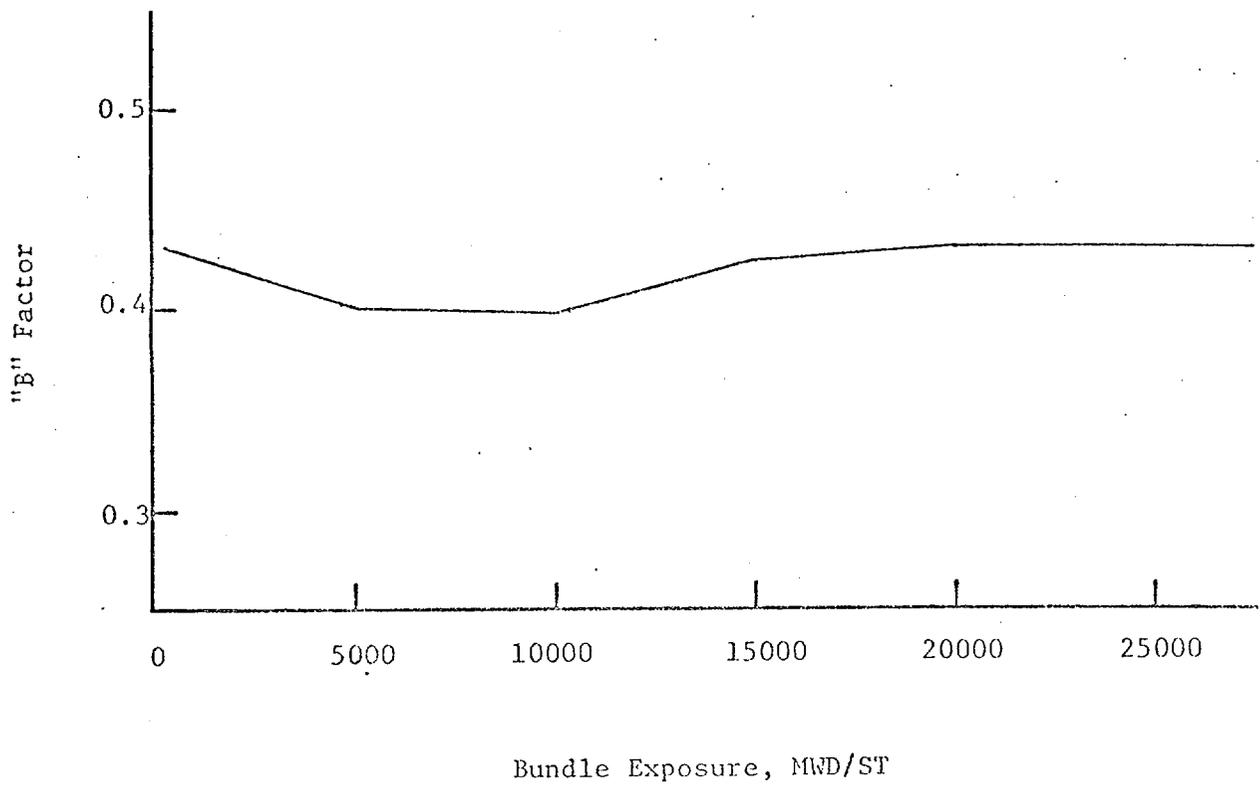


Figure 3.1.7.g

Type 2 - Reload 1 Fuel

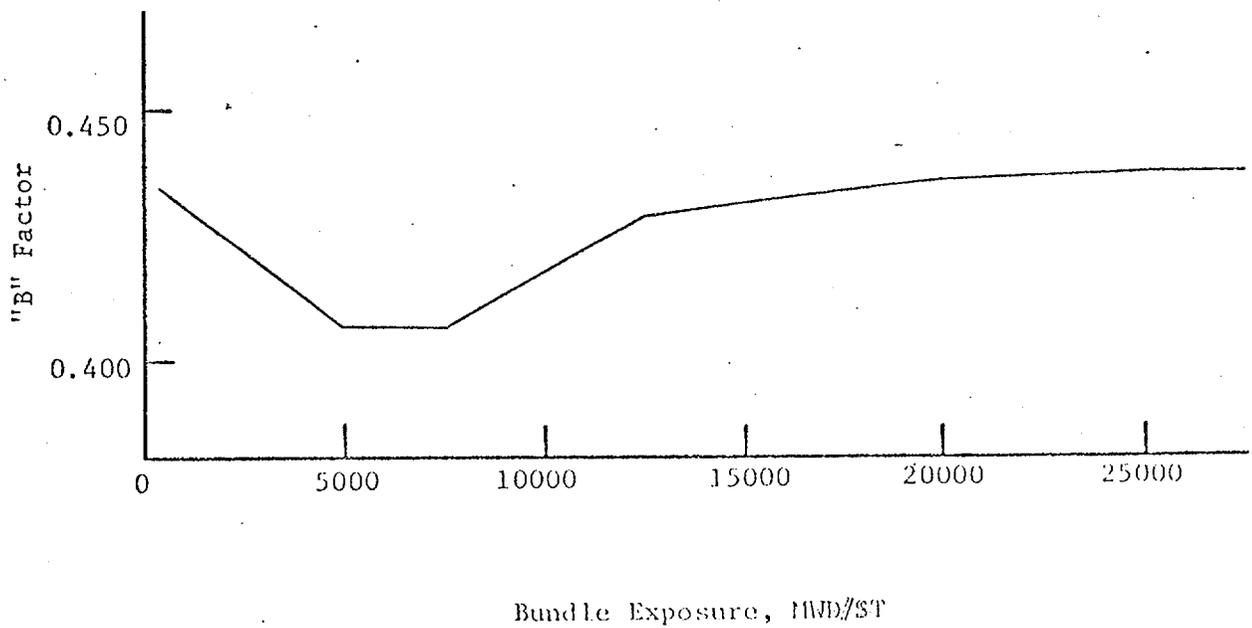


Figure 3.1.7.h
Type 3 - Reload 2 Fuel

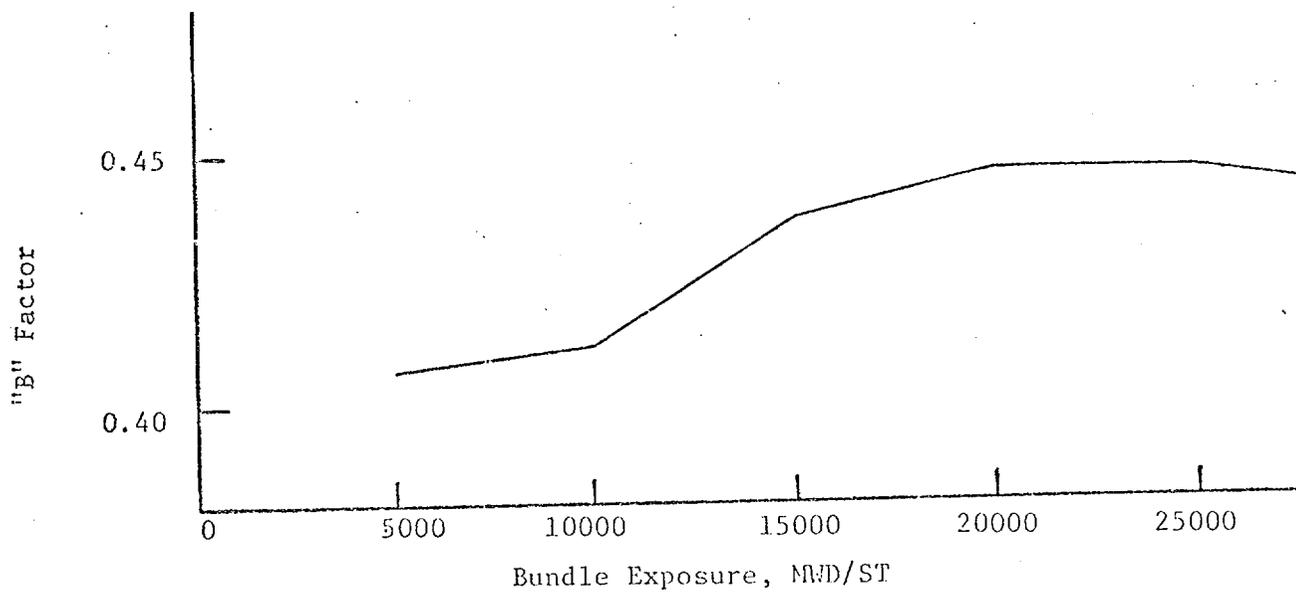


Figure 3.1.7.i
Type 4 - Reload 3 Fuel

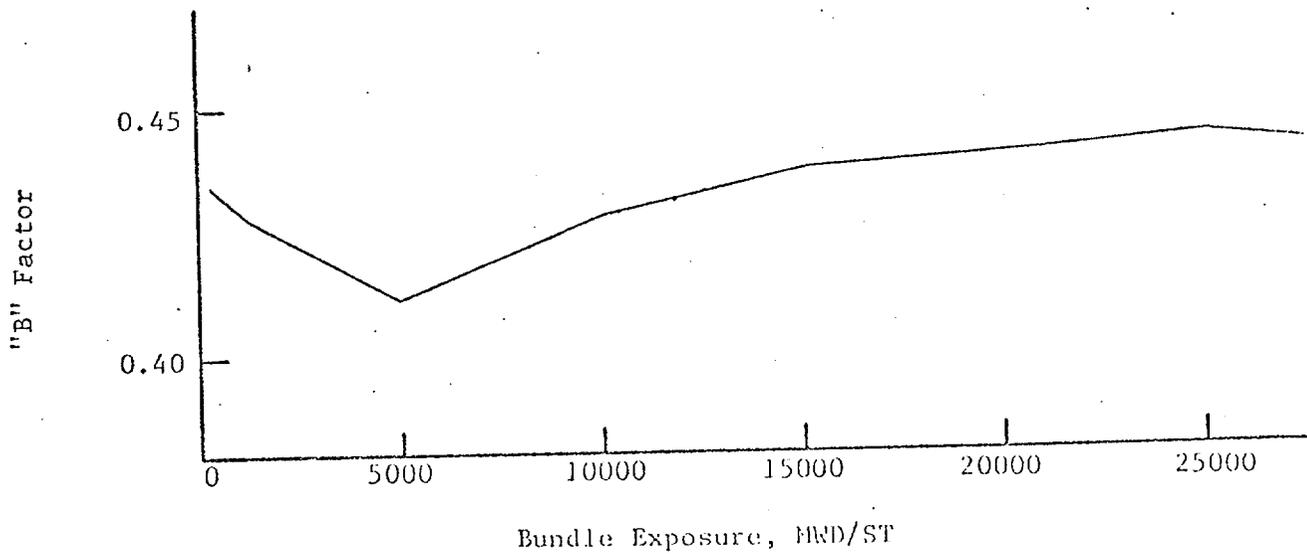


Figure 3.1.7.j

Type 5 - Reload 4 (2.5 enrichment)
Reload 5

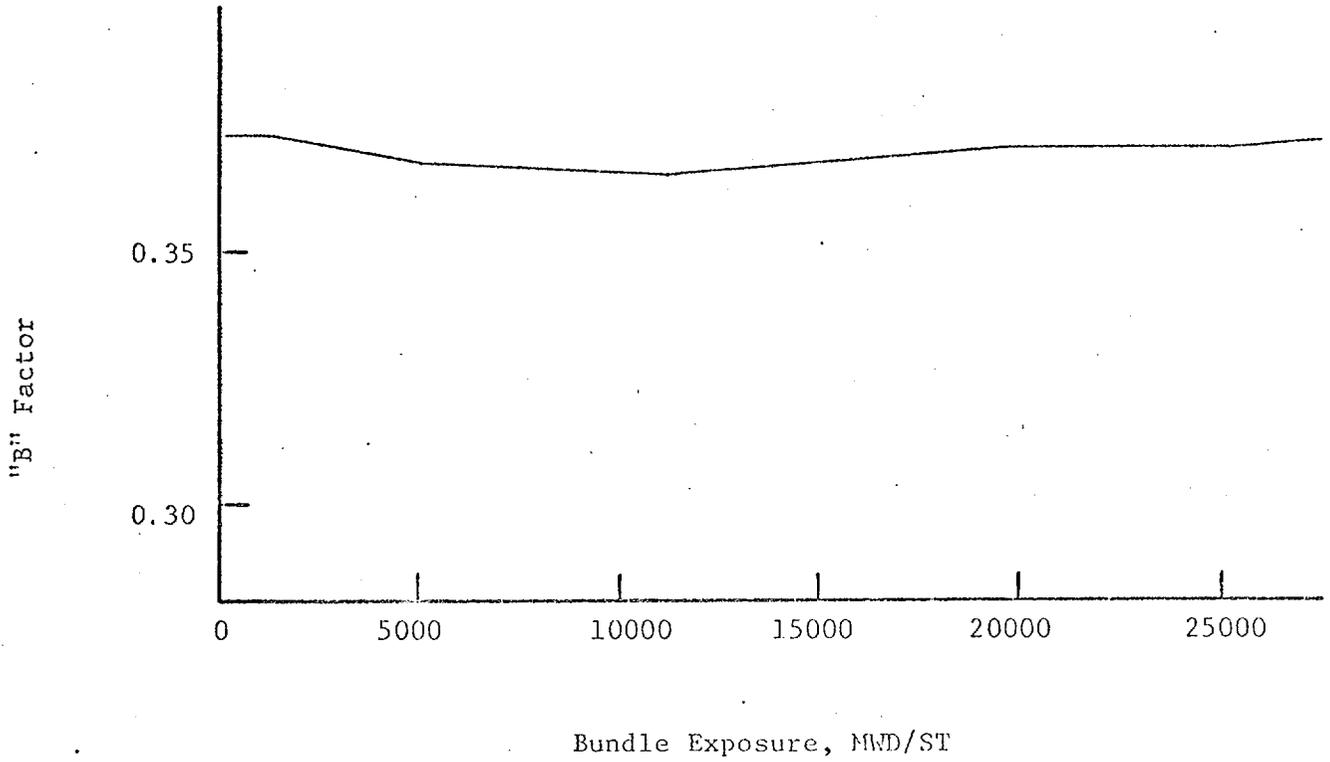
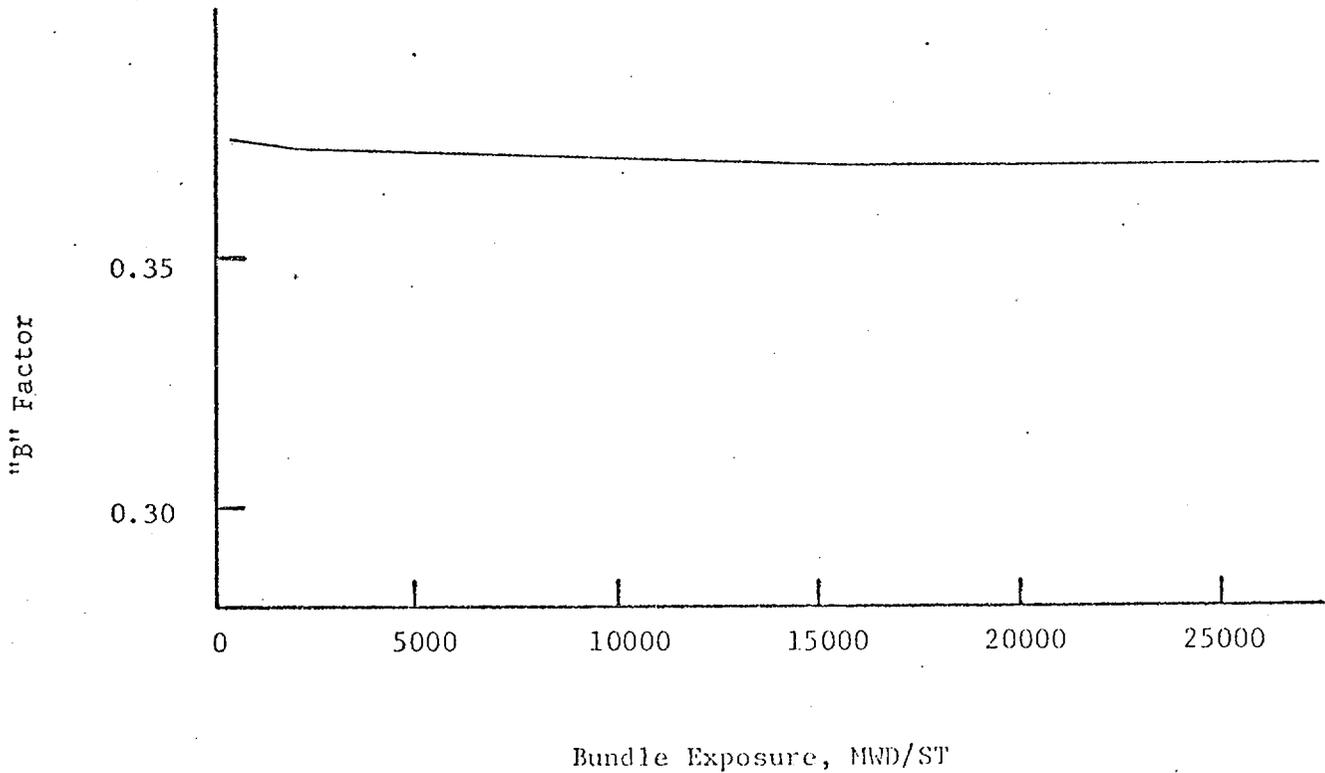


Figure 3.1.7.k

Type 6 - Reload 4 (2.62 enrichment)





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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 12 TO FACILITY OPERATING LICENSE NO. DPR-63

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT UNIT NO. 1

DOCKET NO. 50-220

Introduction

By letter dated May 19, 1976 and by a supplemental letter dated August 3, 1976, Niagara Mohawk Power Corporation (NMPC) requested an amendment to Facility Operating License No. DPR-63 for Nine Mile Point Unit No. 1 (NMP-1). The proposed amendment would incorporate exposure-dependent assembly averaged power-void relationship limits into the NMP-1 Technical Specifications.

Background and Discussion

On November 13, 1975 the NRC issued License Amendment No. 5 for NMP-1 which authorized operation during fuel cycle 4 with modified operating limits based on an acceptable Emergency Core Cooling System (ECCS) analysis. As a part of that licensing action technical specification limits for the assembly averaged power-void relationship were established to provide assurance that plant operating conditions would be more conservative than the initial conditions assumed in the ECCS loss of coolant analysis (LOCA), thereby assuring applicability of the analysis.

The ECCS models for non-jet pump boiling water reactors, such as NMP-1, utilize an empirical correlation to determine the duration of nucleate boiling heat transfer in the early period following a postulated LOCA. This correlation establishes the time-to-dryout (onset of boiling transition) and is found to be proportional to the ratio of assembly water volume to assembly power. Dryout time is a significant parameter in determining the extent of nucleate and transition boiling heat transfer and, consequently, in determining predicted peak cladding temperatures and associated Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) limits. By maintaining the assembly averaged power-void relationship as specified in the NMP-1 Technical Specifications, dryout times at least as conservative as those used in the NMP-1 ECCS LOCA analysis are assured.

The assembly averaged power-void relationship limits established by License Amendment No. 5 for NMP-1 were calculated for each fuel type in the core using the smallest (and, therefore, most conservative) value for time-to-dryout predicted during the fuel cycle. Since time-to-dryout is a function of MAPLHGR which is exposure-dependent, it follows that time-to-dryout is also

exposure-dependent. Furthermore, since time-to-dryout is used to determine the assembly averaged power-void relationship limits ("B" values), it necessarily follows that "B" values are also exposure-dependent. Consequently, NMPC has requested that exposure-dependent "B" values be incorporated into the NMP-1 Technical Specifications in order to provide greater operating flexibility throughout fuel cycle 4.

Evaluation

We have reviewed the procedure used by NMPC to determine exposure-dependent "B" values, as detailed in their submittal of August 3, 1976, and have determined that this procedure assures that the plant operating conditions will continue to be more conservative than the initial conditions assumed in the ECCS LOCA analysis for NMP-1. Specifically, we have determined that the proposed exposure-dependent assembly averaged power-void relationship limits conservatively bound the time-to-dryout assumed in the ECCS analysis calculations for NMP-1. In addition, the proposed changes do not affect the existing MAPLHGR limits which restrict the power level in any local core region and which assure that the NMP-1 ECCS analysis complies with the requirements of 10 CFR Part 50, Section 50.46 and Appendix K.

Environmental Aspects

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in authorized 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: August 20, 1976

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-220

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. 12 to Facility Operating License No. DPR-63 issued to Niagara Mohawk Power Corporation which revised Technical Specifications for operation of the Nine Mile Point Nuclear Station Unit No. 1, located in Oswego County, New York. The amendment is effective as of its date of issuance.

The amendment will incorporate exposure-dependent assembly averaged power-void relationship limits into the Nine Mile Point Nuclear Station Unit No. 1 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 to 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.

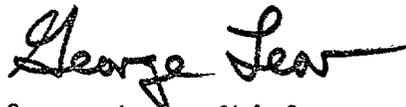
The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §1.5(d)(4) an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated May 19, 1976, and supplement dated August 3, 1976, (2) Amendment No. 12 to License No. DPR-63, 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 E. Second Street, Oswego, New York 13126.

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 20th day of August, 1976.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script that reads "George Lear". The signature is written in dark ink and is positioned above the typed name and title.

George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors