June 4, 1998

Mr. John H. Mueller
Chief Nuclear Officer
Niagara Mohawk Power Corporation
Nine Mile Point Nuclear Station
Operations Building, Second Floor
Lycoming, NY 13093

SUBJECT: ISSUANCE OF AMENDMENT FOR NINE MILE POINT NUCLEAR STATION, UNIT 2 (TAC NO. MA0362)

Dear Mr. Mueller:

The Commission has issued the enclosed Amendment No. 82 to Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station, Unit 2. The amendment consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated December 15, 1997, as supplemented by letter dated April 24, 1998.

The amendment changes TSs 2.1.2 and 3.4.1.1 to revise the minimum critical power ratio safety limit for the upcoming fuel operating cycle (Cycle 7) for two-loop and single-loop recirculation operation.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

Original Signed by:

Darl S. Hood, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-410

Enclosures: 1. Amendment No. 82 to NPF-69
2. Safety Evaluation

cc w/encls: See next page

DF01

DOCUMENT NAME: G:\NMP2\NM2A0362.AMD

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	PM:PDI-1	E	LA:PDI-1		D:PDI-1		OGC	
NAME	DHood/lcc DSH		SLittle		SBajwa			
DATE	06/2/98		06/4/98		06/4/98		06/3/98	

Official Record Copy

DATED: June 4, 1998

AMENDMENT NO. 82 TO FACILITY OPERATING LICENSE NO. NPF-69-NINE MILE POINT UNIT 2

Docket File
PUBLIC
PDI-1 Reading
J. Zwolinski
S. Bajwa
S. Little
D. Hood
OGC
G. Hill (2), T-5 C3
W. Beckner, 013/H15
Z. Abdullahi
T. Collins
T. Huang
ACRS
L. Doerflein, Region I

cc: Plant Service list

DATED: June 4, 1998

AMENDMENT NO. 82 TO FACILITY OPERATING LICENSE NO. NPF-69-NINE MILE POINT UNIT 2

Docket File
PUBLIC
PDI-1 Reading
J. Zwolinski
S. Bajwa
S. Little
D. Hood
OGC
G. Hill (2), T-5 C3
W. Beckner, 013/H15
Z. Abdullahi
T. Collins
T. Huang
ACRS
L. Doerflein, Region I

cc: Plant Service list

June 4, 1998

Mr. John H. Mueller
Chief Nuclear Officer
Niagara Mohawk Power Corporation
Nine Mile Point Nuclear Station
Operations Building, Second Floor
Lycoming, NY 13093

SUBJECT: ISSUANCE OF AMENDMENT FOR NINE MILE POINT NUCLEAR STATION, UNIT 2 (TAC NO. MA0362)

Dear Mr. Mueller:

The Commission has issued the enclosed Amendment No. 82 to Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station, Unit 2. The amendment consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated December 15, 1997, as supplemented by letter dated April 24, 1998.

The amendment changes TSs 2.1.2 and 3.4.1.1 to revise the minimum critical power ratio safety limit for the upcoming fuel operating cycle (Cycle 7) for two-loop and single-loop recirculation operation.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

Original Signed by:

Darl S. Hood, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-410

Enclosures: 1. Amendment No. 82 to NPF-69
2. Safety Evaluation

cc w/encls: See next page

DOCUMENT NAME: G:\NMP2\NM2A0362.AMD

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	PM:PDI-1	E	LA:PDI-1		D:PDI-1		OGC			
NAME	DHood/lcc DSH		SLittle		SBajwa					
DATE	06/ 2 /98		06/ 4 /98		06/ 4 /98		06/ 3 /98			

Official Record Copy

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 4, 1998

Mr. John H. Mueller
Chief Nuclear Officer
Niagara Mohawk Power Corporation
Nine Mile Point Nuclear Station
Operations Building, Second Floor
Lycoming, NY 13093

SUBJECT: ISSUANCE OF AMENDMENT FOR NINE MILE POINT NUCLEAR STATION, UNIT 2 (TAC NO. MA0362)

Dear Mr. Mueller:

The Commission has issued the enclosed Amendment No. 82 to Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station, Unit 2. The amendment consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated December 15, 1997, as supplemented by letter dated April 24, 1998.

The amendment changes TSs 2.1.2 and 3.4.1.1 to revise the minimum critical power ratio safety limit for the upcoming fuel operating cycle (Cycle 7) for two-loop and single-loop recirculation operation.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

Darl S. Hood

Darl S. Hood, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-410

Enclosures: 1. Amendment No. 82 to NPF-69
2. Safety Evaluation

cc w/encls: See next page

John H. Mueller
Niagara Mohawk Power Corporation

Nine Mile Point Nuclear Station
Unit No. 2

cc:

Regional Administrator, Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Resident Inspector
Nine Mile Point Nuclear Station
P.O. Box 126
Lycoming, NY 13093

Mr. Jim Rettberg
NY State Electric & Gas Corporation
Corporate Drive
Kirkwood Industrial Park
P.O. Box 5224
Binghamton, NY 13902-5224

Mr. John V. Vinquist, MATS Inc.
P.O. Box 63
Lycoming, NY 13093

Supervisor
Town of Scriba
Route 8, Box 382
Oswego, NY 13126

Mr. Richard Goldsmith
Syracuse University
College of Law
E.I. White Hall Campus
Syracuse, NY 12223

Charles Donaldson, Esquire
Assistant Attorney General
New York Department of Law
120 Broadway
New York, NY 10271

Mr. Timothy S. Carey
Chair and Executive Director
State Consumer Protection Board
5 Empire State Plaza, Suite 2101
Albany, NY 12223

Mark J. Wetterhahn, Esquire
Winston & Strawn
1400 L Street, NW.
Washington, DC 20005-3502

Gary D. Wilson, Esquire
Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, NY 13202

Mr. F. William Valentino, President
New York State Energy, Research,
and Development Authority
Corporate Plaza West
286 Washington Avenue Extension
Albany, NY 12203-6399

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NIAGARA MOHAWK POWER CORPORATION

DOCKET NO. 50-410

NINE MILE POINT NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.82
License No. NPF-69

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Niagara Mohawk Power Corporation (the licensee) dated December 15, 1997, as supplemented by letter dated April 24, 1998, 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 1;

   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 2.C.(2) of Facility Operating License No. NPF-69 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, as revised through Amendment No. 82 are hereby incorporated into this license. Niagara Mohawk Power Corporation shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance to be implemented before startup of the Unit 2 reactor to begin fuel operating cycle 7.

FOR THE NUCLEAR REGULATORY COMMISSION

Guy S Vissing for

S. Singh Bajwa, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications

Date of Issuance: June 4, 1998

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 82 TO FACILITY OPERATING LICENSE NO. NPF-69

DOCKET NO. 50-410

Revise Appendix A as follows:

Remove Page	Insert Page
iii	iii
2-1	2-1
3/4 4-1	3/4 4-1
B2-1	B2-1
B2-2	B2-2
B2-3	B2-3
B2-4	B2-4

DEFINITIONS

2.1 SAFETY LIMITS

THERMAL POWER, Low Pressure or Low Flow

2.1.1 THERMAL POWER shall not exceed 25% of RATED THERMAL POWER with the reactor vessel steam dome pressure less than 785 psig or core flow less than 10% of rated flow.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

With THERMAL POWER exceeding 25% of RATED THERMAL POWER and the reactor vessel steam dome pressure less than 785 psig or core flow less than 10% of rated flow, be in at least HOT SHUTDOWN within 2 hours and comply with the requirements of Specification 6.7.

THERMAL POWER, High Pressure and High Flow

2.1.2 The MINIMUM CRITICAL POWER RATIO (MCPR)* shall not be less than 1.09 with two recirculation loop operation and shall not be less than 1.10 with single recirculation loop operation with the reactor vessel steam dome pressure greater than 785 psig and core flow greater than 10% of rated flow.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

With MCPR* less than 1.09, with two recirculation loop operation or less than 1.10 with single loop operation, the reactor vessel steam dome pressure greater than 785 psig, and core flow greater than 10% of rated flow, be in at least HOT SHUTDOWN within 2 hours and comply with the requirements of Specification 6.7.

REACTOR COOLANT SYSTEM PRESSURE

2.1.3 The reactor coolant system pressure, as measured in the reactor vessel steam dome, shall not exceed 1325 psig.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, and 4.

ACTION:

With the reactor coolant system pressure as measured in the reactor vessel steam dome above 1325 psig, be in at least HOT SHUTDOWN with reactor coolant system pressure less than or equal to 1325 psig within 2 hours and comply with the requirements of Specification 6.7.

REACTOR VESSEL WATER LEVEL

2.1.4 The reactor vessel water level shall be above the top of the active irradiated fuel.

* MCPR values are applicable to Cycle 7 operation only.

3/4.4 REACTOR COOLANT SYSTEM

3/4.4.1 RECIRCULATION SYSTEM

RECIRCULATION LOOPS

LIMITING CONDITIONS FOR OPERATION

3.4.1.1 Two reactor coolant system recirculation loops shall be in operation with:

a. Total core flow greater than or equal to 45% of rated core flow, or
b. THERMAL POWER within the unrestricted zone of Figure 3.4.1.1-1.

APPLICABILITY: OPERATIONAL CONDITIONS 1* AND 2*.

ACTION:

a. With one reactor coolant system recirculation loop not in operation:

   1. Within four hours:

      a) Place the recirculation flow control system in the Loop Manual (Position Control) mode, and

      b) Reduce THERMAL POWER to ≤70% of RATED THERMAL POWER, and,

      c) Increase the MINIMUM CRITICAL POWER RATIO (MCPR)*** Safety Limit by 0.01 to 1.10 per Specification 2.1.2, and,

      d) Reduce the Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) limit per Specification 3.2.1, and,

      e) Reduce the Average Power Range Monitor (APRM) Scram and Rod Block and Rod Block Monitor Trip Setpoints and Allowable Values to those applicable for single recirculation loop operation per Specifications 2.2.1, 3.2.2 and 3.3.6.

      f) Reduce the volumetric drive flow rate of the operating recirculation loop to ≤41,800** gpm.

---

* See Special Test Exception 3.10.4.

** This value represents the volumetric recirculation loop drive flow which produces 100% core flow at 100% THERMAL POWER.

*** MCPR values are applicable to Cycle 7 operation only.

2.1 BASES FOR SAFETY LIMITS

2.1.0 INTRODUCTION

The fuel cladding, reactor pressure vessel, and primary system piping are the principal barriers to the release of radioactive materials to the environs. Safety Limits are established to protect the integrity of these barriers during normal plant operations and anticipated transients. The fuel cladding integrity Safety Limit is set so that no fuel damage is calculated to occur if the limit is not violated. Because fuel damage is not directly observable, a step-back approach is used to establish a Safety Limit so that the MCPR* is not less than 1.09 for two recirculation loop operation and 1.10 for single recirculation loop operation. MCPR* greater than 1.09 for two recirculation loop operation and 1.10 for single recirculation loop operation represents a conservative margin relative to the conditions required to maintain fuel cladding integrity. The fuel cladding is one of the physical barriers that separate the radioactive materials from the environs. The integrity of this cladding barrier is related to its relative freedom from perforations or cracking. Although some corrosion or use-related cracking may occur during the life of the cladding, fission product migration from this source is incrementally cumulative and continuously measurable. Fuel cladding perforations, however, can result from thermal stresses that occur from reactor operation significantly above design conditions and the Limiting Safety System Settings. Although fission product migration from cladding perforation is just as measurable as that from use-related cracking, the thermally caused cladding perforations signal a threshold beyond which still greater thermal stresses may cause gross rather than incremental cladding deterioration. Therefore, the fuel cladding Safety Limit is defined with a margin to the conditions that would produce onset of transition boiling, MCPR of 1.0. These conditions represent a significant departure from the condition intended by design for planned operation.

2.1.1 THERMAL POWER, Low Pressure or Low Flow

The use of critical power correlations is not valid for all critical power calculations performed at reduced pressures below 785 psig or core flows less than 10% of rated flow. Therefore, the fuel cladding integrity Safety Limit is established by other means. This is done by establishing a limiting condition on core THERMAL POWER with the following basis. Since the pressure drop in the bypass region is essentially all elevation head, the core pressure drop at low power and flows will always be greater than 4.5 psi. Analyses show that with a bundle flow of 28 x 10^3 lb/hr, bundle pressure drop is nearly independent of bundle power and has a value of 3.5 psi. Thus, the bundle flow with a 4.5 psi driving head will be greater than 28 x 10^3 lb/hr. Full-scale ATLAS test data taken at pressures from 14.7 psia to 800 psia indicate that the fuel assembly critical power at this flow is approximately 3.35 MWt. With the design peaking factors, this corresponds to a THERMAL POWER of more than 50% of RATED THERMAL POWER. Thus, a THERMAL POWER limit of 25% of RATED THERMAL POWER for reactor pressure below 785 psig is conservative.

* MCPR values are applicable to Cycle 7 operation only.

2.1.2 THERMAL POWER, High Pressure and High Flow

The fuel cladding integrity Safety Limit is set so that no fuel damage is calculated to occur if the limit is not violated. Since the parameters that result in fuel damage are not directly observable during reactor operation, the thermal and hydraulic conditions resulting in a departure from nucleate boiling have been used to mark the beginning of the region in which fuel damage could occur. Although it is recognized that a departure from nucleate boiling would not necessarily result in damage to BWR fuel rods, the critical power at which boiling transition is calculated to occur has been adopted as a convenient limit. However, the uncertainties in monitoring the core operating state and in the procedures used to calculate the critical power result in an uncertainty in the value of the critical power. Therefore, the fuel cladding integrity Safety Limit is defined as the CPR in the limiting fuel assembly for which more than 99.9% of the fuel rods in the core are expected to avoid boiling transition considering the power distribution within the core and all uncertainties.

The Safety Limit MCPR is determined using a statistical model that combines all of the uncertainties in operating parameters and the procedures used to calculate critical power. The probability of the occurrence of boiling transition is determined using an approved critical power correlation. The critical power correlation is valid over the range of conditions used in the tests of the data used to develop the correlation. Details of the fuel cladding integrity Safety Limit calculation are given in Reference 1. Reference 1 also includes a tabulation of the uncertainties used in the determination of the Safety Limit MCPR. The plant specific values of the parameters used in the Safety Limit MCPR statistical analysis are found in the cycle specific analysis.

References:

1. General Electric Standard Application for Reactor Fuel, NEDE-24011-P-A (latest approved revision).

This Page is Not Used

This Page is Not Used

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 82 TO FACILITY OPERATING LICENSE NO. NPF-69

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION, UNIT 2

DOCKET NO. 50-410

1.0 INTRODUCTION

By letter dated December 15, 1997, as supplemented April 24, 1998, Niagara Mohawk Power Corporation (NMPC or licensee) submitted an application to amend the operating license (NPF-69) for Nine Mile Point Nuclear Station Unit 2 (NMP2). The proposed amendment would revise Technical Specifications (TSs) 2.1.2, "Safety Limits--Thermal Power, High Pressure and High Flow," and 3.4.1.1, "Reactor Coolant System--Recirculation System--Recirculation Loops--Limiting Conditions for Operation," by changing the minimum critical power ratio (MCPR) safety limit for the upcoming fuel operating cycle (Cycle 7). The MCPR values would change from 1.07 to 1.09 for operation with both recirculation loops, and from 1.08 to 1.10 for operation with one recirculation loop. An obsolete footnote in TS 3.4.1.1 which states that "The MCPR Safety Limit of 1.07 will be used through the first operating cycle," would be deleted. The associated Bases 2.1 would be changed to (1) reflect the new MCPR values, (2) delete certain details (including Bases Table B2.1.2-1, "Uncertainties Used in the Determination of the Fuel Cladding Safety Limit," and Bases Table B2.1.2-2, "Nominal Values of Parameters Used in the Statistical Analysis of Fuel Cladding Integrity Safety Limit,") and (3) substitute for the deleted detail a reference to General Electric (GE) Standard Application for Reactor Fuel (GESTAR II), NEDE-24011, and to the cycle-specific analysis. The TS Index would be changed to reflect deletion of Bases Tables B2.1.2-1 and B2.1.2-2.

By letter dated April 24, 1998, the licensee supplemented the initial application for amendment to add a footnote stating that the MCPR values are applicable to Cycle 7 operation only. Limiting the new MCPR values to Cycle 7 is consistent with the TS changes as described in the Federal Register (63 FR 4314, January 28, 1998), and does not affect the Commission's finding of initial proposed no significant hazards consideration.

2.0 BACKGROUND

On May 24, 1996, GE notified the NRC staff, pursuant to 10 CFR Part 21, of an error in its generic safety limit calculational methodology, to the effect that the generic MCPR safety limit might be non-conservative when applied to some cycle-specific core and fuel designs. Consequently, GE performed a cycle-specific safety limit calculation for NMP2 Cycle 5. NMPC submitted Licensee Event Report (LER) 96-06, "Incorrect Safety Limit Caused by Inadequate Calculational Procedure," dated June 3, 1996, and provided additional information to the NRC regarding the impact of the nonconservative values. NMPC concluded that neither the MCPR safety limit nor the MCPR operating limit would have been exceeded for any analyzed plant transient, based on the increased safety limit value and the core performance up to that point in the operating cycle. For Cycle 6 (which began in November 1996, and ended May 2, 1998, with the start of the current refueling outage), NMPC revised the Supplemental Reload Licensing Report, the Updated Safety Analysis Report (USAR), and Core Operating Limits Report (COLR) to correct the MCPR safety limit. NMPC did not submit an application for license amendment for Cycle 6 to implement the corrective actions described in LER 96-06. Therefore, the current TSs do not reflect the Cycle 6 MCPR safety limit of 1.10 for two recirculation loop operation and the corresponding single loop MCPR safety limit of 1.12. The current NMP2 TSs specify MCPR safety limits of 1.07 for two-loop operation and 1.08 for single-loop operation.

"General Electric Standard Application for Reactor Fuel" (NEDE-24011-P-A), GESTAR II, describes the approved analytical methodologies and requirements for determining the MCPR safety limit and the MCPR operating limit. The cycle-specific thermal limit parameters, including the MCPR operating limit, are specified in the COLR, which the licensee reissues every cycle. GESTAR II specifies, in part, that:

(1) For every new fuel design, a generic MCPR will be calculated for a large high-power density plant, assuming a bounding equilibrium core;

(2) For each new fuel design, the applicability of the generic equilibrium core MCPR safety limit will be confirmed for each operating cycle or a plant-specific analysis will be performed; and

(3) The critical power ratio correlation will be reconfirmed or a new one established whenever there is a change in the wetted parameters of the flow geometry (i.e., fuel, water rod diameter, channel sizing, spacer design).

In addition, NRC and GE instituted interim implementing procedures, which were developed as corrective actions to issues identified in GE's Part 21 reporting and in a notice of noncompliance issued to GE as a result of an NRC inspection in May 1996. Amendment 25 to GESTAR II (NEDE-24011-P-A), which is being reviewed by the NRC staff, incorporates the corrective actions. The interim procedures require, in part, that licensees perform a core-specific MCPR safety limit evaluation for each cycle until the NRC staff approves Amendment 25 to GESTAR II.

3.0 EVALUATION

In the application for amendment, NMPC reaffirmed that the MCPR safety limit for NMP2 Cycle 7 was analyzed in accordance with the NRC-approved methods described in NEDE-24011-P-A-13 (the latest approved revision of GESTAR II) and the subsequent NRC/GE interim procedures documented in Amendment 25 to GESTAR II, which is being reviewed by the NRC staff. NMPC also stated that it will perform the cycle-specific MCPR safety limit calculations for future core reloads using the cycle-specific core loading pattern and power distribution until the NRC staff approves Amendment 25 to GESTAR.

In response to an NRC request, the licensee submitted a supplement to the application for amendment, dated April 24, 1998, to add footnotes to TS Sections 2.1.2 and 3.4.1.1 and TS Bases 2.1.0 that restrict the MCPR safety limit values to Cycle 7.

GE uses a parameter, called "R-factor," to characterize the local peaking pattern relative to any given fuel rod. The NRC staff previously reviewed the R-factor calculation method for the GE11 fuel product line used at NMP2. The proposed cycle-specific MCPR safety limit analysis is based on the NRC-approved methodologies specified in GESTAR II (NEDE-24011-P-A-13, Sections 1.1.5 and 1.2.5, which references NEDE-10985-A, "General Electric BWR Thermal Analysis Basis (GETAB): Data, Correlation and Design Application," dated January 1977) for two-loop operations. The revised R-factor calculation method uses the same NRC-approved equation stated in GESTAR II, except that it substitutes rod-integrated powers for the lattice peaking factors to account for the effects of the part-length rod design. The NRC staff finds this approach acceptable.

Appendices D and F of the application for amendment contains GE's evaluation. These appendices discuss the basis for the NMP2 cycle-specific MCPR safety limit evaluation for Cycle 6 and Cycle 7, including the GE11 core-specific input parameters, and the corresponding assumptions. It also explains why the cycle-specific MCPR safety limit calculations for Cycle 6 yield higher values in comparison with the upcoming Cycle 7 values.

The NMP2 Cycle 7 MCPR safety limits were derived using cycle-specific fuel and core parameters, including the actual core loading, conservative variations of projected control blade patterns, the actual bundle parameters, and the cycle exposure range. The key parameters for the MCPR safety limit calculations developed by GE indicate that the cycle-specific safety limit for Cycle 7 has a flatter radial power distribution than Cycle 6. However, the Cycle 7 in-bundle critical power ratio distributions are more peaked than in Cycle 6. The higher core enrichment and the flatter core-wide power distribution for Cycle 7 are offset by the more peaked pin power in comparison to Cycle 6. Consequently, the Cycle 7 MCPR safety limit for NMP2 resulted in a lower value than for the Cycle 6.

On the basis of its review, the NRC staff finds the proposed changes to Sections 2.1.2 and 3.4.1 of the NMP2 TSs acceptable, because the MCPR safety limits: (1) are based on cycle-specific inputs and analysis; (2) were obtained using NRC-approved methods and procedures; and (3) ensure that 99.9 percent of the fuel rods in the core will not experience boiling transition during an anticipated operational occurrence.

The Cycle 7 MCPR safety limits may not bound the cycle-specific MCPR safety limits for future cycles. Consequently, the MCPR safety limit values are limited to the Cycle 7 reload as stated in the proposed footnotes added to Sections 2.1.2 (including TS Bases 2.1) and 3.4.1.1 of the NMP2 TSs.

The NRC staff also finds that the existing footnote in TS Section 3.4.1.1 that imposes a condition applicable only to the first operating cycle, is obsolete, and thus, its deletion is acceptable. Similarly, the proposed changes to the TS Bases are acceptable as an administrative matter because the changes remove redundant information that is available in the licensing topical report, GESTAR II. The corresponding changes to the index to reflect deleted tables are also acceptable.

3.0 <u>STATE CONSULTATION</u>

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (63 FR 4314). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: Z. Abdullahi
T. Huang
D. Hood

Date: June 4, 1998