

November 21, 1988

Docket No. 50-220

Mr. Lawrence Burkhardt III  
Executive Vice President, Nuclear Operations  
Niagara Mohawk Power Corporation  
301 Plainfield Road  
Syracuse, New York 13212

Dear Mr. Burkhardt:

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. 69215)

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The Commission has issued the enclosed Amendment No. 111 to Facility Operating License No. DPR-63 for the Nine Mile Point Nuclear Station Unit No. 1 (NMP-1). The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated May 4, 1988.

This amendment revises Technical Specification Sections 3.6.2 and 4.6.2 to clarify the Surveillance Requirements for Average Power Range Monitoring scram and Rod Withdrawal Block instrumentation.

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

Sincerely,

Original signed by Robert A. Capra

Robert E. Martin, Senior Project Manager  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 111 to DPR-63
2. Safety Evaluation

cc: w/enclosures  
See next page

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

November 21, 1989

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Dear Mr. Burkhardt:

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The Commission has issued the enclosed Amendment No. 111 to Facility Operating License No. DPR-63 for the Nine Mile Point Nuclear Station Unit No. 1 (NMP-1). The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated May 4, 1988.

This amendment revises Technical Specification Sections 3.6.2 and 4.6.2 to clarify the Surveillance Requirements for Average Power Range Monitoring scram and Rod Withdrawal Block instrumentation.

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

Sincerely,

*Robert A. Coppe for*

Robert E. Martin, Senior Project Manager  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 111 to DPR-63
2. Safety Evaluation

cc: w/enclosures  
See next page

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Niagara Mohawk Power Corporation

Nine Mile Point Nuclear Station,  
Unit No. 1

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

NIAGARA MOHAWK POWER CORPORATION

DOCKET NO. 50-220

NINE MILE POINT NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 111  
License No. DPR-63

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Niagara Mohawk Power Corporation (the licensee) dated May 4, 1988, 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 2.C.(2) of Facility Operating License No. DPR-63 is hereby amended to read as follows:

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(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 111, 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

*Robert A. Capra*

Robert A. Capra, 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: November 21, 1989

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 111 TO FACILITY OPERATING LICENSE NO. DPR-63

DOCKET NO. 50-220

Revise Appendix A as follows:

Remove Pages

195  
196  
217  
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Insert Pages

195  
196  
217  
221  
223

TABLE 4.6.2a (Cont'd)

INSTRUMENTATION THAT INITIATES SCRAMSurveillance Requirement

<u>Parameter</u>	<u>Sensor Check</u>	<u>Instrument Channel Test</u>	<u>Instrument Channel Calibration</u>
(8) Shutdown Position of Reactor Mode Switch	None	Once during each major refueling outage	None
(9) Neutron Flux			
(a) IRM			
(i) Upscale	(f)	(f)	(f)
(ii) Inoperative	(f)	(f)	(f)
(b) APRM			
(i) Upscale	None	Once/week	Once/week <sup>(m)</sup> , Once per 3 months
(ii) Inoperative	None	Once/week	None
(iii) Downscale	None	Once/week	Once/week <sup>(m)</sup> , Once per 3 months
(10) Turbine Stop Valve Closure	None	Once per 3 months	Once per operating cycle
(11) Generator Load Rejection	None	Once per month	Once per 3 months

NOTES FOR TABLES 3.6.2a and 4.6.2a

- (a) May be bypassed when necessary for containment inerting.
- (b) May be bypassed in the refuel and shutdown positions of the reactor mode switch with a keylock switch.
- (c) May be bypassed in the refuel and startup positions of the reactor mode switch when reactor pressure is less than 600 psi.
- (d) No more than one of the four IRM inputs to each trip system shall be bypassed.
- (e) No more than two C or D level LPRM inputs to an APRM shall be bypassed and only four LPRM inputs to an APRM shall be bypassed in order for the APRM to be considered operable. No more than one of the four APRM inputs to each trip system shall be bypassed provided that the APRM in the other instrument channel in the same core quadrant is not bypassed. A Travelling In-Core Probe (TIP) chamber may be used as a substitute APRM input if the TIP is positioned in close proximity to the failed LPRM it is replacing.
- (f) Calibrate prior to starting and normal shutdown and thereafter check once per shift and test once per week until no longer required.
- (g) IRM's are bypassed when APRM's are onscale. APRM downscale is bypassed when IRM's are onscale.
- (h) Each of the four isolation valves has two limit switches. Each limit switch provides input to one of two instrument channels in a single trip system.
- (i) May be bypassed when reactor power level is below 45%.
- (j) Trip upon loss of oil pressure to the acceleration relay.
- (k) May be bypassed when placing the reactor mode switch in the SHUTDOWN position and all control rods are fully inserted.
- (l) Only the trip circuit will be calibrated and tested at the frequencies specified in Table 4.6.2a, the primary sensor will be calibrated and tested once per operating cycle.
- (m) This calibration shall consist of the adjustment of the APRM channel to conform to the power values calculated by a heat balance during reactor operation when THERMAL POWER  $\geq$  25% of RATED THERMAL POWER. Adjust the APRM channel if the absolute difference is greater than 2% of RATED THERMAL POWER. Any APRM channel gain adjustment made in compliance with Figure 2.1.1 shall not be included in determining the absolute difference.



TABLE 3.6.2g (cont'd)

INSTRUMENTATION THAT INITIATES CONTROL ROD WITHDRAWAL BLOCK

Limiting Condition for Operation

<u>Parameter</u>	<u>Minimum No. of Tripped or Operable Trip Systems</u>	<u>Minimum No. of Operable Instrument Channels Per Operable Trip System</u>	<u>Set Point</u>	<u>Reactor Mode Switch Position in Which Function Must Be Operable</u>			
				<u>Shutdown</u>	<u>Refuel</u>	<u>Startup</u>	<u>Run</u>
c. Downscale	2	3 (b)	> 5 percent of full scale for each scale		X	X	
d. Upscale	2	3 (b)	< 88 percent of full scale for each scale		X	X	
(3) APRM							
a. Inoperative	2 (h)	3 (c)	--		X	X	X
b. Upscale (Biased by Recirculation Flow)	2 (h)	3 (c)	Figure 2.1.1(h)		X	X	X
c. Downscale	2 (h)	3 (c)	> 2 percent of full scale		(d)	(d)	X

Amendment No. 111

TABLE 4.6.2g (Cont'd)

INSTRUMENTATION THAT INITIATES CONTROL ROD WITHDRAWAL BLOCKSurveillance Requirement

<u>Parameter</u>	<u>Sensor Check</u>	<u>Instrument Channel Test</u>	<u>Instrument Channel Calibration</u>
(3) APRM			
a. Inoperative	None	Once per month	None
b. Upscale (Biased by Recirculation Flow)	None	Once per month	Once per 3 months
c. Downscale	None	Once per month	Once per 3 months
(4) Recirculation Flow			
a. Comparator Off Normal	None	Once per month	Once per month
b. Flow Unit Inoperative	None	Once per month	Once per month
c. Flow Unit Upscale	None	Once per month	Once per month

Amendment No. 111

NOTES FOR TABLES 3.6.2g and 4.6.2g

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- (a) No more than one of the four SRM inputs to the single trip system shall be bypassed.
- (b) No more than one of the four IRM inputs to each instrument channel shall be bypassed. These signals may be bypassed when the APRM's are onscale.
- (c) No more than one of the four APRM inputs to each instrument channel shall be bypassed provided that the APRM in the other instrument channel in the same core quadrant is not bypassed. No more than two C or D level LPRM inputs to an APRM shall be bypassed and only four LPRM inputs to only one APRM shall be bypassed in order for the APRM to be considered operable. In the Run mode of operation, bypass of two chambers from one radial core location in any one APRM shall cause that APRM to be considered inoperative. A Travelling In-Core Probe (TIP) chamber may be used as a substitute APRM input if the TIP is positioned in close proximity to the failed LPRM it is replacing. If one APRM in a quadrant is bypassed and meets all requirements for operability with the exception of the requirement of at least one operable chamber at each radial location, it may be returned to service and the other APRM in that quadrant may be removed from service for test and/or calibration only if no control rod is withdrawn during the calibration and/or test.
- (d) May be bypassed in the startup and refuel positions of the reactor mode switch when the IRM's are onscale.
- (e) This function may be bypassed when the count rate is  $\geq 100$  cps.
- (f) One sensor provides input to each of two instrument channels. Each instrument channel is in a separate trip system.
- (g) Calibrate prior to startup and normal shutdown and thereafter check once per shift and test once per week until no longer required.
- (h) The actuation of either or both trip systems will result in a rod block.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 111 TO FACILITY OPERATING LICENSE NO. DPR-63

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION, UNIT NO. 1

DOCKET NO. 50-220

INTRODUCTION

By application for amendment dated May 4, 1988, Niagara Mohawk Power Corporation requested a revision of the Technical Specifications, Appendix A, to Operating License DPR-63 for Nine Mile Point Nuclear Station Unit No. 1 (NMP-1). The proposed change clarifies the Surveillance Requirements for APRM Scram and Rod Withdrawal Block instrumentation. The APRM surveillance intervals as shown on Table 4.6.2a have been changed and a note clarifying weekly surveillance requirements has been added. Also, a comment was added to Table 3.6.2g identifying that either or both APRM trips will initiate a Rod Block. This evaluation encompassed the referenced changes as applicable to Sections 3.6.2 and 4.6.2 of the Technical Specifications.

DISCUSSION

NMP-1 Technical Specification Table 4.6.2a identified surveillance requirements for instrumentation that initiates scram signals. The requested change revised the channel calibration surveillance interval for the APRM instrumentation. Note M of Table 4.6.2a has been revised to clarify that the weekly calibration of the APRM instrumentation includes only APRM power level adjustments based on heat balance calculations performed during reactor operation. A three-month channel calibration interval has been added for both APRM upscale and downscale parameters. The APRM weekly instrument channel calibration requirement for an inoperative APRM has been deleted.

NMP-1 Technical Specifications Table 3.6.2g was revised to point out that actuation of an APRM trip will cause a Rod Withdrawal Block. Table 4.6.2g was revised to eliminate the Rod Withdrawal Block surveillance requirement for calibration of an inoperative APRM.

The proposed Technical Specification change revises the frequency of currently established surveillances. However, the proposed three-month surveillance requirement for both upscale and downscale parameters is conservative when compared with the frequency given in the Standard Technical Specifications for

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APRM calibration. The addition of note M to Table 4.6.2a and the elimination of the inoperative APRM surveillance calibration are also in agreement with the Standard Technical Specifications. The three-month calibration frequency and the deletion of inoperative APRM calibration also agree with the Standard Technical Specification surveillance requirements regarding Rod Withdrawal Block instrumentation.

A comparison of the NMP-1 APRM Technical Specification change for upscale and downscale parameters with the BWR Owners Group Improved Technical Specifications indicates that the proposed three-month calibration frequency is acceptable. The Improved Technical Specifications do not include APRM instrumentation as part of the Rod Withdrawal Block surveillance scope and as a result the three-month surveillance requirement is in fact conservative. The proposed elimination of the inoperative APRM calibration requirement is also consistent with the requirements outlined in the Improved BWR Technical Specifications. Comparison of the NMP-1 Technical Specification changes to other BWR plant Technical Specifications also indicates the proposed surveillance revisions to be consistent with industry practice.

Although the proposed change revises surveillance requirements and intervals for the APRM and Rod Block instrumentation, these changes are consistent with industry practice and the Standard Technical Specifications. The revised APRM/Rod Block surveillance requirements will not impact the safe operation of the plant. The amendment is therefore found to be acceptable to the staff.

#### ENVIRONMENTAL CONSIDERATION

This amendment involves changes to the surveillance requirements. The 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this 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 this amendment.

#### CONCLUSION

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: November 21, 1989

PRINCIPAL CONTRIBUTOR: Cliff Doutt