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. 80
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 October 31, 1997, as supplemented by letter dated February 3, 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. 80 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 upon completion and acceptance of design modifications currently scheduled for the spring of 1998.

FOR THE NUCLEAR REGULATORY COMMISSION

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: March 31, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 80

TO FACILITY OPERATING LICENSE NO. NPF-69

DOCKET NO. 50-410

Replace the following page of the Appendix A Technical Specifications with the attached page. The revised page is identified by Amendment number and contains vertical lines indicating the areas of change.

Remove	Insert
2-3	2-3
3/4 3-1	3/4 3-1
3/4 3-1a	3/4 3/1a
3/4 3-2	3/4 3-2
3/4 3-4	3/4 3-4
3/4 3-7	3/4 3-7
3/4 3-9	3/4 3-9
3/4 3-64	3/4 3-64
3/4 3-65	3/4 3-65
B3/4 3-1	B3/4 3-1
B3/4 3-2	B3/4 3-2

TABLE 2.2.1-1

REACTOR PROTECTION SYSTEM INSTRUMENTATION SETPOINTS

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUE
1. Intermediate Range Monitor, - Neutron Flux - High	≤120/125 divisions of full scale	≤122/125 divisions of full scale
2. Average Power Range Monitor:		
a. Neutron Flux - Upscale, Setdown	≤15% of RATED THERMAL POWER	≤20% of RATED THERMAL POWER
b. Flow-Biased Simulated Thermal Power - Upscale		
1) Flow-Biased 2) High-Flow-Clamped	≤0.58 (W-ΔW)[(a)] + 59%, with a maximum of ≤113.5% of RATED THERMAL POWER	≤0.58 (W-ΔW)[(a)] + 62%, with a maximum of ≤115.5% of RATED THERMAL POWER
c. Fixed Neutron Flux - Upscale	≤118% of RATED THERMAL POWER	≤120% of RATED THERMAL POWER
d. Inoperative	NA	NA
e. 2-Out-Of-4 Voter	NA	NA
3. Reactor Vessel Steam Dome Pressure - High	≤1052 psig	≤1072 psig
4. Reactor Vessel Water Level - Low, Level 3	≥159.3 in. above instrument zero*	≥157.8 in. above instrument zero
5. Main Steam Line Isolation Valve - Closure	≤8% closed	≤12% closed
6. Main Steam Line Radiation [(b)] - High	≤3.0 x full-power background	≤3.6 x full-power background
7. Drywell Pressure - High	≤1.68 psig	≤1.88 psig

* See Bases Figure B3/4 3-1.

(a) The Average Power Range Monitor Scram Function varies as a function of recirculation loop drive flow (W). ΔW is defined as the difference in indicated drive flow (in percent of drive flow which produces rated core flow) between two loop and single loop operation at the same core flow. ΔW=0 for two loop operation. ΔW=5% for single loop operation.

(b) See footnote (**) to Table 3.3.2-2 for trip setpoint during hydrogen addition test.

3/4.3.1 REACTOR PROTECTION SYSTEM INSTRUMENTATION

LIMITING CONDITIONS FOR OPERATION

3.3.1 As a minimum, the reactor protection system instrumentation channels shown in Table 3.3.1-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3.1-1.

ACTION:

a. With one channel required by Table 3.3.1-1 inoperable in one or more Functional Units, place the inoperable channel and/or that trip system in the tripped condition* within 12 hours. The provisions of Specification 3.0.4 are not applicable.

b. With two or more channels required by Table 3.3.1-1 inoperable in one or more Functional Units:

1. Within one hour, verify sufficient channels remain OPERABLE or tripped* to maintain trip capability in the Functional Unit, and

2. Within 6 hours, place the inoperable channel(s) in one trip system and/or that trip system** in the tripped condition*, and

3. Within 12 hours, restore the inoperable channels in the other trip system to an OPERABLE status or tripped*.

Otherwise, take the ACTION required by Table 3.3.1-1 for the Functional Unit.

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* An inoperable channel or trip system need not be placed in the tripped condition where this would cause the Trip Function to occur. In these cases, if the inoperable channel is not restored to OPERABLE status within the required time, the ACTION required by Table 3.3.1-1 for the Functional Unit shall be taken.

For Functional Units 2.a, 2.b, 2.c, and 2.d, inoperable channels shall be placed in the tripped condition to comply with Action a. Because these Functional Units provide trip inputs to both trip systems, placing either trip system in trip is not applicable. For Functional Units 2.a, 2.b, 2.c, and 2.d, Action b.3 applies without regard to "in the other trip systems."

** This ACTION applies to that trip system with the most inoperable channels; if both trip systems have the same number of inoperable channels, the ACTION can be applied to either trip system. Action b.2 is not applicable for Functional Units 2.a, 2.b, 2.c, and 2.d.

SURVEILLANCE REQUIREMENTS

4.3.1.1 Each reactor protection system instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST, and CHANNEL CALIBRATION operations for the OPERATIONAL CONDITIONS and at the frequencies shown in Table 4.3.1.1-1.

4.3.1.2 LOGIC SYSTEM FUNCTIONAL TESTS and simulated automatic operation of all channels shall be performed at least once per 18 months, except Table 4.3.1.1-1, Functions 2.a, 2.b, 2.c, 2.d, and 2.e. Functions 2.a, 2.b, 2.c, and 2.d do not require LOGIC SYSTEM FUNCTIONAL TESTS. For Function 2.e, tests shall be performed at least once per 24 months. LOGIC SYSTEM FUNCTIONAL TEST for Function 2.e includes simulating APRM trip conditions at the APRM channel inputs to the voter channel to check all combinations of two tripped inputs to the 2-out-of-4 voter logic in the voter channels.

4.3.1.3 The REACTOR PROTECTION SYSTEM RESPONSE TIME of each required reactor trip functional unit shall be demonstrated to be within its limit at least once per 18 months. Neutron detectors, Functions 2.a, 2.b, 2.c, 2.d, and Function 2.e digital electronics are exempt from response time testing. Each test shall include at least one channel per Trip System so that all channels are tested at least once per N times 18 months, where N is the total number of redundant channels in a specific reactor Trip System.

TABLE 3.3.1-1

REACTOR PROTECTION SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	APPLICABLE OPERATIONAL CONDITIONS	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (a)	ACTION
1.	Intermediate Range Monitors:			
	a. Neutron Flux - High	2	3	1
		3, 4	3	2
		5(b)	3	3
	b. Inoperative	2	3	1
		3, 4	3	2
		5	3	3
2.	Average Power Range Monitor(c):			
	a. Neutron Flux - Upscale, Setdown	2	3(l)	1
		5(k)	3(l)	3
	b. Flow Biased Simulated Thermal Power - Upscale	1	3(l)	4
	c. Fixed Neutron Flux - Upscale	1	3(l)	4
	d. Inoperative	1, 2	3(l)	1
		5(k)	3(l)	3
	e. 2-Out-Of-4 Voter	1, 2	2	1
		5(k)	2	3
3.	Reactor Vessel Steam Dome Pressure - High	1, 2(d)	2	1
4.	Reactor Vessel Water Level - Low, Level 3	1, 2	2	1

REACTOR PROTECTION SYSTEM INSTRUMENTATION

TABLE NOTATIONS

(a) A channel may be placed in an inoperable status for up to 6 hours for required surveillance without placing the Trip System in the tripped condition provided at least one OPERABLE channel in the same Trip System is monitoring that parameter.

(b) Unless adequate shutdown margin has been demonstrated per Specification 3.1.1, and the Refuel position one-rod-out interlock is OPERABLE per Specification 3.9.1, the shorting links shall be removed from the RPS circuitry prior to and during the time any control rod is withdrawn.*

(c) An APRM channel is inoperable if there are less than 3 LPRM inputs per level or less than 20 LPRM inputs to an APRM channel.

(d) This function is not required to be OPERABLE when the reactor pressure vessel head is removed per Specification 3.10.1.

(e) This function shall be automatically bypassed when the reactor mode switch is not in the Run position.

(f) This function is not required to be OPERABLE when PRIMARY CONTAINMENT INTEGRITY is not required.

(g) Also actuates the standby gas treatment system.

(h) With any control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.

(i) This function shall be automatically bypassed when turbine first stage pressure is less than or equal to 136.4** psig, equivalent to THERMAL POWER less than 30% of RATED THERMAL POWER.

(j) Also actuates the EOC-RPT system.

(k) Required to be OPERABLE only during shutdown margin demonstrations performed per Specification 3.10.3.

(l) Since each APRM provides inputs to both trip systems, the minimum operable channels specified in Table 3.3.1-1 are the total APRM channels required (i.e., it is not on a trip system basis). The 6 hour allowed test time to complete a channel surveillance test (Note (a) above) is applicable provided at least two OPERABLE channels are monitoring that parameter.

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* Not required for control rods removed per Specification 3.9.10.1 or 3.9.10.2.

** To allow for instrument accuracy, calibration and drift, a setpoint of less than or equal to 125.8 psig turbine first stage pressure shall be used.

TABLE 4.3.1.1-1

REACTOR PROTECTION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION(a)	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
1. Intermediate Range Monitors:				
a. Neutron Flux - High	S/U, S,(b) S	S/U(c), W, R(d) W	R R	2 3, 4, 5
b. Inoperative	NA	W	NA	2, 3, 4, 5
2. Average Power Range Monitor(e):				
a. Neutron Flux - Upscale, Setdown	D, (b) D	SA(i) SA	R R	2 5(n)
b. Flow-Biased Simulated Thermal Power - Upscale	D	SA(h)	W(g), R(f)	1
c. Fixed Neutron Flux - Upscale	D	SA	W(g), R	1
d. Inoperative	NA	SA	NA	1, 2, 5(n)
e. 2-Out-Of-4 Voter	D	SA	NA	1, 2, 5(n)
3. Reactor Vessel Steam Dome Pressure - High	S	Q	R(k)	1, 2
4. Reactor Vessel Water Level - Low, Level 3	S	Q	R(k)	1, 2
5. Main Steam Line Isolation Valve - Closure	NA	Q	R	1
6. Main Steam Line Radiation - High	S	Q	R	1, 2(j)
7. Drywell Pressure - High	S	Q	R(k)	1, 2(l)

REACTOR PROTECTION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TABLE NOTATIONS

(a) Neutron detectors may be excluded from CHANNEL CALIBRATION.

(b) The IRM and SRM channels shall be determined to overlap for at least 1/2 decade during each startup after entering OPERATIONAL CONDITION 2, and the IRM and APRM channels shall be determined to overlap for at least 1/2 decade during each controlled shutdown, if not performed within the previous 7 days.

(c) Within 24 hours before startup, if not performed within the previous 7 days.

(d) Perform a CHANNEL FUNCTIONAL TEST with the mode switch in Startup/Hot Standby and the plant in the COLD SHUTDOWN or REFUEL Condition.

(e) The LPRMs shall be calibrated at least once per 1000 effective full-power hours (EFPH) using the TIP system.

(f) Calibration includes the flow input function.

(g) This calibration shall consist of the adjustment of the APRM channel to conform to the power values calculated by a heat balance during OPERATIONAL CONDITION 1 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 Specification 3.2.2 shall not be included in determining the absolute difference.

(h) CHANNEL FUNCTIONAL TEST shall include the flow input function, excluding the flow transmitter.

(i) Not required to be performed when entering Mode 2 from Mode 1 until 12 hours after entering Mode 2.

(j) This function is not required to be OPERABLE when the reactor pressure vessel head is removed per Specification 3.10.1.

(k) Perform the calibration procedure for the trip unit setpoint at least once per 92 days.

(l) This function is not required to be OPERABLE when PRIMARY CONTAINMENT INTEGRITY is not required to be OPERABLE per Special Test Exception 3.10.1.

(m) With any control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.

(n) Required to be OPERABLE only during shutdown margin demonstrations performed per Specification 3.10.3.

TABLE 4.3.6-1

CONTROL ROD BLOCK INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION (a)	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
1. Rod Block Monitor				
a. Upscale	NA	SA(c)	R	1*
b. Inoperative	NA	SA(c)	NA	1*
c. Downscale	NA	SA(c)	R	1*
2. Source Range Monitors				
a. Detector Not Full In	NA	S/U(b), W	NA	2, 5
b. Upscale	NA	S/U(b), W	Q	2, 5
c. Inoperative	NA	S/U(b), W	NA	2, 5
d. Downscale	NA	S/U(b), W	Q	2, 5
3. Intermediate Range Monitors				
a. Detector Not Full In	NA	S/U(b), W	NA	2, 5
b. Upscale	NA	S/U(b), W	Q	2, 5
c. Inoperative	NA	S/U(b), W	NA	2, 5
d. Downscale	NA	S/U(b), W	Q	2, 5
4. Scram Discharge Volume				
Water Level - High, Float Switch	NA	Q	R	1, 2, 5**

TABLE 4.3.6-1 (Continued)

CONTROL ROD BLOCK INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION (a)	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
5. Reactor Coolant System Recirculation Flow				
a. Upscale	NA	SA	R	1
b. Inoperative	NA	SA	NA	1
c. Comparator	NA	SA	R	1
6. Reactor Mode Switch				
a. Shutdown Mode	NA	R	NA	3, 4
b. Refuel Mode	NA	R	NA	5

BASES

3/4.3.1 REACTOR PROTECTION SYSTEM INSTRUMENTATION

The reactor protection system (RPS) automatically initiates a reactor scram to:

a. Preserve the integrity of the fuel cladding.

b. Preserve the integrity of the reactor coolant system.

c. Minimize the energy which must be adsorbed following a loss-of-coolant accident, and

d. Prevent inadvertent criticality.

This specification provides the Limiting Conditions for Operation necessary to preserve the ability of the system to perform its intended function even during periods when instrument channels may be out of service because maintenance is being performed. When necessary, one channel may be made inoperable for brief intervals to conduct required surveillance.

The reactor protection system is made up of two independent trip systems. There are usually four channels to monitor each parameter, and there are two channels in each trip system. The outputs of the channels in a trip system are combined in a logic so that either channel will trip that trip system. The tripping of both trip systems will produce a reactor scram. The APRM system is divided into four APRM channels and four 2-out-of-4 voter channels. Each APRM channel provides inputs to each of the four voter channels. The four voter channels are divided into two groups of two each, with each group of two providing inputs to one RPS trip system. The system is designed to allow one APRM channel, but no voter channels, to be bypassed. Note (l) to Table 3.3.1-1 states that the Minimum Operable Channels in Table 3.3.1-1 for the APRM Functional Units (except the 2-out-of-4 voter Functional Unit) are the total number of APRM channels required and are not on a trip system basis. Therefore, when only one required APRM is inoperable, Action a is the only Action required to be entered. This Action requires the APRM to be restored to operable status or placed in the tripped condition within 12 hours. As stated in Action a, footnote *, placing either trip system in trip is not applicable since the APRM channels are not on a trip system basis. When two or more required APRMs are inoperable, Action b is entered. Action b.1 requires verification of trip capability in the affected functional unit within one hour (i.e., one APRM operable and one APRM in the tripped condition). Action b.2, as stated in footnote **, is not applicable since the APRM channels are not on a trip system basis. Action b.3 requires that the remaining required inoperable APRM be restored to operable status within 12 hours.

The system meets the intent of IEEE-279 for nuclear power plant protection systems. Specified surveillance intervals and surveillance and maintenance outage times have been determined in accordance with NEDC-30851P-A, "Technical Specification Improvement Analyses for BWR Reactor Protection System," and NEDC-32410P-A, "Nuclear Measurement Analysis and Control Power Range Neutron Monitor (NUMAC-PRNM) Retrofit Plus Option III Stability Trip Function." The bases for the trip settings of the RPS are discussed in the bases for Specification 2.2.1. When a channel is placed in an inoperable status solely for performance of required surveillances, entry into LCO and required ACTIONS may be delayed, provided the associated function maintains RPS trip capability.

The measurement of response time at the specified frequencies provides assurance that the protective functions associated with each channel are completed within the time limit assumed in the safety analyses. Response time may be demonstrated by any series of sequential, overlapping or total channel test measurement, provided such tests demonstrate the total channel response time as defined. Sensor response time verification may be demonstrated by either (1) inplace, onsite, or offsite test measurements, or (2) utilizing replacement sensors with certified response times.

3/4.3.2 ISOLATION ACTUATION INSTRUMENTATION

This specification ensures the effectiveness of the instrumentation used to mitigate the consequences of accidents by prescribing the OPERABILITY trip setpoints for isolation of the reactor systems. When necessary, one channel may be inoperable for brief intervals to conduct required surveillance. Specified surveillance intervals and surveillance and maintenance outage times have been determined in accordance with NEDC-30851P-A, Supplement 2, "Technical Specification Improvement Analyses for BWR Isolation Instrumentation Common to RPS and ECCS Instrumentation," and with NEDC-31677P-A, "Technical Specification Improvement Analyses for BWR Isolation Actuation Instrumentation." When a channel is placed in an inoperable status solely for performance of required surveillances, entry into LCO and required ACTIONS may be delayed, provided the associated function maintains primary containment isolation capability. Some of the trip settings may have tolerances explicitly stated where both the high and low values are critical and may have a substantial effect on safety. The setpoints of other instrumentation, where only the high or low end of the setting has a direct bearing on safety, are established at a level away from the normal operating range to prevent inadvertent actuation of the systems involved.

Except for the MSIVs, the FSAR Chapter 15 safety analysis does not address individual sensor response times or the response times of the logic systems to which the sensors are connected. For AC-operated valves, it is assumed that the AC power supply is lost and is restored by startup of the emergency diesel generators. In this event, a time of 13 seconds is assumed before the valve starts to move. In addition to the pipe break, the failure of the DC-operated valve is assumed; thus the signal delay (sensor response) is concurrent with the 13-second diesel startup. The safety analysis considers an allowable inventory loss in each case which in turn determines the valve speed in conjunction with the 13-second delay. It follows that checking the valve speeds and the 13-second time for establishing emergency power will establish the response time for the isolation functions.

Operation with a trip set less conservative than its Trip Setpoint but within its specified Allowable Value is acceptable on the basis that the difference between each Trip Setpoint and the Allowable Value is an allowance for instrument drift specifically allocated for each trip in the safety analysis. The Trip Setpoint and Allowable Value also contain additional margin for instrument accuracy and calibration capability.