May 8, 1984

Docket No. 50-220

Mr. G. K. Rhode
Senior Vice President
Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, New York 13202

Dear Mr. Rhode:

The Commission has issued the enclosed Amendment No. 60 to Facility Operating License No. DPR-63 for the Nine Mile Point Nuclear Station, Unit No. 1. The amendment changes the Technical Specifications in response to your request dated January 5, 1984.

This revision to the Technical Specifications deletes Limiting Conditions for Operation, surveillance requirements and changes to the bases relating to isolation valves and instrumentation which automatically isolated the emergency condensers. These changes support the changing of system isolation from automatic to manual on indications of high radiation.

A copy of the Safety Evaluation is also enclosed.

Sincerely,

Original signed by/

Robert A. Hermann, Project Manager
Operating Reactors Branch #2
Division of Licensing

Enclosures:
1. Amendment No. 60 to License No. DPR-63
2. Safety Evaluation

cc w/enclosures:
See next page

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NRC PDR	RHermann	TBarnhart (4)	OPA, CMiles
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SNorris:ajs	RHermann	DVassallo	Bernie Bordenick	GLainas
04/20/84	04/20/84	04/23/84	04/24/84	05/1/84

change To as marked OK on Telecon 5/1/84 Bernie Bordenick/OELD

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Mr. G. K. Rhode
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 NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 60
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 January 5, 1984, 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. 60, 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

Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 8, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 60

FACILITY OPERATING LICENSE NO. DPR-63

DOCKET NO. 50-220

Revise the Appendix A Technical Specifications by removing and inserting the following pages:

Existing Page	Revised Page
118	118
205	205
206	206
235	235

The revised areas are indicated by marginal lines.

LIMITING CONDITIONS FOR OPERATION
Table 3.2.7

REACTOR COOLANT SYSTEM ISOLATION VALVES

Line or System	No. of Valves (Each Line)	Location Relative to Primary Containment	Normal Position	Motive Power	Maximum Oper. Time (Sec)	Action on Initiating Signal	Initiating Signal (All Valves Have Remote Manual Backup)
Main Steam (Two Lines)	1	Inside	Open	A.I.P.O.*	10	Close	Reactor water level low-low, or main steam line high radiation, or main steam line high flow, or low condenser vacuum, or high temperature in the pipe tunnel
	1	Outside	Open	A.I.P.O.*	10	Close	
Main Steam Warm-up (Two Lines)	1	Outside	Closed	A.I.P.O.	8	Close	
Main Steam-Emergency Cooling Vents (Two Lines)	2	Outside	Open	A.I.P.O.	5	Close	-
Feedwater (Two Lines)	1	Outside	Open	R.M.P.O.*	60	-	-
	1	Outside	-	Self Act. Ck.	--	-	-
Emergency Cooling							
Steam Leaving Reactor (Two Lines)	1	Outside	Open	A.I.P.O.	38	Close	High system flow
	1	Outside	Open	A.I.P.O.	38	Close	
Condenser Return to Reactor (Two Lines)	1	Inside	-	Self Act. Ck.	--	-	
	1	Outside	Closed	A.I.P.O.	60	Close	
Reactor Cleanup							
Water Leaving Reactor (One Line)	1	Inside	Open	A.I.P.O.	18	Close	Reactor water level low-low, or high area temperature, liquid poison initiation or high system pressure, or low system flow, or high system temperature
	1	Outside	Open	A.I.P.O.	18	Close	
Water Return to Reactor (One Line)	1	Inside	Open	A.I.P.O.	18	Close	
	1	Outside	-	Self Act. Ck.	--	-	
Shutdown Cooling							
Water Leaving Reactor (One Line)	1	Inside	Closed	A.I.P.O.	40	Close	Reactor water level low-low, or high area temperature
	1	Outside	Closed	A.I.P.O.	40	Close	
Water Return to Reactor (One Line)	1	Inside	Closed	A.I.P.O.	40	Close	
	1	Outside	-	Self Act. Ck.	--	-	

Table 3.6.2c

INSTRUMENTATION THAT INITIATES OR ISOLATES EMERGENCY COOLING

Limiting Condition for Operation

Parameter	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip Sytem	Set-Point	Reactor Mode Switch Position in Which Function Must Be Operable			
				Shutdown	Refuel	Startup	Run
EMERGENCY COOLING INITIATION							
(1) High-Reactor Pressure	2	2	≤1080 psig	(b)		x	x
(2) Low-Low Reactor Water Level	2	2	≥5 inches (Indicator Scale)	(b)		x	x
EMERGENCY COOLING ISOLATION (for each of two systems)							
(3) High Steam Flow Emergency Cooling System	2	2(a)	.19 psid			x	x

Table 4.6.2c

INSTRUMENTATION THAT INITIATES OR ISOLATES EMERGENCY COOLING

Parameter	Surveillance Requirement: Sensor Check	Surveillance Requirement: Instrument Channel Test	Surveillance Requirement: Instrument Channel Calibration
EMERGENCY COOLING INITIATION			
(1) High Reactor Pressure	None	Once per month(c)	Once per 3 months(c)
(2) Low-Low Reactor Water Level	Once/day	Once per month(c)	Once per 3 months(c)
EMERGENCY COOLING ISOLATION (for each of two systems)			
(3) High Steam Flow Emergency Cooling System	None	Once per 3 months(c)	Once per 3 months(c)

a. The set points included in the tables are those used in the transient analysis and the accident analysis. The high flow set point for the main steam line is 105 psi differential. This represents a flow of approximately 4.4×10^6 lb/hr. The high flow set point for the emergency cooling system supply line is 19 psi differential. This represents a flow of approximately 8.7×10^5 at rated conditions.

Normal background for the main steam line radiation monitors is defined as the radiation level which exists in the vicinity of main steam lines after 1 hour or more of sustained full rated power. The dose rate at the monitor due to activity from the control rod drop accident of Appendix E or from gross failure of one rod with complete fission product release from the rod would exceed the normal background at the monitor. The automatic initiation signals for the emergency cooling systems have to be sustained for more than 10 seconds to cause opening of the return valves. If the signals last for less than 10 seconds, the emergency cooling system operating will not be automatically initiated.

The high level in the scram discharge volume is provided to assure that there is still sufficient free volume in the discharge system to receive the control rod drives discharge. Following a scram, bypassing is permitted to allow draining of the discharge volume and resetting of the reactor protection system relays. Since all control rods are completely inserted following a scram and since the bypass of this particular scram initiates a control rod block, it is permissible to bypass this scram function. The scram trip associated with the shutdown position of the mode switch can be reset after 10 seconds.

The condenser low vacuum, low-low vacuum and the main steam line isolation valve position signals are bypassed in the startup and refuel positions of the reactor mode switch when the reactor pressure is less than 600 psig. These are bypassed to allow warmup of the main steam lines and a heat sink during startup.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 60 TO FACILITY OPERATING LICENSE NO. DPR-63

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION, UNIT NO. 1

DOCKET NO. 50-220

1.0 Introduction

By letter dated January 5, 1984 (Reference 1) Niagara Mohawk Power Corporation (the licensee) proposed changes to the Technical Specifications (TS) of Facility Operating License No. DPR-63 for the Nine Mile Point Nuclear Station, Unit No. 1. The revision to the Technical Specifications addressed in this Safety Evaluation concerns the changing of the isolation of the emergency condensers from automatic to manual on a high radiation signal.

The current control logic for the emergency condenser initiates automatic isolation upon receiving a high radiation signal from the emergency condenser vent radiation monitors or on high steam flow signals. In the event of a fire in the control complex, high radiation and high steam flow signals may cause a spurious isolation of both emergency condensers. Therefore the removal of the high radiation signal from the control complex was initially proposed as an Appendix R.III.G.3 modification by the licensee. Subsequent to this proposal, the licensee has adopted a position that manual isolation of the emergency condensers on a high radiation signal is acceptable. Manual isolation of the emergency condenser is done on other BWR plants (Big Rock Point, Dresden 2 and 3, Millstone 1, Oyster Creek and LaCrosse). Instead of making changes in the logic circuitry to prevent the spurious isolation, the licensee is proposing the deletion of the automatic isolation of the emergency condenser on high radiation signals.

2.0 Evaluation

During emergency condenser operation, water on the shell side of the condenser boils and vents to the atmosphere while condensing steam inside the tube bundles. Radiation monitors are located on the condenser vent to detect any tube leaks. The proposed change will provide only an alarm in the control room from the radiation monitors with no automatic isolation of the emergency condensers. In the event of a tube leak in the emergency condenser, an uncontrolled release of radioactive gases to the atmosphere could occur for a short time until operator action is taken. Staff concerns about this potential occurrence were discussed with the licensee in a telephone conference on March 5, 1984. Subsequently the licensee in their letter dated March 19, 1984 explained the operator actions that will

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be prescribed for emergency condenser operation. The licensee stated that the operators will take into account the plant condition and other indications, besides the high radiation signal, before manually isolating. The plant conditions and indications include the following:

The high radiation signal is one indicator of a tube leak. The high radiation signal does not, however, provide sufficient indication of a tube leak. There is other guidance available to operators to confirm a tube leak, for example:

a. Checking Radiation Monitors - If a tube leaks exists, high radiation would be sustained. The signal may have been only a radiation spike.

b. Checking Shell Side Temperature Monitors - If a tube leak exists, shell temperature may increase.

c. Checking Water Level Monitors - If a tube leak exists, water level may be fluctuating.

The licensee is committed to add the above operator guidance to the appropriate procedures. As described in Reference 2 more flexibility and availability are attained by manual isolation of the emergency condensers. The design basis of the emergency cooling system remains the same. Isolation condensers will still be automatically isolated on a high steam flow.

We find that the modification and changes to the Technical Specifications, in light of this commitment, are acceptable.

3.0 Environmental Considerations

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 §51.5(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) 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 References

1. Letter from C. V. Mangan of Niagara Mohawk Power Corporation to Director of NRR, license amendment request dated January 5, 1984.

2. Memorandum from Themis P. Speis, Assistant Director, DSI to Thomas N. Novak, Assistant Director, DL - "Safety Evaluation of Licensee's Response to NUREG-0737 Item II.K.3.14 - Isolation of Isolation Condensers," dated November 3, 1981.

3. Letter from C. V. Mangan of Niagara Mohawk Power Corporation to Director of NRR dated March 19, 1984.

Principal Contributor: G. Thomas

Dated: May 8, 1984