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DOCKET NUMBER	50-220
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FROM: Niagara Mohawk Power Corp.
Syracuse, New York 13202
Gerald K. Rhode

DATE OF DOCUMENT: 3-6-77

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DESCRIPTION

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(1 page)

ENCLOSURE

Amd't to OL/Change to Tech Specs: Consisting of Changes in Attachment A to application with replacement pages and additions....

(2 encl rec'd)
(17 pages)

DO NOT REMOVE

ACKNOWLEDGED

PLANT NAME: NINE MILE PT UNIT # 1

FOR ACTION/INFORMATION — ENVIRO — JCM 3-11-77

SAFETY			ENVIRO	
	ASSIGNED AD:			ASSIGNED AD:
✓	BRANCH CHIEF:	LEAR (6)		BRANCH CHIEF:
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	CASE		BOSNAK				BALLARD
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	HARLESS		PAWLICKI		STELLO		
							SITE TECH.
	PROJECT MANAGEMENT		REACTOR SAFETY		OPERATING TECH.		GAMMILL
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	P. COLLINS		NOVAK	✓	SHAO		HULMAN
	HOUSTON		ROSZTOCZY	✓	BAER		
	PETERSON		CHECK	✓	BUTLER		SITE ANALYSIS
	MELTZ			✓	GRIMES		VOLLMER
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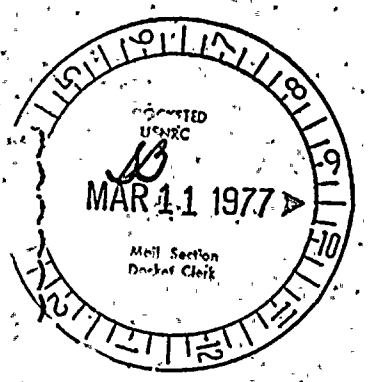
UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION



In the Matter of

NIAGARA MOHAWK POWER CORPORATION (Nine Mile Point Nuclear Station Unit No. 1)

Docket No. 50-220

APPLICATION FOR AMENDMENT

TO

OPERATING LICENSE

Pursuant to Section 50.90 of the regulations of the Nuclear Regulatory Commission, Niagara Mohawk Power Corporation, holder of Facility Operating License No. DPR-63, hereby requests that Sections 2.1.1, 3.1.4 and 3.6.2 of the Technical Specifications and Bases set forth in Appendix A to that License be amended. These proposed changes have been concurred with by the Site Operations Review Committee and Safety Review and Audit Board.

The proposed Technical Specification changes are set forth in Attachment A to this application. Supporting Information, which demonstrates that the proposed changes do not involve a significant hazards consideration, is set forth in Attachment B. The proposed change would not authorize any change in the types or any increase in the amounts of effluents or any change in the authorized power level of the facility.

2341

WHEREFORE, Applicant respectfully requests that Appendix A to Facility Operating License No. DPR-63 be amended in the form attached hereto as Attachment A.

NIAGARA MOHAWK POWER CORPORATION

By _____

Gerald K. Rhode
Vice President-Engineering

Subscribed and sworn to before me
on this 6th day of March, 1977.

_____

NOTARY PUBLIC

HAZEL J. CARRICK
Notary Public in the State of New York
Qualified in Oneida Co. No. [illegible]
Commission Expires March 30, 19[illegible]

ATTACHMENT A

NIAGARA MOHAWK POWER CORPORATION

License No. DPR-63

Docket No. 50-220

Proposed Changes to Technical Specifications

Replace page 6
13
52
~~Add 53a.~~
56
197
199
204
205
207
208
210
231

Add 53a
232a

Section 2.1.1

SAFETY LIMIT	LIMITING SAFETY SYSTEM SETTING

c. The neutron flux shall not exceed its scram setting for longer than 1.5 seconds as indicated by the process computer. When the process computer is out of service, a safety limit violation shall be assumed if the neutron flux exceeds the scram setting and control rod scram does not occur.

To ensure that the Safety Limit established in Specifications 2.1.1a and 2.1.1b is not exceeded, each required scram shall be initiated by its expected scram signal. The Safety Limit shall be assumed to be exceeded when scram is accomplished by a means other than the expected scram signal.

d. Whenever the reactor is in the shutdown condition with irradiated fuel in the reactor vessel, the water level shall not be more than 7 feet 11 inches (127.1 inches indicator scale) below minimum normal water level (Elevation 302'9"), except as specified in "e" below.

e. For the purpose of performing major maintenance on the reactor vessel, the reactor water level may be lowered to 9' below the minimum normal water level (Elevation 302'9"). Whenever the reactor water level is to be lowered below the low-low-low level set point, redundant instrumentation will be provided to monitor the reactor water level.

d. The reactor water low level scram trip setting shall be no lower than -12 inches (53 inches indicator scale) relative to the minimum normal water level (302'9").

e. The reactor water low-low level setting for core spray initiation shall be no less than -5 feet (5 inches indicator scale) relative to the minimum normal water level (Elevation 302'9").

f. The flow biased APRM rod block trip settings shall be less than or equal to that shown in Figure 2.1.1.

During periods when the reactor is shut down, consideration must also be given to water level requirements, due to the effect of decay heat. If reactor water level should drop below the top of the active fuel during this time, the ability to cool the core is reduced. This reduction in core cooling capability could lead to elevated cladding temperatures and clad perforation. The core will be cooled sufficiently to prevent clad melting should the water level be reduced to two-thirds of the core height.

The lowest point at which the water level can normally be monitored is approximately 4 feet 8 inches above the top of the active fuel. This is the low-low-low water level trip point, which is 7 feet 11 inches (127.1 inches indicator scale) below minimum normal water level (Elevation 302'9"). The safety limit has been established here to provide a point which can be monitored and also can provide adequate margin. However, for performing major maintenance as specified in Specification 2.1.1.e, redundant instrumentation will be provided for monitoring reactor water level below the low-low-low water level set point. (For example, by installing temporary instrument lines and reference pots to redundant level transmitters, so that the reactor water level may be monitored over the required range.)

The thermal power transient resulting when a scram is accomplished other than by the expected scram signal (e.g., scram from neutron flux following closure of the main turbine stop valves) does not necessarily cause fuel damage. However, for this specification a safety limit violation will be assumed when a scram is only accomplished by means of a backup feature of the plant design. The concept of not approaching a safety limit provided scram signals are operable is supported by the extensive plant safety analysis.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
c. If a redundant component in each of the core spray systems becomes inoperable, both systems shall be considered operable provided that the component is returned to an operable condition within 7 days and the additional surveillance required is performed.	
d. If a copy spray system becomes inoperable and all the components are operable in the other system, the reactor may remain in operation for a period not to exceed 7 days.	d. Core spray header ΔP instrumentation check — Once/day calibrate — Once/3 months test — Once/3 months
e. If Specifications a, b, c and d are not met, a normal orderly shutdown shall be initiated within one hour and the reactor shall be in the cold shutdown condition within ten hours. If both core spray systems become inoperable the reactor shall be in the cold shutdown condition within ten hours and no work (except as specified in "f" and "h" below) shall be performed on the reactor or its connected systems which could result in lowering the reactor water level to more than seven feet eleven inches below minimum normal water level (127.1 inches indicator scale).	e. <u>Surveillance with Inoperable Components</u> When a component or system becomes inoperable its redundant component or system shall be demonstrated to be operable immediately and daily thereafter.
	f. Surveillance during control rod drive maintenance which is simultaneous with the suppression chamber unwatered shall include at least hourly checks that the conditions listed in 3.1.4f are met.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
h. For the purpose of performing major maintenance on the reactor vessel, the reactor water level may be lowered to 9' below the minimum normal water level (elevation 302'9"). Whenever the reactor water level is to be lowered below the low-low-low level set point, redundant instrumentation will be provided to monitor the reactor water level.	

Based on the limited time involved in performance of the concurrent maintenance tasks, procedural controls to minimize the potential and duration of leakage from the control rod drive housing or LPRM penetration and available coolant makeup provides adequate protection against drainage of the vessel while the suppression chamber is drained.

Specification 3.1.4g establishes provisions to eliminate a potential single failure mode of core spray isolation valves 40-02 and 40-12. These provisions are necessary to ensure that the core spray system safety function is single failure proof. During system testing, when the isolation valve(s) are required to be in the closed condition, automatic opening signals to the valve(s) are operable if the core spray system safety function is required.

The intent of Specification 3.1.4h is to allow maintenance of reactor vessel structures while in the cold shutdown condition as specified in Specification 2.1.1e. This will require bypassing the core spray automatic initiation at the low-low water level signal.

added

Table 3.6.2b

INSTRUMENTATION THAT INITIATES
PRIMARY COOLANT SYSTEM OR CONTAINMENT ISOLATION

Limiting Condition for Operation

Parameter	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip System	Set-Point	Reactor Mode Switch Position in Which Function Must Be Operable			
				Shutdown	Refuel	Startup	Run
PRIMARY COOLANT ISOLATION (Main Steam, Cleanup, and Shutdown)							
(1) Low-Low Reactor water level	2	2	≥5 inches (Indicator Scale)	(c)	X	X	X
(2) Manual	2	1	--	X	X	X	X
MAIN-STEAM-LINE ISOLATION							
(3) High Steam Flow Main-Steam Line	2	2	≤105.psid	X	X	X	X

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Table 3.6.2b (cont'd)

INSTRUMENTATION THAT INITIATES
PRIMARY COOLANT SYSTEM OR CONTAINMENT ISOLATION

Limiting Condition for Operation

Parameter	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip System	Set-Point	Reactor Mode Switch Position in Which Function Must Be Operable			
				Shutdown	Refuel	Startup	Run
CLEANUP SYSTEM ISOLATION							
(8) High Area Temperature	1	2	≤190	X	X	X	X
SHUTDOWN COOLING SYSTEM ISOLATION							
(9) High Area Temperature	1	1	≤170	X	X	X	X
CONTAINMENT ISOLATION							
(10) Low-Low Reactor Water Level	2	2	≥5 inches (Indicator Scale)	(c)	X	X	X

NOTES FOR TABLES 3.6.2b AND 4.6.2b

(a) May be bypassed in the refuel and startup positions of the reactor mode switch when reactor pressure is less than 600 psi.

(b) May be bypassed when necessary for containment inerting.

(c) May be bypassed when necessary for performing major maintenance as specified in Specification 2.1.1.e.

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 System	Set-Point	Reactor Mode Switch Position in Which Function Must Be Operable			
				Shutdown	Refuel	Startup	Run
EMERGENCY COOLING INITIATION							
(1) High-High Reactor Pressure	2	2	≤ 1080 psig	X	X	X	X
(2) Low-Low Reactor Water Level	2	2	≥ 5 inches (Indicator Scale)	(b)	X	X	X
EMERGENCY COOLING ISOLATION							
(for each of two systems)							
(3) High Steam Flow Emergency Cooling System	2	2 (a)	19 psid	X	X	X	X
(4) High Radiation [illegible] Cooling							

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NOTES FOR TABLES 3.6.2c AND 4.6.2c

(a) Each of two differential pressure switches provide inputs to one instrument channel in each trip system.

(b) May be bypassed when necessary for performing major maintenance as specified in Specification 2.1.1.e.

Table 3.6.2d

INSTRUMENTATION THAT INITIATES CORE SPRAY

Limiting Condition for Operation

Parameter	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip System	Set-Point	Reactor Mode Switch Position in Which Function Must Be Operable			
				Shutdown	Refuel	Startup	Run
START CORE SPRAY PUMPS							
(1) High Drywell Pressure	2	2	≤3.5 psig	(a)	X	(a)	(a)
(2) Low-Low Reactor Water Level	2	2	≥5 inches (Indicator Scale)	(b)	X	X	X
OPEN CORE SPRAY DISCHARGE VALVES							
(3) Reactor Pressure and either (1) or (2) above.	2	2	≥365 psig	X	X	X	X

NOTES FOR TABLES 3.6.2d AND 4.6.2d

(a) May be bypassed when necessary for containment inerting.

(b) May be bypassed when necessary for performing major maintenance as specified in Specification 2.1.1.e.

Table 3.6.2k

HIGH PRESSURE COOLANT INJECTION

Limiting Condition for Operation

Parameter	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip System	Set-Point	Reactor Mode Switch Position in Which Function Must Be Operable			
				Shutdown	Refuel	Startup	Run
1) Low Reactor Water Level	2	2	1 ft. below water level at Elevation 302'-9"	(a)	X	X	X
2) Automatic Turbine Trip	1	1	---			X	X

NOTE FOR TABLES 3.6.2k AND 4.6.2k

(a) May be bypassed when necessary for performing major maintenance as specified in Specification 2.1.1.e.

ATTACHMENT B

NIAGARA MOHAWK POWER CORPORATION

License No. DPR-63

Docket No. 50-220

Supporting Information

The proposed Technical Specification changes described in Attachment A will allow lowering the reactor water level below the low-low-low level set point. This change is required to perform planned maintenance on the feedwater spargers and nozzles during our current Spring 1977 outage. Future reactor vessel maintenance work may also require lowering the reactor water level below the low-low-low level set point (i.e., core spray sparger maintenance).

Technical Specification changes are proposed to allow the bypassing of automatic initiation of the primary coolant and containment isolation, emergency cooling, core spray and the high pressure coolant injection systems. In order to lower the reactor vessel water, these water level trip settings must be bypassed.

A temporary reactor vessel water level monitoring installation will provide redundant instrumentation for monitoring the water level below the low-low-low level set point. The output from the instrumentation will be connected to a chart recorder in the control room. An annunciator on the chart recorder will be set to alarm prior to reaching the proposed Technical Specification limit.

The primary source of water to maintain level will be from the demineralized water storage system tank. The secondary source of temporary make-up will be from the condensate transfer system. Any drainage required to maintain vessel level will be controlled through remotely operated valves between the clean-up system and the equipment drain tank.

The shutdown cooling system will be available and in service as required for removing heat from the reactor vessel water.

Core spray will be manually initiated should the water level fall below 9'3" of the normal water level. (This is still 3'4" above the top of the active fuel.) Although manual initiation of the core spray may be slower than automatic, this is more than compensated for by the substantial reduction in postulated heat deposition resulting from a LOCA when compared to operation at rated conditions. Reductions in heat deposition are due to the following:

1) The core decay heat generation will be at least a factor of 10 less than it would be immediately following operation at rated conditions.

2) The stored energy in the core is insignificant.

Furthermore, the probability of a LOCA is significantly lower in the shutdown mode, since temperatures and pressures will be at ambient levels.

Finally, no other work that has the potential of decreasing the reactor vessel water level will be performed while the reactor vessel water is below the low-low-low level set point.