

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, 3.1.7 and Bases of the Technical Specifications set forth in Appendix A to that License be amended. Those proposed changes have been reviewed by the Site Operations Review Committee and the Safety Review and Audit Board.

The proposed Technical Specifications 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 changes 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. Justification for classification of the amendment pursuant to 10 CFR Section 170.22 is included as Attachment C. A check for the appropriate fee accompanies this Application.

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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 Donald P. Dise

Donald P. Dise  
Vice President - Engineering

Subscribed and sworn to before  
me on this 25th day of May, 1979.

Cynthia A. Petta  
NOTARY PUBLIC

CYNTHIA A. PETTA  
Notary Public in the State of New York  
Qualified in Onondaga Co. No. 4682225  
My Commission Expires March 30, 1980



ATTACHMENT A

Niagara Mohawk Power Corporation

License No. DPR-63

Docket No. 50-220

Proposed Changes to Technical Specifications (Appendix A)

Attached are revised Pages 6, 6a, 13, 64b and 70b. The revised pages have been retyped in their entirety and the marginal markings indicate the specific changes to text.



## SAFETY LIMIT

- 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. During all operating conditions 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 in the shutdown mode only (not to exceed 12 weeks in duration) on the reactor vessel, the reactor water level may be lowered 9' below the minimum normal water level (Elevation 302'9"). Whenever the reactor water level is to be lowered to more than 7 feet 11 inches below minimum normal water level, redundant instrumentation will be provided to monitor the reactor water level.

## LIMITING SAFETY SYSTEM SETTING

- 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.





## SAFETY LIMIT

Written procedures will be developed and followed whenever the reactor water level is lowered below the low-low level set point.

(5 feet below minimum normal water level)

The procedures will define the valvds that will be used to lower the vessel water level. All other valves that have the potential of lowering the vessel water level will be identified by valve number in the procedures and these valves will be red tagged to preclude their operation during the major maintenance with the water level below the low-low level set point.

In addition to the Facility Staff requirements given in Specification 6.2.2.b, there shall be another control room operator present in the control room with no other duties than to monitor the reactor vessel water level.



## BASES FOR 2.1.1 FUEL CLADDING - SAFETY LIMIT

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. 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. However, for performing major maintenance as specified in Specification 2.1.1e, 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.) In addition written procedures, which identify all the valves which have the potential of lowering the water level inadvertently, are established to prevent their operation during the major maintenance which requires the water level to be below the low-low level set point.

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

If at any time during power operation it is determined by normal surveillance that the limiting value for the power/flow relationship is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. If the power/flow relationship is not returned to within the prescribed limits within two (2) hours, the reactor shall be brought to the Cold Shutdown condition within 36 hours. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits.

### e. Recirculation Loops

During all operating conditions with irradiated fuel in the reactor vessel at least two (2) recirculation loop suction and their associated discharge valves will be in the full open position except when the reactor vessel is flooded to a level above the main steam nozzles or when the steam separators and dryer are removed.

### f. Reporting Requirements

If any of the limiting values identified in Specification 3.1.7a, b, c, d and e are exceeded, a Reportable Occurrence report shall be submitted. If the corrective action is taken, as described, a thirty-day written report will meet the requirements of this specification.



## BASES FOR 3.1.7 AND 4.1.7 FUEL RODS

### Recirculation Loops

Requiring the suction and discharge for at least two (2) recirculation loops to be full open assures that an adequate flow path exists from the annular region between the pressure vessel wall and the core shroud, to the core region. This provides for communication between those areas thus assuring that reactor water level instrument readings are indicative of the water level in the core region.

When the reactor vessel is flooded to the level of the main steam line nozzle, communication between the core region and annulus exists above the core to ensure that indicative water level monitoring in the core region exists. When the steam separators and dryer are removed, safety limit 2.1.1d and e requires water level to be higher than 9 feet below minimum normal water level (Elevation 302'9"). This level is above the core shroud elevation which would ensure communication between the core region and annulus thus ensuring indicative water level monitoring in the core region. Therefore, maintaining a recirculation loop in the full open position in these two instances are not necessary to ensure indicative water level monitoring.

### Reporting Requirements

The LCO's associated with monitoring the fuel rod operating conditions are required to be met at all times, i.e., there is no allowable time in which the plant can knowingly exceed the limiting values of MAPLHGR, LHGR, MCPR, or Power/Flow Ratio. It is a requirement, as stated in Specifications 3.1.7a, b, c & d that if at any time during power operation, it is determined that the limiting values for MAPLHGR, LHGR, MCPR, or Power/Flow Ratio are exceeded, action is then initiated to restore operation to within the prescribed limits. This action is initiated as soon as normal surveillance indicates that an operating limit has been reached. Each event involving operation beyond a specified limit shall be reported as a Reportable Occurrence. If the specified corrective action described in the LCO's was taken, a thirty-day written report is acceptable.





## ATTACHMENT B

### Niagara Mohawk Power Corporation

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#### Supporting Information

Safety Limit 2.1.1d is being clarified to include the low-low-low reactor vessel water level as a safety limit during all operating conditions as this is presently the lowest point at which level can be monitored. However, the top of active fuel is the level of safety significance.

In addition, Limiting Condition for Operation 3.1.7e will ensure that adequate communication exists between core region and annular area to ensure that level instrument readings are indicative of water level in the core region. This is accomplished by requiring that the suction and discharge valves on at least two (2) recirculation loops remain full open. This is not required when the reactor vessel is flooded to the level of the main steam line nozzle as communication between the core region and annulus exists above the core. This will ensure that indicative water level monitoring in the core region exists. When the steam separator and dryer are removed, Safety Limit 2.1.1d and e ensure water level above the core shroud elevation. This would ensure communication between the core region and annulus thus ensuring indicative water level monitoring in the core region.

Operations at Nine Mile Point Unit 1 has been consistent with the proposed Limiting Condition for Operation. Operators have not nor were they trained to close all recirculation loops in other than the above described situations. This Technical Specification change enforces current operating practice.



ATTACHMENT C

Niagara Mohawk Power Corporation

License No. DPR-63

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Amendment Classification

The proposed amendment to the Operating License has been evaluated and determined to fall within the definition of Class III of 10 CFR 170.22 thereby requiring a fee of four thousand dollars (\$4,000.00).

The proposed amendment for Nine Mile Point Unit 1 involves only a single safety issue as identified by a Nuclear Regulatory Commission position. Therefore, it meets the requirements of Class III of 10 CFR 170.22.

