ATTACHMENT A

NIAGARA MOHAWK POWER CORPORATION

LICENSE NO. DPR-63

DOCKET NO. 50-220

Proposed Changes to Tecnnical Specifications (Appendix A)

Replace existing pages 4a, 89, 90 and 91 with the attached revised pages 4a, 89, 89a, 90 and 91. These pages have been retyped in their entirety with marginal markings to indicate changes to the text. Marginal markings were not placed next to typographical, clerical, or format changes.

Note: Page 4a includes a new definition, number 1.18, to Section 1.0 of our present Technical Specifications. However, the following proposed Technical Specifications amendments also affect this section (these have not been incorporated into this submittal):

(1) Our submittal of November 1, 1983.

(2) Our submittal of February 1, 1984.

1.16 Fire Suppression Water System

A Fire Suppression Water System shall consist of: a water supply system, fixed extinguishing systems of both automatic sprinklers and sprays, and manual fire fighting equipment consisting of standpipe risers with hose connections and hose reels.

1.17 Fire Watch Patrol

At least each hour an area with inoperable Fire Protection Equipment shall be inspected for abnormal conditions.

1.18 Reactor Coolant Leakage

a. Identified Leakage

(1) Leakage into closed systems, such as pump seal or valve packing leaks that are captured, flow metered and conducted to a sump or collecting tank, or

(2) Leakage into the primary containment atmosphere from sources that are both specifically located and known not to be from a through-wall crack in the piping within the reactor coolant pressure boundary.

b. Unidentified Leakage

All other leakage of reactor coolant into the primary containment area.

LIMITING CONDITION FOR OPERATION

3.2.5 REACTOR COOLANT SYSTEM LEAKAGE

Applicability:

Applies to the limits on reactor coolant system leakage rate and leakage detection systems.

Objective:

To assure that the makeup capability provided by the control rod drive pump is not exceeded.

Specification:

a. Any time irradiated fuel is in the reactor vessel and the reactor temperature is above 212°F, reactor coolant leakage into the primary containment shall be limited to:

   1. Five gallons per minute unidentified leakage.

   2. A two gallon per minute increase in unidentified leakage within any period of 24 hours or less.

   3. Twenty-five gallons per minute total leakage (identified plus unidentified) averaged over any 24 hour period.

SURVEILLANCE REQUIREMENT

4.2.5 REACTOR COOLANT SYSTEM LEAKAGE

Applicability:

Applies to the monitoring of reactor coolant system leakage.

Objective:

To determine the reactor coolant system leakage rate and assure that the leakage limits are not exceeded.

Specification:

a. A check of the reactor coolant leakage shall be made at least once every eight hours.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
b. Any time irradiated fuel is in the reactor vessel and reactor coolant temperature is above 212°F, at least one of the leakage measurement channels associated with each sump (one for the drywell floor drain and one for the equipment drain) shall be operable. If conditions a or b cannot be met, the reactor will be placed in the cold shutdown condition within 24 hours.	b. The following surveillance shall be performed on each leakage detection system: 1. An instrument calibration once each refueling outage. 2. An instrument functional test once every three months.

Allowable leakage rates of coolant from the reactor coolant system have been based on the predicted and experimentally observed behavior of cracks in pipes and on the ability to makeup coolant system leakage in the event of loss of offsite a-c power. The normally expected background leakage due to equipment design and the detection capability for determining coolant system leakage were also considered in establishing the limits. The behavior of cracks in piping systems has been experimentally and analytically investigated as part of the USAEC sponsored Reactor Primary Coolant System Rupture Study (the Pipe Rupture Study). Work utilizing the data obtained in this study indicates that leakage from a crack can be detected before the crack grows to a dangerous or critical size by mechanically or thermally induced cyclic loading, or stress corrosion cracking or some other mechanism characterized by gradual crack growth. This evidence suggests that for leakage somewhat greater than the limit specified for unidentified leakage, the probability is small that imperfections or cracks associated with such leakage would grow rapidly. However, the establishment of allowable unidentified leakage greater than that given in 3.2.5 on the basis of the data presently available would be premature because of uncertainties associated with the data. For leakage of the order of 5 gpm as specified in 3.2.5, the experimental and analytical data suggest a reasonable margin of safety that such leakage magnitude would not result from a crack approaching the critical size for rapid propagation. Leakage of the magnitude specified can be detected reasonably in a matter of a few hours utilizing the available leakage detection schemes, and if the origin cannot be determined in a reasonably short time, the plant should be shut down to allow further investigation and corrective action.

Inspection and corrective action is initiated when unidentified leakage increases at a rate in excess of 2 gpm, within a 24 hour period or less. This minimizes the possibility of excessive propagation of intergranular stress corrosion cracking.

A total leakage of 25 gpm is well within the capacity of the control rod drive system makeup capability (page III-7 of the First Supplement).* As discussed in 3.1.6 above, for leakages within this makeup capability, the core will remain covered and automatic pressure blowdown will not be actuated.

The primary means of determining the reactor coolant leakage rate is by monitoring the rate of rise in the levels of the drywell floor and equipment drain lines. Shift checks will be made to verify that no alarms have been actuated due to high leakage. For sump inflows of one gpm, changes on the order of 0.2 gpm can be detected within 40 minutes. At inflows between one and five gpm, changes on the order of 0.5 gpm can be detected in eight minutes.

*FSAR

Leakage is detected by having all unidentified leakage routed to the drywell floor drain tank and identified leakage routed directly to the drywell equipment drain tanks. Identified leakage includes such items as recirculation pump seal leakage and recirculation pump suction and discharge valve packing leakoff.

Another method will monitor the time required to fill the tanks between two accurately determined levels. When the level in the tank reaches the low-level switch setting, a timer will start and operate for a preset time interval. If the timer resets before the high-level switch setting is reached indicating a leakage rate within allowable limits, no action will result, and the system resets for the next filling and timing cycle. If the leakage is high enough to cause the level to reach the high level switch setting before the timer resets automatically, an alarm is actuated indicating leak rate above the predetermined limit (First and Fifth Supplements).*

Additional information is available to the operator which can be used for the shift leakage check if the drywell sumps level alarms are out of service. The integrated flow pumped from the sumps to the waste disposal system can be checked.

Qualitative information is also available to the operator in the form of indication of drywell atmospheric conditions. Continuous leakage from the primary coolant system would cause an increase in drywell temperature. Any leakage in excess of 15 gpm of steam would cause a continuing increase in drywell pressure with resulting scram (First Supplement).*

Either the rate of rise leak detection system, the timer leak detection system or the integrated flow can be utilized to satisfy Specification 3.2.5.b.

*FSAR

ATTACHMENT B

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Supporting Information

Your letter of June 6, 1984 requested that Niagara Mohawk submit a Technical Specification change imposing the unidentified leakage detection requirements of Generic Letter 84-11. This Technical Specifications amendment meets the intent of Generic Letter 84-11. However, the reactor coolant leakage rate will be checked once every eight hours.

Unidentified pressure boundary piping leakage is detected and monitored by the drywell floor drain tank. Monitoring of unidentified leakage is provided by two separate systems: rate of rise instrumentation and a timer detection system. Each of these systems has redundant instrumentation. The rate of rise instrumentation signals are processed in two ways: level versus time and rate of change. The two types of rate of rise signals are continuously recorded in the control room. Annunciation indicates excessive leakage rates. Therefore, a total of three indications are available for control room operators to assess any changes in the drywell floor drain tank level.

Additional information is available to the operator which can be used for the shift leakage check. For example, the integrated flow pumped from the sumps to the waste disposal system can be checked. Additionally, a containment atmospheric monitoring system which provides continuous indication of containment airborne radioactivity, can provide indication of possible unidentified leakage.

ATTACHMENT C

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No Significant Hazards Considerations Analysis

The proposed Technical Specifications change submitted herein involves no significant hazard considerations. Therefore, in accordance with the proposed amendment, the operation of Nine Mile Point Unit 1 will not:

1. Involve the significant increase in the probability of consequences of an accident previously evaluated; or

2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or

3. Involve a significant reduction in the margin of safety.

The proposed Technical Specifications amendment imposes more stringent controls on coolant leakage limits. This is accomplished by initiating inspection and corrective action when unidentified leakage increases at a rate in excess of two gallons per minute within a 24 hour period or less, increasing the frequency of reactor coolant leakage checks to once every eight hours, and placing operability and surveillance requirements on the leakage detection systems. This proposed determination is supported by the fact that the requested action corresponds with example (iii) of the Sholly Rule published in the Federal Register on April 6, 1983 (48FR14870), in that the changes constitute additional controls not previously included in the Technical Specifications.