ATTACHMENT I
PROPOSED TECHNICAL SPECIFICATION CHANGES

NEW YORK POWER AUTHORITY
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
DPR-64

3. Isolation shall be maintained between the essential and non-essential headers at all times when above cold shutdown conditions except that for a period of eight hours the headers may be connected while another essential header is being placed in service as described in F.2, above.

G. Hydrogen Recombiner System

1. The reactor T_{avg} shall be not exceed 350° unless the following requirements are met:

   a) Both hydrogen recombiner units together with their associated piping, valves, oxygen supply system and control system are operable.

   b) One hydrogen monitor including a flow path and associated containment fan cooler unit shall be operable.

   c) Hydrogen and oxygen supplies shall not be connected to the hydrogen recombiner units except under conditions of an accident or those specified in 4.5.A.3.

2. The requirements of 3.3.G.1 may be modified to allow any one of the following components to be inoperable at any one time:

a. One hydrogen recombiner unit or its associated flow path or oxygen supply system or control system may be inoperable for a period not to exceed 15 days provided the other recombiner unit is demonstrated to be operable.

b. Both containment hydrogen monitoring systems may be inoperable for a period not to exceed 7 days.

3. If the Hydrogen Recominber System is not restored to meet the requirements of 3.2.G.1 within the time period specified in 3.3.G.2, then:

a. If the reactor is critical, it shall be brought to the hot shutdown condition utilizing normal operating procedures. The shutdown shall start no later than at the end of the specified time period.

b. If the reactor is subcritical, the reactor coolant system temperature and pressure shall not be increased more than 25°F and 100 psi, respectively, over existing values.

c. In either case if the requirements of 3.3.G.1 are not satisfied within an additional 48 hours, the reactor shall be brought to the cold shutdown condition utilizing normal operating procedures. The shutdown shall start no later than the end of the 48 hour period.

H. Control Room Ventilation System

1. The control room ventilation system shall be operable at all times when containment integrity is required as per Specification 3.6.

The four day out of service period for the Weld Channel and Penetration Pressurization System and the Isolation Valve Seal Water System is allowed because no credit has been taken for operation of these systems in the calculation of off-site accident doses should an accident occur. No other safeguards systems are dependent on operation of these systems.[11] The minimum pressure settings for the IVSWS and WC & PPS during operation assures effective performance of these systems for the maximum containment calculated peak accident pressure of 40.6 psig.[12]

The Component Cooling System is not required during the injection phase of a loss-of-coolant accident. The component cooling pumps are located in the Primary Auxiliary Building and are accessible for repair after a loss-of-coolant accident.[6] During the recirculation phase following a loss-of-coolant accident, only one of the three component cooling pumps is required for minimum safeguards.[7]

A total of six service water pumps are installed, only two of the set of three service water pumps on the header designated the essential header are required immediately following a postulated loss-of-coolant accident.[8] During the recirculation phase of the accident, two service water pumps on the non-essential header will be manually started to supply cooling water for one component cooling system heat exchanger, one control room air conditioner, and one diesel generator; the other component cooling system heat exchanger, the other control room air conditioner, the two other diesel generators and remaining safety related equipment are cooled by the essential service water header.[14]

Two full rated recombination systems are provided in order to control the hydrogen evolved in the containment following a loss-of-coolant accident. Either system is capable of preventing the hydrogen concentration from exceeding 2% by volume within the containment. Each of the systems is separate from the other and is provided with redundant features. Power supplies for the blowers and ignitors are separate, so that loss of one power supply will not affect the remaining system. Hydrogen gas is used as the externally supplied fuel. Oxygen gas is added to the containment atmosphere through a separate containment feed to prevent depletion of oxygen in the air below the concentration required for stable operation of the combustor (12%). The containment hydrogen

monitoring system consists of two safety related hydrogen concentration measurement cabinets with sample lines which pass through the containment penetrations to each containment fan cooler unit plenum. Two of the five sampling lines (from containment fan cooler units nos. 32 and 35) are routed to a common source line and then to a hydrogen monitor. The other three sample lines (from containment fan cooler units nos. 31, 33 and 34) are likewise headered and routed to the other hydrogen monitor. Each monitor has a separate return line. The design hydrogen concentration for operating the recombiner is established at 2% by volume. Conservative calculations indicate that the hydrogen content within the containment will not reach 2% by volume until 12 days after a loss-of-coolant accident. (10) There is, therefore, no need for immediate operation of the recombiner following an accident, and the quantity of hydrogen fuel stored at the site will be only for periodic testing of the recombiners.

Auxiliary Component Cooling Pumps are provided to deliver cooling water for the two Recirculation Pumps located inside the containment. Each recirculation pump is fed by two Auxiliary Component Cooling Pumps. A single Auxiliary Component Cooling Pump is capable of supplying the necessary cooling water required for a recirculation pump during the recirculation phase following a loss-of-coolant accident.

The control room ventilation is designed to filter the control room atmosphere for intake air and/or for recirculation during control room isolation conditions. The control room system is designed to automatically start upon control room isolation and to maintain the control room pressure to the design positive pressure so that all leakage should be out leakage.

The OPS has been designed to withstand the effects of the postulated worst case Mass Input (i.e., single safety injection pump) without exceeding the 10 CFR 50, Appendix G curve. Curve III on Figure 3.1.A-3 provides the setpoint curve of the OPS PORVs which is sufficiently below the Appendix G curve such that PORVs overshoots would not exceed the allowable Appendix G pressures. Therefore, only one safety injection pump can be available to feed water into the RCS when the OPS is operable. The other pump must be prevented from injecting water into the RCS. This may be accomplished, for example, by placing the SI pump

ATTACHMENT II
SAFETY EVALUATION RELATED TO
TECHNICAL SPECIFICATION CHANGES

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I. Description of Changes

This application seeks to amend Section 3.3.G of the Indian Point 3 Technical Specifications in order to clarify the containment hydrogen monitoring technical specifications.

II. Evaluation of Changes

On October 4, 1985, the Authority submitted proposed changes to the Indian Point 3 Technical Specifications for various NUREG-0737 items. These technical specifications were approved by the NRC in Amendment No. 65, dated April 18, 1986. Included in the above were the technical specifications for NUREG-0737 item II.F.1.6, Containment Hydrogen Monitors.

The containment atmosphere sampling system referred to in Section 3.3.G of the Indian Point 3 Technical Specifications was replaced with the Containment Hydrogen Monitoring System required by NUREG-0737. The Authority's letter of December 30, 1980 (IPN-80-117) provided the NRC details of the NUREG-0737 Containment Hydrogen Monitoring System. This monitoring system consists of two safety related hydrogen concentration measurement cabinets with sample lines which pass through the containment penetrations to each containment fan cooler unit plenum. Two of the five sampling lines (from containment fan cooler units nos. 32 and 35) are routed to a common source line and then to a hydrogen monitor. The other three sample lines (from containment fan cooler units nos. 31, 33 and 34) are likewise headered and routed to the other hydrogen monitor. Therefore, the technical specifications with regard to the containment atmosphere sampling system (Sections 3.3.G 1b, 3.3.G 2b and 3.3.G 2c) no longer apply and should be deleted.

III. No Significant Hazards Evaluation

In accordance with the requirements of 10 CFR 50.92, the application has been determined to involve no significant hazards based upon the following:

(1) Does the proposed license amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response

The proposed amendment is an administrative change which does not impact plant power operation. The purpose of the proposed amendment is to remove technical specifications for a system which no longer exists at Indian Point 3. Therefore, the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

(2) Does the proposed license amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response

This proposed amendment will not vary or affect any plant operating condition or parameter. Hence, the possibility of a new or different kind of accident from any accident previously evaluated is not created.

(3) Does the proposed amendment involve a significant reduction in a margin of safety?

The proposed amendment is an administrative change which removes technical specifications for a system that no longer exists at Indian Point 3. Technical Specifications for the NUREG-0737 containment hydrogen monitoring which replaced the original sampling system were approved in Amendment No. 65, dated April 18, 1986. Therefore, this proposed amendment does not involve a significant reduction in a margin of safety.

The Authority considers that the proposed changes can be classified as not likely to involve significant hazards considerations since the proposed changes constitute "a purely administrative change to Technical Specifications." (Example (i), Federal Register, Vol. 48, No. 67, dated April 6, 1983, page 14870).

IV. Impact of Change

This change will not adversely impact the following:

ALARA Program
Security and Fire Protection Programs
Emergency Plan
FSAR or SER Conclusions
Overall Plant Operations and the Environment

V. Conclusion

The incorporation of these changes: a) will not increase the probability nor the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Safety Analysis Report; b) will not increase the possibility for an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report; c) will not reduce the margin of safety as defined in the basis for any Technical Specifications; d) does not constitute an unreviewed safety question; and e) involves no significant hazards considerations as defined in 10 CFR 50.92.

VI. References

a) IP-3 FSAR
b) IP-3 SER
c) Amendment No. 65, dated April 18, 1986 to the Indian Point 3 operating license.