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John C. Brons
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October 30 , 1989
IPN-89- 068

U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Attn: Document Control Desk

Subject: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
Inservice Inspection Hydrostatic Test Program
Ist 10 Year Interval-Relief Requests

Reference: 1. NYPA letter J. C. Brons to NRC, " Inservice Inspection Hydrostatic Test Program," dated December 6, 1988 (IPN-89-052).

Dear Sir:

The purpose of this letter is to provide additional information on the first 10 year Hydrostatic Test Program Relief Requests submitted in Reference 1. The Authority staff discussed this information in a telecon with the NRC staff on September 12, 1989. Based on this discussion, the relief request for the buried components has been revised. The additional information is provided in Attachment I. The revised relief request is provided in Attachment II.

Should you or your staff have any questions regarding this matter, please contact Mr. P. Kokolakis of my staff.

Very truly yours,

For John C. Brons
Executive Vice President
Nuclear Generation

cc: see next page

A047 Drawings
1/1 To: Reg Files

cc: U. S. Nuclear Regulatory Commission
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ATTACHMENT I TO IPN 89-068

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

FIRST 10 YEAR HYDROSTATIC TEST PROGRAM RELIEF REQUESTS

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

ADDITIONAL INFORMATION ON FIRST INTERVAL RELIEF REQUESTS

NRC Question: A. Relief Request 6: Relief is requested to extend the buried component provisions of IWA-5244 and the inaccessible component provisions of IWA-5241(b) and IWA-5242(b) (1983 Code) to component made inaccessible by reason of high radiation fields, congestion of components, and closed piping tunnels. Provide information which will allow relief to be considered on a case by case basis, including the specific portion(s) of piping for which relief is requested and the estimated radiation field and/or precluding configuration associated with the specific portion(s) of piping.

NYPA Response: Based on the inservice inspection experience at IP-3, the Authority has determined that it is not necessary to extend the buried component provisions of IWA-5244 and the inaccessible component provisions of IWA-5241(b) and IWA-5242(b) (1983 Code) to components made inaccessible because of high radiation fields, congestion of components and closed piping tunnels. Therefore, the Authority has revised this relief request to limit the relief request for buried components only. The revised relief request and the drawings for the buried components are included in Attachment II.

NRC Question: B. Relief Request 9: Provide drawings which show that the listed Class 2 portions of the Safety Injection System are unisolable from the Reactor Coolant System.

NYPA Response: Marked-up drawing No. ISI 27353 is included in Attachment I.

NRC Question: C. Relief Request 10: The Licensee has not provided justification demonstrating that the Code-required hydrostatic test pressure is impractical. It appears that this relief request is based on operational impact only (i.e. time consuming) and not on impracticality. Provide additional information which justifies performing the hydrostatic test of the steam generators and associated non isolable connecting piping at a reduced pressure in lieu of the Code-required test pressure.

NYPA Response: This relief request was a one-time only request for the then existing steam generators. Since then, the steam generators have been replaced and the new steam generators are tested in accordance with the Code requirements. Therefore, the Authority withdraws this relief request.

NRC Question: D. Relief Requests 11 and 12: The Licensee states that there is no time when the subject portions of the Service Water System supply and discharge headers (Relief Request 11) and the subject portions of the Component Cooling System header (Relief Request 12) can readily

be removed from service for the period of time required to perform pressure tests. Discuss whether or not this statement is true during all plant conditions such as during vessel examination when fuel is removed from the reactor.

NYPA Response:

Relief Request 11 pertains to the Service Water System (SWS) and Relief Request 12 pertains to the Component Cooling Water System (CCWS). Portions of these systems share common lines, even though they utilize two separate headers. One header supplies cooling water for the Emergency Diesel Generators (EDGs) and is required at all times. IP-3 Technical Specifications (TS) require that except for cold shutdown conditions, all three EDGs shall be operable. During Cold Shutdown, the plant TS require two EDGs out of three to be operable. The SWS is required for EDG operability, therefore, the header that supplies the EDGs is required at all times. The second header is needed to provide cooling water to the CCWS. The CCWS is required to remove decay heat from the Residual Heat Removal System when fuel is in the Reactor. When the fuel is removed from the Reactor, the CCWS is required to provide cooling via the Spent Fuel Pit Heat Exchanger. Therefore, the CCWS is required at all times with or without fuel in the Reactor.

NRC Question: E.

Relief Request 13: Provide a listing of the portions of Class 2 piping for which relief is requested and marked-up drawings showing the non-isolable portions of the Isolation Valve Seal Water System.

NYPA Response:

Portions of the Isolation Valve Seal Water System (IVSWS) are unisolable from the systems it serves. These portions are marked on Drawing No. ISI-27463 which is included in Attachment I. IVSWS has isolation valves which are used for maintenance activities. These valves provide adequate isolation to perform maintenance work but are not adequate to ensure positive isolation during a high pressure test. Furthermore, even though the tubing used throughout the system has a design rating of 2500 psi, the maximum pressure during accident conditions is approximately 50 psi. Pressurization of the gaseous portions of the system at such high pressure would be unsafe.

NRC Question: F.

Relief Request 14, 15, 16, 18, 19 and 20: Provide marked-up drawings showing the subject portions of piping for which relief is requested.

NYPA Response:

Marked-up drawings Nos. ISI-20183 and ISI-27503 are included in Attachment I.

NRC Question: G.

Relief Request 17: It is stated that the Spray Additive tank is designed for an internal pressure of 250 psig with limiting test pressure based on attachment piping with a design pressure of 150

psig. Based on this, the test pressure required by the Code is 188 psig. It is also stated that the existing pressure relief valve is set at 275 psig, but is planned to be replaced with one set at 25 psig when available. Therefore, the Licensee has proposed to hydrostatically test the Spray Additive Tank and associated non-isolable piping at a pressure of 25 psig in lieu of the Code required test pressure of 188 psig. Until the Licensee has replaced the pressure relief valve, the integrity of the tank and associated non-isolable piping should be verified to the higher pressure. The Licensee has not justified that performing the Code-required hydrostatic test at the required pressure is impractical. For relief to be considered, additional information that demonstrates impracticality should be provided.

NYPA Response:

The Containment Spray Additive tank contains approximately 4500 gallons of 30% Sodium Hydroxide solution. Sodium Hydroxide is a highly caustic and toxic liquid and presents a major personnel safety hazard. The Additive tank is never pressurized except for a slight (less than 5 psig) nitrogen overpressure. Testing the tank at 188 psig is impractical because the test at elevated pressures would increase the likelihood of leakage through packing glands and personnel hazard would preclude any contact with the test fluid. In order to minimize the hazard to personnel, the tank would have to be drained and flushed. This would create a large amount of liquid waste and handling and disposal of such a large volume of Sodium Hydroxide would create a very impractical situation. Pneumatic leak tests using air or nitrogen as a test medium would prevent the need for large liquid waste handling and disposal, but increased risks due to the potential energy of compressed gas need to be considered. Elevated pneumatic air tests would need large gas volumes and leakage is more likely to occur. The reasons and conditions needed to pressurize a relatively large tank that is normally never pressurized during operation are not practical when the above stated facts are taken into consideration. In order to exceed the tank design pressure, two nitrogen system pressure regulators would have to fail open and an associated nitrogen system relief valve would have to fail close. This is considered highly unlikely to occur. Furthermore, the pressure relief valve on the tank will be replaced with a valve set at 25 psig by the next refueling outage.

NRC Question: H.

Relief Request 19: It is stated that the normal operating pressure for the subject RHR piping is 2235 psig. It is also stated that the maximum pressure allowed by normal operations is 400 psig. Provide clarifications on the normal operating and design pressures of the subject piping.

NYPA Response:

The piping located between Residual Heat Removal (RHR) system isolation valves is designed for a pressure of 2580 psig. These valves provide isolation between the high pressure (greater than 2235 psig) Reactor Coolant System (RCS) and the low pressure (less than 450 psig) RHR system. Therefore, these valves are needed in order to

prevent RHR system overpressurization. These valves are interlocked to prevent opening at pressure of greater than 450 psig in the RCS. The reference to normal operating pressure was in regard to the RCS. In order to test the system to design pressure, the RHR system isolation valve connected to the RCS would have to be opened.

NRC Question: I. Relief Request 20: It is stated that the maximum pressure to which the subject pipe segment can be pressurized is 52 psig. However, it is also stated that, as an alternative to the Code-required test pressure, the hydrostatic test will be performed at a pressure of 100 psig. Provide clarification with regard to the maximum alternative test pressure that is proposed.

NYPA Response: The referenced maximum pressure corresponds to the peak containment accident pressure which is 52 psig. Valve 885 A is a double disc gate valve. A passage is drilled through the inboard valve disc of valve 885 A which vents the piping between valves 885 A and 885 B. Thus, this section of piping cannot be pressurized to the test pressure corresponding to the design pressure (600 psig). The reference to 52 psig was to the probable maximum operating pressure the piping would actually ever be pressurized to.

ATTACHMENT II TO IPN 89-068

REVISED RELIEF REQUEST

FIRST TEN YEAR ISI INTERVAL HYDROSTATIC TESTING

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

FIRST TEN YEAR ISI INTERVAL
HYDROSTATIC TESTING
RELIEF REQUEST NO. 6

1. COMPONENTS

   a. Name: Buried components

   b. Function: Various

   c. ASME Section XI Code Class 1, 2 and 3.

2. REFERENCE CODE REQUIREMENTS

   ASME Section XI 1974 through Summer 1975 addenda, Paragraph IWA-5240 provisions regarding examination.

3. BASIS FOR RELIEF

   Relief is requested to add the provisions of IWA-5244 of the 1983 ASME Code to buried components subject to the referenced code requirements. In addition, Paragraph IWA-5244 shall be applied to both redundant and non-redundant systems. The 1974 Code does not include later code provisions such as are addressed in the 1983 Code Paragraph IWA-5244, Buried Components. These provisions were developed in recognition of the fact that inaccessible components which preclude direct visual examination require alternate examination such as pressure loss or flow changes.

4. ALTERNATE EXAMINATION

   When practical, the provisions of Section XI 83/S83, IWA-5244 which relate to examination of buried components will apply. In addition, Paragraph IWA-5244(a), which currently is limited to non-redundant systems shall also apply to redundant systems. Buried component drawings are attached.

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