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New York Power Authority

L. M. Hill
Site Executive Officer

September 13, 1995
IPN-95-095

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

SUBJECT: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
License No. DPR-64
Safety Evaluation of Inservice Testing Program Relief Requests

Reference 1: NRC letter M. J. Case to W. J. Cahill (NYPA), dated September 13, 1994, "Safety Evaluation of Revision 4 of the Second 10-Year Interval Inservice Testing Program Relief Requests - Indian Point Nuclear Generating Unit No. 3." (TAC No. M88309)

Dear Sir:

In reference 1, the NRC issued a Safety Evaluation (SE) for Revision 4 of the Indian Point 3 second 10-Year interval Inservice Testing (IST) Program requests for relief.

The Authority's response to the action items in Section 4 of the Brookhaven National Laboratory Technical Evaluation Report (TER), enclosed with reference 1, is provided in Attachment I.

The commitments associated with this letter are in Attachment II.

If you have any questions regarding this letter, please contact Mr. K. Peters at (914) 736-8029.

Very truly yours,

L. M. Hill
Site Executive Officer
Indian Point 3 Nuclear Power Plant

Attachments
cc: See next page

A047

cc: Mr. Thomas T. Martin
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ATTACHMENT I TO IPN-95-095

RESPONSE TO SAFETY EVALUATION OF
INSERVICE TESTING PROGRAM RELIEF REQUESTS

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

Response To Action Items in Section 4 of the Technical Evaluation Report (TER)

TER Action Item 4.1: The licensee should consider the use of system P&IDs, as opposed to ISI type drawings. The ISI drawings may be beneficial to ensure all components are included in the program, but for purposes of an independent review, were difficult to interpret in many instances. For example, flow paths are shown as dotted lines which make it difficult to determine piping connections and alternate flow paths.

NYPA Response: The Authority will include copies of applicable P&IDs in future IST program submittals.

TER Action Item 4.2: In PR-1, the licensee requested relief to use pump curves for the RHR, CCW, and SW pumps. The licensee should ensure that the seven elements as discussed in Draft NUREG-1482, Section 5.2 be followed when preparing these curves. In addition, the IST Pump Table contained in Appendix A of the licensee's Program should be revised to reflect the cold shutdown full flow test for the RHR pumps. (TER Section 2.1.1)

NYPA Response: The Authority has developed pump curves for RHR, CCW, and SW pumps in accordance with the seven elements recommended in NUREG-1482 Section 5.2. The Authority will update the IST Pump Table to reflect the cold shutdown full flow test for the RHR pumps.

TER Action Item 4.3: In PR-15, provisional relief was recommended from Section XI, ¶IWP-4210 regarding the presence or absence of liquid in gage lines. The licensee should ensure that the calculation of pump differential pressure is properly proceduralized to account for liquid in the pressure sensing gage lines so that the accuracy of the final value meets the Code requirements. (TER Section 2.2.1.2)

NYPA Response: The Authority will ensure that pump differential pressure calculations account for liquid in the pressure gage sensing lines so that the final value meets code requirements.

TER Action Item 4.4: In PR-16, relief was recommended to allow the licensee to calculate differential pressure for the SI pump cooling water recirculation pumps. The licensee should ensure that this method is proceduralized, and that the method meets quality assurance requirements. (TER Section 2.2.3.1)

NYPA Response: PR-16 will be withdrawn. A plant modification installed during the recent outage permits direct measurement of pump pressures and calculation of pump delta P in accordance with code requirements.

TER Action Item 4.5: In PR-17, the licensee proposed to perform a full flow test on only one of the two containment spray pumps each refueling. Due to current plant design, the licensee is unable to accurately determine flow through the eductor line, and no discussion was provided regarding flow rate determination during the proposed refueling testing. Interim relief was recommended to allow the licensee time to evaluate the addition of isolation valves or flow instrumentation. Relief is not recommended to test only one pump each refueling. The licensee should test each pump during refueling outages. If the licensee is proposing to determine pump flowrate based upon RWST level changes, this relief request should also be revised to address the accuracy of such a method. (TER Section 2.2.4.1)

NYPA Response: The Authority will investigate installation of flow meter or isolation valves on the eductor line. If isolation valves are installed, PR-17 will be revised to request a full flow test on both Containment Spray Pumps be performed every two years during refueling outages. If a flow instrument is added to the eductor line then the relief request will be withdrawn. In addition, the Authority will verify the accuracy of using the RWST level indicators to determine pump flow rates.

TER Action Item 4.6: In revised relief request VR-22, the licensee should review the function of the boric acid recirculation check valve 1822 to ensure it does not perform a safety function in the open position. Since the function of this valve is to allow recirculation flow between the BIT and the boric acid tanks. The licensee has not adequately justified why this valve cannot be tested closed quarterly in accordance with Section XI. The licensee should revise this request to provide further justification for deferring testing. (TER Section 3.1.1.3)

NYPA Response: VR-22 will be withdrawn. A plant modification installed during the recent outage has isolated the BIT from the Boric Acid Storage Tanks. As a result, check valve 1822 no longer performs any safety function and will be removed from the IST program.

TER Action Item 4.7: In several relief requests, the licensee proposes to perform valve disassembly and inspection in lieu of testing with flow (VR-37, 47, 7, 8, 10, 31, 20, 45, and 49). The NRC does not consider disassembly and inspection to be an equivalent substitute to testing with flow. The licensee should evaluate, and implement if feasible, non-intrusive techniques to verify valve position. The valves should also be partial-stroked with flow following disassembly and inspection. (TER Sections 3.1.2.1, 3.2.2.5, 3.2.4.1, 3.2.5.1, 3.2.6.1, 3.2.7.1, 3.2.8.1, 3.2.10.1, and 3.2.10.2)

NYPA Response: The Authority will investigate non-intrusive check valve testing in 1996 prior to the next refueling outage. Check valves will be partial exercised open with flow after

disassembly and inspection.

TER Action Item 4.8: In VR-5, the licensee proposes to exercise the AFW pump discharge check valves open every 2 years in accordance with Technical Specification 4.8.1.a. The licensee should review Technical Specification 4.8.1.b which states that the AFW discharge valves will be tested at intervals not greater than six months. If there is a means to exercise these valves every six months, then this relief request should be revised. (TER Section 3.2.1.3)

NYPA Response: It is the Authority's position that Tech. Spec. 4.8.1.b refers to the exercising of FCV-405 and FCV-406 valves. Exercising Auxiliary Feed Water discharge check valves BFD-35, 37, 40, 42, BFD-47-1, 2, 3, 4, BFD-67, 68, 69, 70 would require injecting cold CST water through the main feed lines during power operation. The 31 and 33 ABFP discharge check valves BFD-35, 37, 40, 42 and BFD-67, 68, 69, and 70 are exercised open on a cold shutdown frequency while the 32 ABFP discharge check valves BFD-47-1, 2, 3, 4 are partial exercised open on a cold shutdown frequency and exercised open on a 2 year frequency.

TER Action Item 4.9: In several relief requests (VR-15, 18), the licensee proposes to verify the remote position indication during each refueling outage. The licensee should ensure that this testing is in compliance with Draft NUREG-1482, Section 4.2.6, which states that the staff recommends position indication be verified for the valve in the open and closed positions. (TER Section 3.2.2.2, 3.2.2.3)

NYPA Response: Remote position indication testing for SI-889A and SI-889B, SI-1802A and SI-1802B is in compliance with Section 4.2.6 of NUREG-1482.

TER Action Item 4.10: In VR-23, the licensee proposes to full-stroke exercise one of the two containment spray pump discharge valves open each refueling outage. In PR-17, relief was not recommended to allow testing one of the two Containment Spray pumps each refueling outage. Similarly, relief is not recommended to permit alternate valve testing. If valve testing cannot be performed in conjunction with the pump tests, then the licensee may consider disassembly and inspection in accordance with GL 89-04 Position 2. In addition, the licensee should ensure that the proposed testing method which uses an alternate refueling cavity fill line will provide flow which is greater than or equal to the required maximum accident flowrate. (TER Section 3.2.2.4)

NYPA Response: The Authority is investigating full stroke exercising both Containment Spray valves

each refueling outage. The Authority will ensure that both pumps can be used to support reactor cavity fill up, and will verify accuracy of the RWST level indicators to ensure code requirements are met.

TER Action Item 4.11:

In VR-47, the licensee has only requested relief from quarterly verification in the closed direction for the sodium hydroxide check valves. As per Appendix B Summary-Inservice Testing Program-Valves, the licensee indicates that these valves will be full-stroke tested open during cold shutdowns. However, in PR-17, the licensee states that the containment spray pumps are tested using minimum recirculation flow quarterly, and full-flow tested during refueling outages. The licensee should ensure that the cold shutdown tests are at full accident flow rate. The licensee should also consider exercising these valves open during the full-flow containment spray pump tests performed during refuelings. (TER Section 3.2.2.5)

NYPA Response:

Full accident flow rates are achieved through SI-1838A and SI-1838B during cold shutdown testing. The valves pass the required accident sodium hydroxide eductor flow on minimum recirculation during the cold shutdown testing. Since the valves are being tested at cold shutdown frequency, refueling outage testing is not required.

TER Action Item 4.12:

In VR-6, the licensee states that the instrument air system valves will be tested in accordance with the Technical Specification for CIVs, and has not requested relief from the Code specified leak testing requirements. As per GL 89-04 Position 10, the NRC has determined that the leak test procedures and requirements for CIVs specified in Appendix J are equivalent to Section XI ¶IWV-3421 through 3425 requirements. The licensee should, however, ensure that the Analysis of Leakage Rates and the Corrective Action requirements of Section XI ¶IWV-3426 and 3427(a) are complied with, and revise the request to clarify this position. (TER Section 3.2.3.1)

NYPA Response:

Analysis of leakage rates and the corrective action requirements of IWV-3426 and IVW-3427(a) are complied with in the IST program. The relief request will be clarified during the next program revision.

TER Action Item 4.13:

In VR-7, the licensee has not adequately justified why the nitrogen supply isolation valve cannot be tested quarterly in accordance with Section XI. The licensee should evaluate the possibility of testing this valve using the test vent connection between valves 1619 and 1616. The licensee should revise and resubmit this relief request accordingly. (TER Section 3.2.4.1)

NYPA Response: The only practical means of testing valve WD-1616 closed is through a leak rate test. NUREG 1482 recognizes that the setup and performance limitations may render leak rate testing impractical during power operation and cold shutdowns and recommends testing this valve during refueling outages. The relief request will be revised to clarify the leak rate test and apply the NUREG position (Section 4.1.4).

TER Action Item 4.14: In VR-10, the licensee has discussed the impracticality of testing during "short-duration outages" but has not discussed the practicality of performing testing during cold shutdowns which are of a sufficient duration to allow a leak test. The licensee should revise and resubmit this relief request accordingly. (TER Section 3.2.6.1)

NYPA Response: The only practical means of testing valve NNE-1610 closed is through a leak rate test. NUREG 1482 recognizes that the setup and performance limitations may render leak rate testing impractical during power operation and cold shutdowns and recommends testing this valve during refueling outages. The relief request will be revised to clarify the leak rate test and apply the NUREG position (Section 4.1.4).

TER Action Item 4.15: In VR-31, the licensee proposes to verify the closure capability of a pair of personnel airlock and equipment hatch valves, rather than individually. The licensee must ensure that only one of the two valves is credited in the safety analysis, and that both valves are subject to equivalent QA standards. In addition if the closure capability of the pair is questioned, then both valves must be declared inoperable, and repaired or replaced before being returned to service. Additionally, the licensee should evaluate the possibility of verifying valve closure during cold-shutdowns which are of sufficient duration to perform the test in accordance with Section XI. Appendix B: Summary-Inservice Testing Program-Valves of the IST Program should also be corrected. This table incorrectly lists valves CB-5 and 6 twice, with different relief request notations. The notations for CB-1 and 2 should be revised to reflect the leak testing relief requested. The licensee should also review Table 4.4.-1 of the Technical Specifications which does not list CB-5 and 6 as containment isolation valves. (TER Section 3.2.7.1)

NYPA Response: Only one of the valve pairs is required and both valves are subject to the same QA standards. The valves will continue to be tested as a pair. The only practical means of testing valves CB-1, 2 and CB-5, 6 closed is through a leak rate test. NUREG 1482 recognizes that the setup and performance limitations may render leak rate testing impractical during power operation and cold shutdowns and recommends testing these valves during refueling outages. The relief request will be revised to clarify the leak

rate test and apply the NUREG position (Section 4.1.4). Table 4.4-1 of the Technical Specifications will be revised to include CB-5, 6, 7 and 8 as containment isolation valves.

TER Action Item 4.16:

In VR-20, the licensee requested relief from exercising the nitrogen supply to the PRT isolation valve quarterly during reactor operation, and during a "short-duration outage." The licensee should evaluate the possibility of performing testing during cold-shutdowns which are of sufficient duration to perform testing in accordance with Section XI. The licensee should also ensure that this valve does not perform a safety function in the open position also. (TER Section 3.2.8.1)

NYPA Response:

The only practical means of testing valve RC-518 closed is through a leak rate test. NUREG 1482 recognizes that the setup and performance limitations may render leak rate testing impractical during power operation and cold shutdowns and recommends testing this valve during refueling outages. The relief request will be revised to clarify the leak rate test and apply the NUREG position (Section 4.1.4).

TER Action Item 4.17:

In VR-42, the licensee requests relief to establish a maximum stroke time for the main steam isolation valves. This proposal does not comply with either GL 89-04 or OM Part 10. The licensee has not provided sufficient information to evaluate whether the requirements of Part 10 or the GL are impractical or burdensome. This relief request should be revised and resubmitted. The licensee should provide specific examples of stroke times. (TER Section 3.2.9.1)

NYPA Response:

VR-42 will be withdrawn. The MSIVs meet the acceptance criteria in accordance with the code.

List of Commitments

Number	Commitment	Due Date
IPN-95-095-01	The Authority will revise the IP3 Inservice Testing Program to include the following: - Include copies of applicable P&IDs in future submittals. - Update IST Pump Table to reflect cold shutdown full flow test for the RHR pumps - Withdraw PR-16 - Withdraw VR-22 and remove valve 1822 from the program. - Withdraw VR-42 - Revise VR-6, VR-7, VR-10, VR-20, and VR-31 to clarify leak rate test and apply NUREG 1482 position where applicable.	March 1996
IPN-95-095-02	The Authority will ensure that pump differential pressure calculations account for liquid in the pressure gage sensing lines so that the final value meets code requirements.	End of RO9
IPN-95-095-03	The Authority will investigate installation of flow meter or isolation valves on the eductor line. If isolation valves are installed, PR-17 will be revised to request a full flow test be performed every two years during refueling outages. If a flow instrument is added to the eductor line then PR-17 will be withdrawn. In addition, the Authority will verify the accuracy of using the RWST level indicators to determine pump flow rates.	End of RO9
IPN-95-095-04	The Authority will investigate non-intrusive check valve testing in 1996 prior to the next refueling outage. Check valves will be partial exercised open after disassembly and inspection.	Prior to RO9
IPN-95-095-05	The Authority is investigating full stroke exercising both Containment Spray valves each refueling outage. The Authority will ensure that both pumps can be used to support reactor cavity fill up, and will verify accuracy of the RWST level indicators to ensure code requirements are met.	End of RO9
IPN-95-095-06	The Authority will revise TS Table 4.4-1 to include CB-5, 6, 7 and 8 as CIVs.	May 1996