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New York Power Authority

William J. Cahill, Jr.
Chief Nuclear Officer

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

SUBJECT: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
License No. DPR-64
Inservice Inspection Program
Request For Approval To Use ASME Code Case N-416-1

Dear Sir:

The purpose of this letter is to request the NRC to grant approval for use of ASME Code Case N-416-1, "Alternative Pressure Test Requirement for Welded Repairs or Installation of Replacement Items by Welding, Class 1, 2, and 3, Section XI, Division 1," at Indian Point 3 during the remainder of the second 10-year inservice inspection interval. The second 10-year inservice inspection interval ends on July 21, 1999. Code Case N-416-1 was approved by the ASME on February 15, 1994 but has not been endorsed by the NRC in Regulatory Guide 1.147. The justification for the use of this code case is included in Attachment I. A similar request has been granted by the NRC for other nuclear power plants (e.g. Docket Nos. 50-280 and 50-281).

There are no new commitments associated with this letter.

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

Very truly yours,

William J. Cahill, Jr.
Chief Nuclear Officer

Attachment

cc: See next page

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cc: Mr. Hubert J. Miller
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INSERVICE INSPECTION PROGRAM
REQUEST FOR APPROVAL TO USE ASME CODE CASE N-416-1

Indian Point 3 Technical Specification 4.2.1.3.a states that the inservice inspection of the American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55 a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50.55 a(g)(6)(i). 10 CFR 50.55a(a)(3) states that alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC, if (i) the proposed alternatives would provide an acceptable level of quality and safety or (ii) compliance with the specified requirements would result in hardship or unusual difficulties without a compensating increase in the level of safety and quality.

ASME Code Case N-416-1, "Alternative Pressure Test Requirement for Welded Repairs or Installation of Replacement Items by Welding, Class 1, 2, and 3, Section XI, Division 1," was approved by the ASME on February 15, 1994. However, this Code Case has not yet been endorsed by the NRC in Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability, ASME Code Section XI, Division 1." Therefore, pursuant to 10 CFR 50.55 a(a)(3), the Authority requests that Code Case N-416-1 be approved for use during the remainder of the Indian Point 3 second 10-year inservice inspection interval. The second 10-year inspection interval ends on July 21, 1999. The use of Code Case N-416-1 at Indian Point 3 would provide an acceptable level of safety and quality. Compliance with the ASME Code Section XI requirements would result in hardship or unusual difficulties without a compensating increase in the level of safety and quality over the requirements specified in Code Case N-416-1, as described below.

The use of Code Case N-416-1 at Indian Point 3 would provide an acceptable level of safety and quality. Piping components are designed for a number of loadings that would be postulated to occur under the various modes of plant operation. Hydrostatic testing only subjects the piping components to a small increase in pressure over the design pressure and, therefore, does not present a significant challenge to pressure boundary integrity. Accordingly, hydrostatic pressure testing is primarily regarded as a means to enhance leakage detection during the examination of components under pressure, rather than solely as a measure to determine the structural integrity of the components. Code Case N-416-1 allows an alternative system leakage test to be performed in lieu of the hydrostatic test required by Article IWA-4400 and IWA-5214.

Industry experience has demonstrated that leaks are not being discovered as a result of hydrostatic test pressures propagating a pre-existing through wall flaw. Leaks in most cases are being found when the system is at normal operating pressure. This is largely due to the fact that hydrostatic pressure testing was required only upon installation and then once every 10 years during the inspection interval, while system leakage tests at nominal operating pressure are conducted at a minimum of once each refueling outage for Class 1 systems and each 40-month inspection period for Class 2 and 3 systems. In addition, leaks may be identified during system walkdowns by plant personnel which may be conducted as often as once a shift.

Compliance with the ASME Code Section XI requirements would result in hardship or unusual difficulties without a compensating increase in the level of safety and quality over the

requirements as specified in Code Case N-416-1. Hardships are generally encountered with the performance of hydrostatic testing performed in accordance with the code. For example, since hydrostatic test pressure would be higher than nominal operating pressure, hydrostatic pressure testing frequently requires significant effort to set up and perform. The need to use special equipment, such as temporary attachment of test pumps and gages, and the need for individual valve lineups can cause the test to be on critical path during outages.

Use of hydrostatic testing deferrals, which are presently allowed in the current Code Case N-416 for Class 2 components, are not a satisfactory solution because the test must eventually be performed, and it is the performance of the test itself that is considered burdensome.

Code Case N-416-1 provides increased testing flexibility, which would considerably reduce, if not eliminate, relief request requirements associated with post welded repair/replacement hydrostatic testing. This is accomplished while maintaining an acceptable level of safety and quality as determined by the ASME Code.