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April 11, 2000
NMP2L 1952

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

RE: Nine Mile Point Unit 2
 Docket No. 50-410
 NPF-69

Subject: *Request for Authorization to Use Alternative to ASME Code Section XI Examination Requirements (TAC No. MA8623)*

Gentlemen:

By letter dated February 29, 2000 (TAC No. MA2151), the NRC Staff approved Niagara Mohawk Power Corporation's (NMPC's) request for relief GPTRR-3 for the second Ten-Year Interval Inservice Pressure Testing Program for Nine Mile Point Unit 2 (NMP2). GPTRR-3 allows NMPC to use the 1992 Edition, instead of the 1989 Edition, of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code regarding the system pressure testing requirements stated in Subarticle IWA-5250(a)(2) of the Code.

NMPC proposes an alternative to the examination requirements of Subarticle IWA-5250(a)(2) of the 1992 Edition of the ASME Code for situations when leakage is detected at bolted connections. Specifically, this alternative will allow the use of ASME Code Case N-566-1, titled "Corrective Action for Leakage Identified at Bolted Connections, Section XI, Division 1." Code Case N-566-1 was approved by the ASME Code Committee on February 15, 1999, but has not yet been endorsed in NRC Regulatory Guide (RG) 1.147, titled "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1." A similar use of Code Case N-566 and its revision N-566-1 for leakage detected at bolted connections was approved for the Indian Point Nuclear Generating Unit No. 2 and St. Lucie Unit 2 by NRC letters dated September 24, 1999 (TAC No. MA4981) and July 29, 1999 (TAC No. 5087), respectively.

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Further details concerning NMPC's proposed alternative examination are contained in the attached relief request GPTRR-4. NMPC requests that the NRC review GPTRR-4 on an expedited basis pursuant to 10 CFR 50.55a(a)(3)(i). Expedited review is necessary to support the restart of NMP2 on schedule following the current refueling outage. Leakage was identified on four bolted connections during system pressure testing conducted in preparation for plant restart. Restart is currently scheduled for April 15, 2000, but may occur sooner depending on completion of the scheduled work. The requested duration for the alternative examination is until the end of the second Ten-Year Inservice Inspection Interval (April 4, 2008).

Very truly yours,



Richard B. Abbott
Vice President Nuclear Engineering

RBA/IAA/tmk
Attachment

xc: Mr. H. J. Miller, NRC Regional Administrator, Region I
Ms. M. K. Gamberoni, Acting Section Chief PD-I, Section 1, NRR
Mr. G. K. Hunegs, NRC Senior Resident Inspector
Mr. P. S. Tam, Senior Project Manager, NRR
Records Management

GPTRR-4
Proposed Alternative to ASME Code Requirements

I. Code Requirement

As part of the Nine Mile Point Unit 2 (NMP2) Second Ten-Year Interval Inservice Pressure Testing Program, Niagara Mohawk Power Corporation (NMPC) submitted Proposed Alternative GPTRR-3, which the NRC approved on February 29, 2000 (reference: TAC No. MA2151). This alternative method permits the use of ASME Section XI, 1992 Edition, Subarticle IWA-5250(a)(2) in place of the 1989 Edition of IWA-5250(a)(2).

ASME Section XI, 1992 Edition, Subarticle IWA-5250(a)(2) states that if leakage occurs at a bolted connection during a system pressure test, the bolt nearest the source of the leakage shall be removed, VT-3 examined, and evaluated for degradation in accordance with IWA-3100. The NRC recommended that a VT-1 examination be performed in lieu of the Code-specified VT-3, since the Code does not provide acceptance criteria for the VT-3 examination. The acceptance standards for the VT-1 examination are those found in IWB-3517. NMPC has implemented this recommendation to perform a VT-1 examination.

II. Requested Authorization

NMPC requests authorization to perform an alternative to the Code-required removal and VT-1 visual examination of bolting if evidence of leakage is identified during a system pressure test of Class 1, 2, and 3 systems, in accordance with ASME Section XI Code Case N-566-1.

III. Basis for Requesting Authorization

NMPC requests approval of this alternative in accordance with 10CFR50.55a(a)(3)(i) on the basis that the proposed alternative would provide an acceptable level of quality and safety.

Removal of pressure retaining bolting at mechanical connections for VT-1 visual examination and subsequent evaluation in locations where leakage has been identified is not always the most prudent course of action to determine the condition of the bolting or the cause of the leak.

ASME Section XI Code Case N-566-1 provides the following response to the question, "What alternative to the requirements of IWA-5250(a)(2) may be used when leakage is detected at bolted connections?"

Reply: It is the opinion of the Committee that, as an alternative to the requirements of IWA-5250(a)(2) bolted connections, the requirements of (a) or (b) below shall be met.

- a) The leakage shall be stopped, and the bolting and component material shall be evaluated for joint integrity as described in (c) below.

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Proposed Alternative to ASME Code Requirements

- b) If the leakage is not stopped, the joint shall be evaluated in accordance with IWB-3142.4 for joint integrity. This evaluation shall include the considerations listed in (c) below.
- c) The evaluation of (a) and (b) above is to determine the susceptibility of the bolting to corrosion and failure. This evaluation shall include the following:
 - (1) the number and service age of the bolts;
 - (2) bolt and component material;
 - (3) corrosiveness of process fluid;
 - (4) leakage location and system function;
 - (5) leakage history at the connection or other system components;
 - (6) visual evidence of corrosion at the assembled connection.”

The IWA-5250(a)(2) requirement to remove, examine, and evaluate bolting in this situation does not allow consideration of other factors, which may indicate the condition of mechanical joint bolting. NMPC considers this requirement to be unnecessarily restrictive.

IV. Proposed Alternative Examination

In accordance with 10 CFR 50.55a(a)(3)(i), NMPC proposes the following alternative to the requirements of IWA-5250(a)(2), which will provide an equivalent level of quality and safety when evaluating leakage and bolting material condition at Class 1, 2, and 3 bolted connections.

As an alternative to the requirements of IWA-5250(a)(2), NMP2 shall comply with the guidance and requirements of Code Case N-566-1. Specifically, one of the following actions shall be taken:

- a) The leakage shall be stopped, and the bolting and component material shall be evaluated for joint integrity as described in (c) below.
- b) If the leakage is not stopped, the joint shall be evaluated in accordance with IWB-3142.4 for joint integrity. This evaluation shall include the considerations listed in (c) below.
- c) The evaluation of (a) and (b) above is to determine the susceptibility of the bolting to corrosion and failure. This evaluation shall include the following:
 - (1) the number and service age of the bolts;
 - (2) bolt and component material;
 - (3) corrosiveness of process fluid;
 - (4) leakage location and system function;
 - (5) leakage history at the connection or other system components;
 - (6) visual evidence of corrosion at the assembled connection.

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Proposed Alternative to ASME Code Requirements

Furthermore, if the initial evaluation indicates the need for further examination, appropriate, additional corrective action shall be taken to ensure the integrity of the bolted connection.

Since the proposed alternative to use a systematic approach with an engineering evaluation provides a more comprehensive evaluation of joint leakage than currently required, NMPC submits that this alternative provides an acceptable level of quality and safety. Therefore, NMPC requests that the proposed alternative be authorized pursuant to 10 CFR50.55a(a)(3)(i).