

February 29, 2000

MEMORANDUM TO: File Center

FROM: Peter S. Tam, Senior Project Manager, Section 1 */RAI/*  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT NOS. 1 AND 2 --  
ELECTRONIC TRANSMISSION, ISSUES TO BE DISCUSSED IN  
AN UPCOMING TELEPHONE CONFERENCE REQUEST FOR  
RELIEF (TAC NOS. MA7116, MA7117 AND MA7118)

REFERENCE: Letters, R. A. Abbott to NRC, October 28, 1999, and January 13,  
2000

By letters dated October 28, 1999, and January 13, 2000, the licensee, Niagara Mohawk Power Corporation (NMPC), submitted proposed alternatives to the IWE/IWL containment inspection requirements for Nine Mile Point, Units 1 and 2 first 10-year containment inspection interval. The staff's review is ongoing. The staff found that additional information may be needed to complete the review. The purpose of this memorandum is solely to convey the draft questions (attached) to the public and the licensee. The questions do not currently state an NRC staff position nor do they represent a formal request for additional information (RAI). After reviewing the draft questions, the licensee may request to discuss them in a meeting or telephone conference; the formal disposition of these draft questions will be discussed then.

Attachment: As stated

Docket Nos. 50-220 and 50-410

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## PROPOSED REQUEST FOR ADDITIONAL INFORMATION

The questions do not currently state an NRC staff position nor do they represent a formal request for additional information (RAI).

The licensee proposed to use the 1998 Edition of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, Subsections IWE and IWL, in lieu of the 1992 Edition with 1992 Addenda, as currently specified by 10 CFR 50.55a(g)(6)(ii)(B) for containment inspections. The staff, with technical assistance from the Idaho National Engineering and Environmental Laboratory (INEEL), has evaluated the licensee's submittals and determined that information outlined below as draft questions is needed to complete the review of the subject request for relief.

1. The 1998 Edition of the ASME Code Section XI invokes IWA-2000, *Examination and Inspection*, when defining the general requirements for examinations to be performed, and for the qualification of examination personnel. The licensee's proposed alternative removes the IWA-2300 requirement to certify NDE personnel to CP-189. In addition, new 1998 Code examinations (General Visual and Detailed Visual) have been introduced. The definition of the new Code examinations has been left up to individual licensees, and a licensee would be allowed to define how personnel performing these examinations are to be qualified. It is presently unclear how owner-defined visual examination programs, including items such as illumination and resolution requirements, acceptance criteria, and minimum personnel qualifications, may be individually developed and the necessary level of consistency maintained industry-wide. To establish that the proposed alternative provides an acceptable level of quality and safety, details of the NMP General and Detailed Visual examination program, addressing both IWE and IWL components, must be evaluated. Please describe the visual examination program, including attributes such as:
  - a. The owner-defined acceptance criteria that will be used with the Detailed Visual examination.
  - The qualification requirements for personnel performing containment visual and ultrasonic examinations including a technical discussion comparing the qualification requirements being used at NMP to the qualification requirements contained in CP-189.
  - An assessment as to how the detailed and general examinations will provide the same level of quality and safety as that provided by the VT-1 and VT-3 examinations required by the 1992 Edition and Addenda.

ATTACHMENT

2. The licensee stated that resolution and illumination requirements for General and Detailed Visual examination procedures will be qualified similar to VT-1 and VT-3 procedure qualifications. In addition, the licensee stated that for applications where remote visual examination systems are to be used, those systems will be demonstrated to have a resolution capability at least equivalent to that attainable by direct visual examination, and that the procedure will be "...demonstrated to the authorized nuclear inservice inspector for capability to detect flaws and degradation levels defined within the procedure". However, it is not clear how procedures will be demonstrated. 10 CFR 50.55a(b)(x)(B) requires the qualification of remote visual examinations. Describe the requirements for qualifying the IWE visual examination procedures and how illumination and resolution requirements will be established and implemented.
3. The IWE-2500(b) requirement to examine paint or coatings prior to removal has been eliminated from the 1998 Edition. Alternatively, the licensee referred to their maintenance rule program to address degradation of paint and coatings. However, it is not clear how the maintenance rule program compares to inservice inspection related visual examinations (i.e., examiner qualifications, frequency of examinations, etc.). This alternative may be considered acceptable if comparable to Code requirements and/or when adequate provisions exist to examine the base metal for surface anomalies that may indicate underlying conditions which could challenge the structural integrity of containment. These examinations should be performed prior to re-application of the coating, and should invoke detailed visual examinations and/or augmented ultrasonic examination, as necessary. Provide specific information addressing the maintenance rule program or how the integrity of the base metal is confirmed prior to paint or coating application.
4. Examination Category E-G, Pressure Retaining Bolting, has been removed from Table IWE-2500-1 in the 1998 Edition. The 1992 Edition required VT-1 visual examination of bolting when a connection was disassembled. The 1998 Edition requires a general visual examination, performed in place, with no requirement for visual examination when the joint is disassembled. It is not clear what, if any, examinations will be performed on disassembled bolted connections. Provide a technical justification describing why not performing VT-1 visual examination of the bolting, when disassembled, provides an acceptable (equivalent) level of quality and safety.
5. IWL-2410, allows for deferral of concrete visual exams to the next scheduled plant outage for portions of the concrete surface which cannot be examined within the stated time interval. This can be considered acceptable provided credit for the examination is not taken for two intervals simultaneously. Confirm that credit for an examination will not be taken in two intervals.
6. IWA-2210 specifies illumination and resolution requirements for Subsection IWL visual examinations; while 10 CFR 50.55a(b)(x)(B) mandates a qualification of the remote visual examination procedure for Subsection IWE. The INEEL staff believes it to be technically prudent to perform this same type of procedure qualification for Subsection IWL remote visual examinations. One method may be to use the guidelines established in ACI 349.3R-96, "Evaluation of Existing Nuclear Safety-Related Concrete Structures." This document provides acceptance criteria for concrete structures and, by default, establishes the minimum detectable flaw size for direct and remote visual examination

procedure qualification. The second-tier acceptance criteria has been found to be acceptable for use at other plants. The licensee may establish acceptance criteria for evaluating concrete containments and qualify the remote visual examination procedure accordingly. Provide plant-specific information that is used to qualify the remote visual examination procedure for the concrete containment.

7. Table IWL-2500-1 of the 1998 Code Edition requires "General Visual Examination" for item L1.12 (suspect area). The 1992 Addenda of the Code requires VT-1 examination. The Code committee has recognized the error in the 1998 Code Edition. Please describe how suspect areas will be examined.
8. In the October 28, 1999, submittal, the licensee proposed to apply the same commitments that were made by TU Electric for Comanche Peak, Units 1 and 2. In Enclosure 2 of the same document, the licensee provided a listing of requirements specified in the Comanche Peak Safety Evaluation that were reviewed for applicability to the NMP1 and NMP2 containment inspection programs. However, this does not represent a clear commitment that the supplemental requirements will be met. Provide a list of the specific requirements and commitments that will be used to supplement the 1998 Code requirements at NMP1 and 2.