September 5, 2002

MEMORANDUM TO: File

FROM: John F. Stang, Senior Project Manager, Section 1 ***/RA/***
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 - REVIEW REGARDING LICENSE AMENDMENT REQUEST, "ONE-TIME EXTENSION OF CONTAINMENT INTEGRATED LEAKAGE RATE TESTING," DATED APRIL 11, 2002 (TAC NOS. MB4837 AND MB4838)

During the review of the subject proposed license amendment, the staff determined additional information was necessary to complete its review. Attached is the draft request for additional information (RAI). In accordance with Nuclear Reactor Regulation Office Instruction 101, the draft RAI will be e-mailed to the licensee and a conference call will be arranged to discuss the RAI. Once the Nuclear Regulatory Commission staff and the licensee have a common understanding of the information required, the RAI will be issued formally to the licensee.

Docket Nos. 50-315 and 50-316

Attachment: As stated

D. C. COOK UNITS 1 AND 2 REVIEW FOR
SUBMITTAL AEP:NRC 2612 ONE-TIME EXTENSION OF CONTAINMENT INTEGRATED LEAKAGE RATE TESTING
DATED APRIL 11, 2002

As the inservice inspection requirements mandated by 10 CFR 50.55a and the leak rate testing requirements of Option B of Appendix J complement each other in ensuring the leak-tightness and structural integrity of the containment, the staff needs the following information to complete its review of the license amendment request.

1. Based on the review of the reference, the staff understands that you are using the 1992 Edition and the 1992 Addenda of Subsections IWE and IWL of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code. Reference 1 also describes the findings of corrosion and thru-wall hole in the liner plate of Unit 2 containment. In addressing "containment inspection history" in the reference, you indicate that there are no areas that require augmented examination. Please provide justification for not identifying the areas of the degraded liner plates and penetrations (accepted by engineering evaluation), and other suspect areas not requiring additional examination (as per IWE-2430), or augmented examination (as per IWE-1240) during the subsequent inspection periods.

2. Please provide the following information related to the finding of the through-wall hole in the Unit 2 liner plate:

    a. Please provide location (elevation, azimuth), liner thickness, nearness to discontinuity areas (i.e. areas that would be subjected to bending under the postulated loadings, or thickness transition), size of the opening made to remove the wire brush, and corrective actions taken to ensure the integrity of the liner plate.

    b. You postulate that the liner through-liner hole was due to the inadequate repair of the liner hole drilled in error during construction. How did you verify that there are no such holes and repairs in other areas, and in the uninspectable areas of the containment liners in both Units of Cook Nuclear Plant (CNP)?

    c. Investigation of other incidents of such through-wall hole in liner plates indicated the cause to be corrosion induced by the foreign elements stuck in the containment concrete. It is quite possible that the Unit 2 through-wall hole in the liner was due to similar reason. In the 1992 integrated leak rate test ILRT, the corrosion had not propagated to the extent that the ILRT would fail. However, if the ILRT were performed prior to this finding, the containment leakage rate could have been unacceptable. Please provide specific discussion of this potential for each CNP Unit.

    d. Recognizing the discussion in 'b,' and 'c' above, please provide justification for not performing ILRT after the through-liner hole finding, or in accordance with the present technical specification requirement.

3. Please provide a summary of findings of the examination of containment concrete performed in accordance with 10 CFR 50.55a and Subsection IWL including the acceptance criteria used for accepting concrete and reinforcing bar degradation.

4. In addressing the issue of potential leakage from the uninspectable areas of the containment surfaces, you indicate that Electric Power Research Institute Class 1 and Class 3b cases include the potential leakage due to containment liner failure. The maximum leakage rate stipulated in theses classes is 35 L_a or 8.75 percent of containment weight for CNP. For an ice-condenser type containment, approximately 3.5 sq. in. of leak area would give a leak rate of 100 percent of the containment weight (Ref. NUREG-1493, Figure 5-10). Considering the areas of CNP containments not available for direct inspection, and the concerns expressed in requests for additional information 2 above, provide justification why the risk assessment should not incorporate higher leakage rate (e.g., 100 percent) in the risk analysis related the the ILRT extension.

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