November 26, 2002

Mr. William R. Kanda, Vice President - Nuclear
First Energy Nuclear Operating Company
10 Center Road
P.O. Box 97
Perry, OH 44081

SUBJECT: PERRY NUCLEAR POWER PLANT - REQUEST FOR ADDITIONAL INFORMATION (RAI) FOR THE REVIEW OF ONE TIME 5-YEAR DEFERRAL OF THE TYPE A CONTAINMENT INTEGRATED LEAK RATE (ILRT) TESTING (TAC. NO. MB4695)

Dear Mr. Kanda:

By letter dated March 14, 2002, FirstEnergy Nuclear Operating Company (FENOC), requested a license amendment for the Perry Nuclear Power Plant requesting a one-time 5 year deferral of the Type A containment ILRT, pursuant to 10 CFR 50.90.

During the review, the Nuclear Regulatory Commission staff has identified that additional information is needed in order to complete the review. Specific questions are presented in the enclosed RAI.

The enclosed questions have already been discussed with your staff. Please respond to this RAI by December 30, 2002. If you have any questions concerning our review, or additional time is needed to respond to the RAI, please contact me at (301) 415-3154.

Sincerely,

/RA/

Stephen P. Sands, Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosure: Request for Additional Information

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION
PERRY NUCLEAR POWER PLANT (PNPP)
ONE TIME DEFERRAL OF INTEGRATED CONTAINMENT LEAK RATE TESTING (ILRT)

References: Letter from G. Dunn (FENOC) to NRC, "License Amendment Request Pursuant to 10 CFR 50.90: One-time deferral of the Type A Containment Integrated Leak Rate Test, March 14, 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-tight and structural integrity of the containment, the staff needs the following information to complete its review of the license amendment request.

1. Under the title, "Containment Inspection (ISI) Program," the PNPP describes its American Society of Mechnical Engineers (ASME) Code, Section XI visual examinations performed for the containment surfaces. The licensee is requested to provide a summary of the screening criteria used in its inservice examination program (ISEP), a summary (including location, size, root cause, etc.) of the degradations found during these examinations, and a description of any corrective actions or analytical evaluations performed when the degradation exceeded 10 percent of the shell thickness. Also, PNPP is requested to provide information regarding the Edition and the Addenda of Subsection IWE of Section XI of the ASME Code used in performing the last two inspections.

2. Subsubarticle IWE-1240 requires the consideration of augmented inspection when the containment area(s) are subjected to standing water. Please provide information related to inspection of the bottom liner plate and embedments of the PNPP containment and drywell areas submerged in water. Specifically, you are requested to provide information regarding the frequency of inspection and results of the last inspection.

3. Recognizing the hardship associated with examining seals, gaskets, and pressure retaining bolts during each inspection period, and that the examination will be performed prior to Type B testing as required by Option A of Appendix J, the staff had granted such relief to a number of licensees. However, implementation of Option B of Appendix J allows flexibility in the frequency of performing Type B testing based on the leak rate performance of the penetrations. As the performance-based testing allows certain leak rates through the penetrations, minor initial degradation of the associated seals, gaskets, and bolting may go undetected, thus, raising a potential concern for components to further degrade over the 10-year examination interval. Therefore, the schedule of examinations of seals, gaskets and pressure retaining bolting should be established based on the components' performance (i.e., plant-specific experience, replacement schedules for resilient seals, etc.) to ensure that, if Type B testing is not performed during the ILRT extension period, significant degradation of these components over this extended interval will not occur. In view of this discussion, the licensee is requested to provide a schedule for examination (and/or testing) of these components including equipment hatches and other penetrations with resilient seals.

4. The stainless steel bellows have been found to be susceptible to trans-granular stress corrosion cracking, and the leakages through them are not readily detectable by Type B testing (See Nuclear Regulatory Commission Information Notice 92-20). The licensee is

requested to provide information regarding the inspection and testing of containment bellows at PNPP.

5. Inspections of some reinforced and steel containments (e.g., North Anna, Brunswick, D. C. Cook, Oyster Creek) have indicated degradation from the non-inspectable side of the liner/steel shell of primary containments. The major non-inspectable areas of the Mark III containment, such as PNPP, include those parts of the steel shell backed by concrete, the basemat liner, and inaccessible areas inside the containment and those in the annulus. PNPP is requested to provide information addressing how potential leakage due to age-related degradation from these non-inspectable areas are factored into the risk assessment in support of the requested ILRT interval extension.

6. In Step 9 of the Calculational Computation, it appears that incorrect values are assigned for the Class 1 frequencies for the 10y and 15y cases. Please confirm the correct values.

7. Please describe the planned approach and schedule for addressing the risk assessment aspects of RAI 5. The staff is particularly interested in an assessment of the likelihood and risk-implications of degradation-induced leakage occurring and going undetected in visual examinations during the extended test interval. Calvert Cliffs and other licensees have provided such assessments, and that methodology is considered applicable to other plant types. It should be noted however that the Calvert Cliffs application considered only the inspection of the inside surface of containment. For free standing containments, examinations are performed for both the inner and outer surfaces. The inspections of outer surfaces provide further assurance that degradation will not be significant. Please discuss those inspections and their impact on risk, e.g., how much of the outer surface is accessible/inspected? are any portions of the shell that are inaccessible from the inside inspected from the outside, and vice versa? Also, it would seem that those portions of the shell that are free standing (not backed by concrete) would have fewer relevant corrosion mechanisms. Some discussion in this area would also be helpful.