

August 20, 2004

Mr. Mano K. Nazar
Senior Vice President and Chief Nuclear Officer
Indiana Michigan Power Company
Nuclear Generation Group
500 Circle Drive
Buchanan, MI 49107

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF
DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 LICENSE RENEWAL
APPLICATION

Dear Mr. Nazar:

By letter dated October 31, 2003, Indiana Michigan Power Company submitted an application pursuant to 10 CFR Part 54, to renew the operating licenses for the Donald C. Cook Nuclear Plant (CNP), Units 1 and 2, for review by the U.S. Nuclear Regulatory Commission (NRC). The NRC staff is reviewing the information contained in the license renewal application (LRA) and has identified, in the enclosure, areas where additional information is needed to complete the review. Specifically, the enclosed requests for additional information (RAIs) are from the NRC Project Team that performed the audits at CNP.

Based on discussions with Mr. Richard Grumbir of your staff, a mutually agreeable date for your response is within 30 days of the date of this letter. If you have any questions regarding this letter or if circumstances result in your need to revise the response date, please contact me at 301-415-4053 or by e-mail at jgr@nrc.gov.

Sincerely,

/RA/

Jonathan Rowley, Project Manager
License Renewal Section A
License Renewal and Environmental Impacts Program
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos.: 50-315 and 50-316

Enclosure: As stated

cc w/encl: See next page

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Donald C. Cook Nuclear Plant, Units 1 and 2

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**DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2
LICENSE RENEWAL APPLICATION
REQUEST FOR ADDITIONAL INFORMATION (RAI)**

RAI B.1.34-1

The staff requested clarification on the method(s) used to monitor a change in material properties of elastomers, specifically, the pressure seals (divider barrier). The Standard Review Plan for License Renewal (SRP-LR) Appendix A.1.2.3.3 states that “parameters to be monitored or inspected should be identified and linked to the degradation of the particular structure and component intended function(s)” and “should detect the presence and extent of aging effects.” By letter dated April 23, 2004 (ML041270484), the applicant responded that the phrase “change in material properties” was intended to convey a visual inspection to ensure the absence of apparent deterioration (i.e., cracks or defects in the sealing surfaces) as discussed in the implementing procedures.

Please provide the basis for concluding that the elastomeric divider barrier will continue to perform its design function despite changes in material properties that may not be visible.

RAI B.1.34-2

In license renewal application (LRA) Section B.1.34, the Divider Barrier Seal Inspection Program manages cracking and change in material property of elastomeric seals. Please clarify the acceptance criteria for evaluating changes in material properties of elastomeric components, specifically, the pressure seals (divider barrier). Implementing procedures mention evidence of chemical attack, radiation damage, or changes in physical appearance. Please clarify how these will be evaluated (acceptance criteria) and confirm that visual evidence of degradation will precede loss of function.

RAI 3.1.3-1

In LRA Table 3.1.2-3, to manage cracking of the bolting material for valves and blind flanges, and main flange bolts, in LRA Table 3.1.2-4, to manage cracking of low-alloy steel manway cover bolts/studs in ambient air, and in LRA Table 3.1.2-5, to manage cracking carbon steel bolting of the secondary manway, handhold, recirculation port (Unit 1), and inspection port closure in ambient air of the steam generators, the applicant proposes to use the Inservice Inspection Program. Although a precedent was cited, the staff was not able to confirm its applicability. For the components referenced, the Generic Aging Lessons Learned (GALL) Report recommends a program consistent with “Bolting Integrity” (GALL AMP XI.M18) which references the guidelines of NUREG-1339 to prevent and mitigate bolting degradation. Please explain the rationale for excluding this bolting material from the scope of CNP LRA Aging Management Program(AMP) B.1.2, “Bolting and Torquing Activities,” or confirm that it is managed using this program.

Enclosure

RAI 3.1.3-2

In LRA Table 3.1.2-4, the applicant proposes to manage cracking of heater support plates, their brackets, and the bracket bolts using the Water Chemistry Control Program. Although a precedent was cited, the staff was not able to confirm that it is applicable to CNP. For the components referenced, the GALL Report recommends the use of Inservice Inspection in addition to the water chemistry control program. Please justify the absence of an inspection or monitoring program to manage this aging effect, or identify the program used.

RAI 3.1.3-4

In LRA Table 3.1.2-5, cracking of the low-alloy steel lower shell, upper shell, transition cone, steam drum, elliptical upper head, feedwater nozzle and main steam nozzle, secondary blowdown and instrumentation connections, recirculation connections (Unit 1), and secondary shell drain connections, secondary handhole and inspection ports, and carbon steel secondary manway and feedwater elbow thermal liner (Unit 2) component types in treated water is managed by CNP AMP B.1.14, "Inservice Inspection – ASME Section XI, Subsection IWB, IWC, and IWD." The applicant made reference to a previously approved staff position, however, in the case cited, a Water Chemistry Control Program had been credited as well. No water chemistry control program was identified for managing of this aging effect at CNP. Please provide the basis for concluding that water chemistry control is not required or identify the Water Chemistry Control Program that will be used.

RAI 3.3.2-2

In LRA Section 3.3.2.2.2, the applicant proposes to manage degradation of elastomers for ventilation systems with the Preventive Maintenance Program. The staff requests clarification on the method(s) used to monitor a change in material properties of elastomers in the ventilation systems. Material properties that could affect the performance of elastomers (e.g., hardness, flexibility) are not directly measured. Please provide a basis for concluding that degradation will be identified before the intended function is compromised. Otherwise, provide a technical basis for the conclusion that the elastomers in question are not subject to these effects or that these effects will not interfere with the intended function of the component.

RAI 3.3.3-2

In LRA Table 3.3.2-4, for elastomers in the compressed air system flex hoses, and in LRA Table 3.3.2-8, for elastomers in the flex hoses associated with the emergency diesel generator (EDG), and in LRA Table 3.3.2-9, for elastomers in the flex hoses associated with the security diesel, and in LRA Table 3.3.2-10, for elastomers in the flex hoses associated with the containment hydrogen monitoring system, the applicant proposes to manage change in material properties with the Preventive Maintenance Program. The staff requests clarification on the method(s) used to monitor a change in material properties of elastomers in these flex hoses associated with these systems. Material properties that could affect the performance of elastomers (e.g., hardness, flexibility) are not directly measured. Please provide a basis for concluding that degradation will be identified before the intended function is compromised. Otherwise, provide a technical basis for the conclusion that the elastomers in question are not subject to these effects or that these effects will not interfere with the intended function of the component.

RAI 3.5.3-1

In LRA Table 3.5.2-1, page 3.5-37, the applicant proposes to manage loss of material, cracking, and change of material properties of concrete exposed to borated ice for ice condenser support slab and ice condenser wear slab using the Structures Monitoring Program. Please clarify whether these component types are accessible for direct monitoring and if not, describe specifically how the associated aging effects will be monitored.

RAI 3.5.3-2

In LRA Table 3.5.2-5, the applicant proposes to manage fire proofing pyrocrete materials using the Fire Protection Program. Separation, cracking, and loss of material are considered to be applicable aging effects for pyrocrete materials. The staff requests the applicant to identify how the aging effects of separation, cracking, and loss of material are managed by the Fire Protection Program or justify why these aging effects are not applicable.