August 31, 2004

LICENSEE: Indiana Michigan Power Company

FACILITY: Donald C. Cook Nuclear Plant, Units 1 and 2

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE HELD ON AUGUST 10, 2004, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION (NRC) AND INDIANA MICHIGAN POWER COMPANY (I&M) REPRESENTATIVES CONCERNING REQUESTS FOR ADDITIONAL INFORMATION ON DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION (TAC NOS. MC1202 AND MC1203)

The U.S. Nuclear Regulatory Commission staff (the staff) and representatives of Indiana Michigan Power Company (the applicant) held a telephone conference call on August 10, 2004, to discuss audit report draft requests for additional information (D-RAIs) concerning the Donald C. Cook Nuclear Plant (CNP) license renewal application (LRA). Also discussed was the applicant's response to a previously submitted request for additional information (RAI) with which the staff required further clarification.

On the basis of the discussions, the applicant was able to better understand the staff's questions. The conference call was also useful in clarifying the staff's questions. No staff decisions were made during the conference call.

Enclosure 1 provides a listing of the telephone conference participants. Enclosure 2 contains the RAI and D-RAIs discussed with the applicant, including a brief description on the status of the items. The applicant has had an opportunity to comment on this summary.

/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

Enclosures: As stated

cc w/encls: See next page

August 31, 2004

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SUBJECT: SUMMARY OF TELEPHONE CONFERENCE HELD ON AUGUST 10, 2004, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION (NRC) AND INDIANA MICHIGAN POWER COMPANY (I&M) REPRESENTATIVES CONCERNING REQUESTS FOR ADDITIONAL INFORMATION ON DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION (TAC NOS. MC1202 AND MC1203)

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Adams Accession no.: **ML042440671**

Document Name:C:\ORPCheckout\FileNET\ML042440671.wpd

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AUGUST 10, 2004

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Om Chopra	NRC
Gregory Cranston	NRC
Steve Pope	Information Systems Laboratory (ISL)*
Malcolm Patterson	ISL
Neil Haggerty	Indiana Michigan Power Company (I&M)
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RAI AND AUDIT REPORT D-RAIs DISCUSSED FOR
DONALD C. COOK (CNP), UNITS 1 AND 2, LICENSE RENEWAL
DURING AUGUST 10, 2004 TELEPHONE CONFERENCE

Donald C. Cook (CNP) LRA Section 2.5

RAI 2.5-1:

Interim Staff Guidance (ISG)-2, "NRC Staff Position on the License Renewal Rule (10 CFR 54.4) as it relates to the Station Blackout Rule (SBO) (10 CFR 50.63)," states, in part, that, "The offsite power systems consist of a transmission system (grid) component that provides a source of power and a plant system component that connects that power source to a plant's onsite electrical distribution system which power safety equipment." For the purpose of the license renewal rule, the staff determined that the plant system portion of the offsite power system that is used to connect the plant to the offsite power source should be included within the scope of the rule. This path typically includes the switchyard circuit breakers that connect to the offsite system power transformers (startup transformer), transformers themselves, the intervening overhead or underground circuits between circuit breaker and transformer and between transformer and onsite electrical distribution system, and the associated control circuits and structures. In this regard, the portion of the SBO path indicated on the offsite power boundary drawing for license renewal does not include the transmission conductors and connections and the associated control cables from the first breaker (disconnect) from the 345 kV [kilovolt] and 765 kV switchyard buses to the 765 kV/34.5 kV and 345 kV/34.5 kV transformers. Please revise this drawing to include the above components indicating which components require an aging management review (AMR).

I&M Response to RAI 2.5-1:

The portion of the SBO path indicated on the license renewal offsite power boundary drawing, 12-LRA-Electrical1, includes the switchyard circuit breakers that connect to the offsite system power transformers (startup transformers), the transformers themselves, and the intervening overhead or underground circuits between circuit breakers and transformers and between transformers and the onsite electrical distribution system. As stated in LRA Section 2.5, switchyard items credited for the SBO path include the associated control circuits and structures in addition to the items shown on the boundary drawing. Consistent with the ISG excerpts in the RAI, the path from the switchyard circuit breakers that connect to the offsite power system transformers (startup transformers) to the 765 kV/34.5 kV and 345 kV/34.5 kV switchyard transformers is considered part of the transmission system (grid), which is not included in the scope of license renewal. Therefore, the transmission conductors and connections and the associated control cables from the first breaker (disconnect) from the 345 kV and 765 kV switchyard buses to the 765 kV/34.5 kV and 345 kV/34.5 kV switchyard transformers are not subject to aging management review. Therefore, no changes to the license renewal offsite power boundary drawing are required.

Status: This issue was previously discussed during a July 29, 2004 conference call. The staff and the applicant continue to have differing interpretations of ISG-2. The staff requests the applicant to provide precedents documentation in support of their position. The NRC and the applicant will have another conference call to resolve this issue.

Donald C. Cook (CNP) – Audit Report Draft Request for Additional Information

D-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 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 (ADAMS Accession No. 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. Changes in other material properties are neither monitored nor inspected.

Material properties that could affect the performance of barrier seals (e.g., hardness, flexibility) are not directly measured. Please provide a basis for concluding that degradation will be apparent before the intended function is challenged. 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.

Status: After discussing the question with the applicant, the question was found to be unclear. The staff agreed to revise the question. The question was revised as follows and sent as a formal question.

> 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 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 (ADAMS Accession No. 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.

D-RAI B.1.34-2

In 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 and confirm that visual evidence of degradation will precede loss of function.

Status: After discussing the question with the applicant, the question was found to be unclear. The staff agreed to revise the question. The question was revised as follows and sent as a formal question.

> In 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.

D-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, handhole, 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 GALL Report recommends a program consistent with "Bolting Integrity" (GALL AMP XI.M18) which invokes 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 AMP B.1.2, "Bolting and Torquing Activities," or confirm that it is managed using this program.

Status: The applicant indicated to the staff that the question is very similar to a RAI asked previously for another section. The applicant requested that the staff review the response to RAI B.1.2.2-3 in letter AEP:NRC:4034-10, dated August 11, 2004. Subsequent to this conference call, this D-RAI was sent as a formal RAI.

D-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.

Status: The applicant indicated that the question is clear. This D-RAI was sent as a formal RAI.

D-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.

Status: The applicant indicated to the staff that the question is very similar to a RAI asked previously for another section. The applicant requested that the staff review the response to RAI 3.1-4 in letter AEP:NRC:4034-12, dated August 11, 2004. Subsequent to this conference call, this D-RAI was sent as a formal RAI.

D-RAI 3.2.3-1

In LRA Table 3.2.2-1, cracking of stainless steel CIS piping and valve components, and in Table 3.2.2-2, cracking of stainless steel ECCS heat exchanger tubes, manifold, piping, pump casing, strainer housing, thermowell, tubing, and valve component types in treated, borated water >270°F will be managed using water chemistry control. The GALL Report suggests a plant-specific program. While the water chemistry control program is expected to prevent and mitigate aging effects, the staff finds that this may not be sufficient. Please justify the absence of an inspection or monitoring program to confirm the effectiveness of water chemistry control in managing this aging effect or identify the program that will be used to do so.

Status: The applicant indicated to the staff that the question is very similar to a RAI asked previously for another section. The applicant requested that the staff review the response to RAI 3.2-12 and RAI 3.4-10 in letter AEP:NRC:4034-09, dated June 30, 2004. Subsequent to this conference call, the staff withdrew the question.

D-RAI 3.3.1-1

In LRA Table 3.3.2-3, the applicant proposes to manage loss of material and cracking for stainless steel, carbon steel, and copper alloy component types exposed to treated water in the component cooling water system with CNP AMP B.1.40.2, "Water Chemistry Control – Closed Cooling Water Chemistry Control." The GALL Report recommends, in addition to water chemistry control, performance monitoring and functional testing of components managed with this program. Please provide justification or a commitment to apply an appropriate testing and/or monitoring program to manage these aging effects.

Status: The applicant indicated to the staff that the question is very similar to RAIs asked previously for other sections. The applicant requested that the staff review the response to RAI 3.2-12, 3.4-8, 3.4-10, and 3.4-12 in letter AEP:NRC:4034-09, dated June 30, 2004. Subsequent to this conference call, the staff withdrew the question.

D-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.

Status: The applicant indicated that the question is clear. This D-RAI was sent as a formal RAI.

D-RAI 3.3.3-1

In LRA Table 3.3.2-3, the applicant proposes to manage cracking for stainless steel fittings, manifold, piping, thermowell, tubing, and valve component exposed to treated water in the component cooling water system with the closed cooling water chemistry control. This material and environment combination was not identified in the GALL Report for component cooling water component types, however, it has been considered acceptable to manage cracking of stainless steel using water chemistry control supplemented by inspection or monitoring programs. Please identify the program or programs that will be used to confirm the effectiveness of water chemistry control for managing this aging effect, or clarify the rationale for relying on water chemistry control alone.

Status: The applicant indicated to the staff that the question is very similar to a RAI asked previously for another section. The applicant requested that the staff review the response to RAI 3.4-10 in letter AEP:NRC:4034-09, dated June 30, 2004. Subsequent to this conference call, the staff withdrew the question.

D-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.

Status: The applicant indicated that the question is clear. This D-RAI was sent as a formal RAI.

D-RAI 3.3.3-3

In LRA Table 3.3.2-6, the applicant identifies no aging effects for copper-alloy piping and valve component types exposed to condensation (LRA Pages 3.3-74 and 3.3-77). However, in LRA Table 3.3.2-6, for the copper-alloy valve component type exposed to condensation (LRA Page 3.3-77), loss of material is identified as an aging effect requiring management. Please clarify the inconsistency between identical material and environment combinations.

Status: The applicant indicated to the staff that the question is very similar to a RAI asked previously for another section. The applicant requested that the staff review the response to RAI 3.3.2-1 in letter AEP:NRC:4034-06, dated June 8, 2004. Subsequent to this conference call, the staff withdrew the question.

D-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.

Status: The applicant indicated that the question is clear. This D-RAI was sent as a formal RAI.

D-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 asks 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.

Status: The applicant indicated that the question is clear. This D-RAI was sent as a formal RAI.

Donald C. Cook Nuclear Plant, Units 1 and 2

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