

November 10, 2004

LICENSEE: Indiana Michigan Power Company

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

SUBJECT: SUMMARY OF PUBLIC MEETING HELD ON OCTOBER 5, 2004, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND INDIANA MICHIGAN POWER COMPANY, PERTAINING TO THE DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION

The U.S. Nuclear Regulatory Commission staff (the staff) and representatives of Indiana Michigan Power Company (I&M) held a public meeting on October 5, 2004, to discuss and clarify requests for additional information (RAIs) concerning the Donald C. Cook Nuclear Plant, Units 1 and 2, license renewal application (LRA). The meeting was useful in clarifying the intent of the staff's RAIs.

Enclosure 1 provides a listing of the meeting's participants. Enclosure 2 contains a listing of the items discussed with the applicant, including a brief description on the status of these items.

The applicant has had an opportunity to comment on this summary.

**/RA/**

Jonathan G. 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/enclosures: See next page

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LIST OF PARTICIPANTS FOR MEETING TO DISCUSS  
THE DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2  
LICENSE RENEWAL APPLICATION  
OCTOBER 5, 2004

**Participants**

Jonathan Rowley  
Raul Hernandez  
Chia-Fu Sheng  
John Fair  
Rich Grumbir  
Bob Kalinowski  
Neil Haggerty  
Mark Rinckel

**Affiliations**

NRC/NRR/DRIP  
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REQUESTS FOR ADDITIONAL INFORMATION  
DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2  
LICENSE RENEWAL APPLICATION

OCTOBER 5, 2004

The U.S. Nuclear Regulatory Commission staff (the staff) and representatives of Indiana Michigan Power Company (I&M) held a public meeting on October 5, 2004, to discuss and clarify RAIs concerning the Donald C. Cook Nuclear Plant, Units 1 and 2, license renewal application (LRA). The following items were discussed during the meeting.

**1. RAI 2.3.3.8-6**

The exhaust silencers and associated vent stacks are long-lived passive components and are therefore subject to an aging management review (AMR).

The applicant is requested to confirm that the exhaust silencers and associated vent stacks are in scope and subject to an AMR and identify which "component type" on LRA Table 2.3.3-8 represents them or provide justification for their exclusion.

**Additional Information Requested**

Following a September 1, 2004 meeting (letter dated September 29, 2004), the applicant submitted a supplemental response to the initial follow-up item for this RAI. Following its review of the response, the staff asked the applicant if there would be more than one data point collected prior to the period of extended operation.

**Status**

The applicant clarified its supplemental response. The staff requested no further information at that time. The applicant was not required to revise its supplemental response.

**2. RAI 4.3.1-1**

Section 4.3.1 of the LRA discusses the fatigue evaluation of the Unit 1 auxiliary spray line that was performed in response to NRC Bulletin 88-08, "Thermal Stresses in Piping Connected to Reactor Coolant Systems." The LRA indicates that this fatigue evaluation is contained in WCAP-14070, "Evaluation of Cook Units 1 and 2 Auxiliary Spray Piping per NRC Bulletin 88-08," July 1994. Provide a copy of WCAP-14070.

**Additional Information Requested**

The initial follow-up to this RAI was requested during a August 12, 2004 (letter dated August 30, 2004) telephone conference call. The applicant submitted a supplemental response to this RAI confirming the time dependency for the proprietary frequency specified in the Note on Page 6-3 of WCAP-14070. Following review of the response to that request, the staff requested the applicant to commit to updating the UFSAR.

Enclosure 2

## **Status**

The item remains unresolved at this time as there was no agreement on how the commitment was to be captured and controlled. The staff requests to have the commitment as part of the UFSAR, were the applicant believes it is appropriate to have the commitment included in the commitment list of the SER. Additional discussion is required to resolve this RAI.

### **3. RAI 4.7.4-1**

The LRA Section 4.7.4, "Reactor Vessel Underclad Cracking," states, "The numbers of design cycles and transients assumed in the WCAP-15338 analysis bound the number of design cycles and transients projected for 60 years of operation." Please provide information regarding how you arrived at this conclusion.

## **Additional Information Requested**

Response to this RAI concludes that WCAP-15338-A remains applicable to CNP for the period of extended operation. However, LRA Section 4.7.4 states, "[t]herefore, the analysis of underclad cracking for CNP remains valid for the period of extended operation in accordance with 10 CFR 54.21(c)(1)(i)." Since the WCAP analysis is for 60 years, the appropriate paragraph for 10 CFR should be 10 CFR 54.21(c)(1)(ii). Please identify the appropriate citation.

## **Status**

The applicant provided logic for its use of '...(i)' rather than '...(ii)'. The staff will reevaluate the request upon receiving this new information. The staff may request additional information if necessary.

### **4. RAI B.1.5-1**

LRA Section B.1.5, "Bottom-Mounted Instrumentation Thimble Tube Inspection," was designed for the detection of wear, not cracking due to stress corrosion cracking (SCC). However, in LRA Table 3.1.2-1 "cracking" was listed as an aging effect requiring management for bottom-mounted instrumentation (BMI) thimble tubes and bullet plugs. If SCC is a credible degradation mechanism requiring aging management for BMI thimble tubes, explain how your proposed program is adequate to detect SCC or modify the thimble tube inspection program to include inspections for thimble tube cracking due to SCC. As part of your response, please also address whether the eddy current (ET) examination discussed in the LRA has been qualified to detect and size SCC. Alternatively, information demonstrating that the thimble tubes are not susceptible to SCC and LRA Table 3.1.2-1 should be revised accordingly.

## **Additional Information Requested**

Following the review of the original response to the RAI, the staff again questioned why cracking is an aging effect requiring management.

## **Status**

The applicant indicated that the response was very conservative in nature. The staff will further evaluate the response to determine if the cracking as an aging effect aspect of the response is necessary. No action was requested of the applicant at that time. The applicant may be requested to revise the response.

### **5. RAI B.1.5-2**

LRA Section B.1.5 provides the acceptance criteria of BMI thimble tubes as: (1) replacement or isolation of a thimble tube with 80 percent through-wall wear, (2) reposition of a thimble tube with more than 40 percent through-wall wear, provided that it is projected to remain under 80 percent until the next inspection, and (3) replacement, isolation, or reposition of a thimble tube with more than 40 percent through-wall wear if it is projected to exceed 80 percent by the next inspection. Using reposition as an option for Criterion 3 for a tube which is projected to exceed 80 percent wear by the next inspection is inadequate because the uncertainty of the tube wear rate at the selected location for the tube reposition in a certain time period might make the reposition ineffective. Provide a revision of the AMP by incorporating ET uncertainty in future wear measurements and by considering only replacement and isolation of tubes as options for Criterion 3 of the acceptance criteria.

## **Additional Information Requested**

Please confirm that for thimble tubes that are repositioned, the final relocation position is selected based on plant-specific data. Elaborate on how you are going to establish the plant-specific wear rate for each thimble.

## **Status**

The applicant indicated that they had done as others and cited the McGuire SER as precedent. The staff is to evaluate the McGuire SER. The staff may request additional information.

### **6. RAI B.1.24-2**

The spray head and its associated components covered by LRA Section B.1.24 may be subject to severe thermal cycling. Inadequate justification was provided to demonstrate that a VT-3 examination is sufficient to detect a potential flaw in the spray head which could lead to failure of the component. Provide justification for using VT-3 examination instead of VT-1 examination for the one-time inspection of these components in either Unit 1 or Unit 2. In addition, provide information regarding acceptance criteria; the evaluation methodology for disposition of indications; and the need for successive examinations for the one-time inspection of spray head, spray head locking bar, and coupling. Also, please provide your commitment in the commitment list and in the UFSAR Supplement.

## **Additional Information Requested**

If the CNP Appendix R evaluation credits the spray pattern provided by the pressurizer spray heads, visual examinations of the spray heads performed to VT-3 examination methods may not be adequate. Please confirm pressurizer spray credited in the CNP App. R analysis, and if so, provide the basis for determining VT-3 examinations will be sufficient to ensure the spray heads will be capable of performing their intended functions through the period of extended operation.

### **Status**

The applicant indicated that the request is clear. The applicant will submit a supplemental response.

## **7. RAI B.1.26-2**

GALL Program XI.M31 lists 8 items of consideration for an acceptable reactor vessel surveillance program. Item 4 indicates that all pulled and tested capsules, unless discarded before August 31, 2000, are placed in storage. Please provide information regarding consistency with GALL with respect to this item. Also, the staff noticed that Item 6 indicates that all other standby capsules exceeding equivalent RPV fluence of 60 EFPY are to be removed and placed in storage. Please provide the projected dates (in terms of RPV EFPY) for all standby capsules (Capsules V and Z for Unit 1 and Capsules V, W, and Z for Unit 2) to reach the fluence equivalent to 60 EFPY of RPV fluence and the plan to remove and store these standby capsules.

### **Staff Comment**

The staff clarified the question. The staff meant to write 48 EFPY or 60 years, not 60 EFPY, in the RAI.

### **Status**

The applicant indicated that the question is clear. The applicant will submit a response.

## **8. RAI B.1.27-1**

Because of the limited information provided in LRA Section B.1.27, "Reactor Vessel Internals Plates, Forgings, Welds, and Bolting," the staff could not verify that this program is consistent with GALL for most of the 10 elements. For example, the LRA does not mention the identification of the most susceptible items, an Attribute 1 concern; the specific water chemistry guidelines used, an Attribute 2 concern; and whether enhanced visual VT-1 examinations or ultrasonic testing will be employed in inspections for certain selected components and locations, an Attribute 4 concern. Provide information regarding whether all 10 elements of the program are in accordance with GALL Program XI.M16, "PWR Vessel Internals," and whether your program contains any exceptions or enhancements.



### **Additional Information Requested**

In the response to RAI B.1.27-1, the applicant did not specify the visual inspection technique to be used in the implementation of this AMP. Please confirm that this AMP will include the Materials Reliability Program (MRP) recommendations, including the appropriate visual inspection technique (e.g., enhanced VT-1 with a 0.0005-inch resolution currently specified in GALL), to be used for inspections performed under this AMP.

In the response to RAI B.1.27-1 regarding Acceptance Criteria, the applicant states, "For the plates, forgings, welds, and bolting other than baffle bolts that will be visually inspected, critical flaw size will be determined by analysis prior to inspection." This did not mention the acceptance criteria for the analysis. GALL requires the use of IWB-3400 and IWB-3500 as the acceptance criteria for flaw analysis (evaluation). Please clarify.

### **Status**

The applicant indicated that the request is clear. The applicant will submit a revised response.

### **9. RAI B.1.27-2**

The information provided in LRA Section B.1.27 is insufficient for the staff to determine whether the PWR Materials Reliability Project (MRP) Issues Group and Westinghouse Owners Group (WOG) programs discussed there address all key issues of this aging management program (AMP), i.e., crack initiation and growth due to stress corrosion cracking (SCC) or irradiation-assisted SCC, loss of fracture toughness due to neutron irradiation embrittlement, and distortion due to void swelling. Provide a description of all the tasks under the MRP program and their goals and an assessment of the relevance of these tasks to the three aging effects mentioned above. Provide the same for the WOG program for baffle and former bolting. Further, please include your participation in the MRP program as a commitment in your LRA commitment list and in the UFSAR Supplement. Also, please provide a commitment that the program to manage void swelling will be submitted for staff review and approval three years prior to the period of extended operation.

### **Additional Information Requested**

In the original response to RAI B.1.27-2, I&M revised the Reactor Vessel Internals (RVI) Plates, Forgings, Welds, and Bolting Program commitment made in the LRA to state that the program to manage void swelling will be submitted for staff review and approval three years prior to the period of extended operation. The staff clarified the original RAI as follows:

Please provide a commitment that the RVI Plates, Forgings, Welds, and Bolting Program will be submitted for staff review and approval three years prior to the period of extended operation.

### **Status**

The applicant indicated that the request is clear. The applicant will submit a revised response.

Donald C. Cook Nuclear Plant, Units 1 and 2

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