

November 26, 2004

LICENSEE: Indiana Michigan Power Company  
FACILITY: Donald C. Cook Nuclear Plant, Units 1 and 2  
SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON  
OCTOBER 27, 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 NRC or the staff) and representatives of Indiana Michigan Power Company (I&M) held a telephone conference call on October 27, 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 conference call was useful in clarifying the intent of the staff's RAIs.

Enclosure 1 provides a listing of the telephone conference call participants. Enclosure 2 contains the items 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 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/encls: See next page

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OFFICE	PM:RLEP	LA:RLEP	SC:RLEP
NAME	JRowley	YEdmonds	SLee
DATE	11/26/04	11/9/04	11/26/04

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RLEP RF  
J. Rowley (PM)

**E-MAIL:**

RidsNrrDrip  
RidsNrrDe  
G. Bagchi  
K. Manoly  
W. Bateman  
J. Calvo  
R. Jenkins  
P. Shemanski  
J. Fair  
RidsNrrDssa  
RidsNrrDipm  
D. Thatcher  
R. Pettis  
C. Li  
M. Itzkowitz (RidsOgcMailCenter)  
R. Weisman  
M. Mayfield  
A. Murphy  
S. Smith (srs3)  
S. Duraiswamy  
Y. L. (Renee) Li  
RLEP Staff

-----  
K. Coyne  
L. Lund  
S. Coffin  
T. Chan  
R. Gramm  
A. Howell  
M. Shuaibi  
J. Strasma, RIV  
M. Kotzalas  
OPA  
NRR/ADPT secretary (RidsNrrAdpt)

LIST OF PARTICIPANTS FOR TELEPHONE CONFERENCE CALL  
TO DISCUSS THE DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2  
LICENSE RENEWAL APPLICATION  
OCTOBER 27, 2004

**Participants**

Jonathan Rowley  
James Strnisha  
Jai Rajan  
Rich McNally  
Raul Hernandez  
Steve Jones  
Cliff Marks  
Robert Kalinowski  
Neil Haggerty  
Ted Ivy

**Affiliations**

U.S. Nuclear Regulatory Commission (NRC)  
NRC  
NRC  
NRC  
NRC  
NRC  
Information Systems Laboratories\*  
Indiana Michigan Power Company (I&M)  
I&M  
Entergy\*\*

\* NRC Contractor

\*\* I&M Contractor

**REQUESTS FOR ADDITIONAL INFORMATION  
DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2  
LICENSE RENEWAL APPLICATION**

OCTOBER 27, 2004

The U.S. Nuclear Regulatory Commission staff (the staff) and representatives of Indiana Michigan Power Company (I&M) held a telephone conference call on October 27, 2004, to discuss and clarify requests for additional information (RAIs) concerning the Donald C. Cook Nuclear Plant, Units 1 and 2 (CNP), license renewal application (LRA). The following RAIs were discussed during the telephone conference call.

**1. RAI 3.3.2.1.11-1**

The applicant submitted the supplemental response to RAI 3.3.2.1.11-1 in a letter to the NRC (AEP:NRC:4034-17) dated October 18, 2004. The staff had four additional questions for the applicant following the review of the response.

**Additional Information Requested**

1. In the I&M Supplemental Response to RAI 3.3.2.1.11-1, the applicant states, "in addition to the System Walkdown Program, the Water Chemistry Control Program will manage the effects of aging on components with an internal environment of treated water." The GALL report recommends use of a one-time inspection to verify the effectiveness of the Water Chemistry Control Program and confirm the absence of an aging effect. It is not clear to the staff if a one-time inspection will be performed for these components to verify the effectiveness of the Water Chemistry Control Program.
2. In the I&M Supplemental Response to RAI 3.3.2.1.11-1, the applicant states, "I&M will include the auxiliary steam system copper heater coils, cast iron strainer housings, and carbon steel traps exposed to an internal steam environment in the Chemistry One-Time Inspection Program." The GALL report recommends use of a one-time inspection to verify the effectiveness of the Water Chemistry Control Program and confirm the absence of an aging effect. It is not clear to the staff if the aging effects will be managed using a One-Time Inspection Program alone or if the one-time inspection will be used to verify the effectiveness of the Water Chemistry Program.
3. In the I&M Supplemental Response to RAI 3.3.2.1.11-1, the applicant states, "the CF system contains water treated with chemicals to reduce corrosion in the steam generators that was conservatively classified as untreated water even though it is actually treated water." It is not clear to the staff how the aging effects in the CF system are managed. Is a water chemistry program being credited by the applicant to manage the aging effects in the CF system and are one-time inspections credited to verify the effectiveness of the program?
4. In the I&M Supplemental Response to RAI 3.3.2.1.11-1, the applicant states, "The remaining systems (CONT, DRAIN, RMS, RWD, and SD) have copper alloy, carbon steel, stainless steel, or glass components that may be pressurized and contain raw water or untreated water. As discussed above, glass exposed to a raw or treated water environment has no aging effect

Enclosure 2

requiring management. I&M will include components containing raw or untreated water subject to aging management review that were included for 10 CFR 54.4(a)(2) in these systems in the Chemistry One-Time Inspection Program." For components in a raw or untreated water environment where an aging effect is likely to occur, the GALL report recommends use of a mitigative program with a One-Time Inspection Program to verify the program effectiveness or the use of periodic inspections. For components in these system, it is not clear to the staff if the applicant is crediting a mitigative program in conjunction with the One-Time Inspection Program or if a one-time inspection alone is credited to manage these aging effects.

## **Status**

The applicant believed that comments 1 and 3 have been addressed in the response to RAI B.1.41-2. The applicant believed that comments 2 and 4 have been addressed with the response as it was written in accordance with previously NRC accepted positions in both the Dresden/Quad Cities (Page 3-195) and V. C. Summer Safety Evaluation Report (SER). The staff will review the RAI response and reference information suggested by the applicant. The staff had no additional question at the time of the call.

## **2. RAI 3.4-4**

The applicant provided the staff a draft of it's supplemental response to RAI 3.4-4 for staff review and comment (see attachment). The staff had an additional question for the applicant following the review of the response.

## **Additional Information Requested**

The response does not address our comment that the management of loss of preload in bolting is limited to bolts subject to long term exposure to elevated temperatures or significant vibration and not all safety related bolting identified in GALL AMP XI.M18 and NUREG-1339. The applicant is requested to clarify the basis for not managing loss of preload for all safety related bolting and other bolting within scope.

## **Status**

The applicant requested the staff review the response to RAI B.1.2.2-1 and 3.2-5 to determine if it satisfies the staff's comment. The staff will review the response and had no additional questions at the time of the call. The question is clear to the applicant. The applicant awaits returned comment from the staff on their request. The applicant will submit a revised response if necessary.

## **3. RAI 2.3.3.1-1**

The applicant submitted the supplemental response to RAI 2.3.3.1-1 in a letter to the NRC (AEP:NRC:4034-01) dated May 7, 2004. The staff had an additional question for the applicant following the review of the response.

**Additional Information Requested**

The fire protection system alone does not provide the diversity of make-up water sources specified within the licensing basis of the facility. Another source(s) of make-up water in addition to the fire protection system should be included within the scope of license renewal to satisfy the requirements of 10 CFR 54.4(a)(2).

**Status**

The applicant will submit a revised response providing at least one diverse make-up water source to the spent fuel pool that is within license renewal scope.

Attachment: As stated

## DRAFT

### Clarification to RAI 3.4-4

#### **RAI 3.4-4:**

*The AMP 1.2 Bolting and Torquing Activities, an existing plant specific program is credited for managing loss of mechanical closure integrity. The program covers bolting in high temperature systems and in applications subject to significant vibration. The staff notes that NUREG-1801 credits AMP XI.M 18 Bolting Integrity for monitoring loss of material, cracking, and loss of preload. In addition, accepted bolting integrity programs (such as EPRI 104213) recommend monitoring for loss of preload as one of the parameters monitored/inspected. Monitoring for cracking of high strength bolts (actual yield strength equal or greater than 150 ksi) is also recommended.*

*As such, the applicant is requested to provide the following information:*

- Identify the areas of the Bolting Integrity Program at DC Cook which are consistent with the AMP XI.M.18 in the GALL report, and also those aspects in which it is different.*
- Discuss how the loss of preload aging effect would be managed by the Bolting and Torquing Activities AMP at DC Cook.*
- Discuss the inspections associated with the Bolting and Torquing Activities AMP at DC Cook which may be beyond the requirements of ASME Section XI.*
- Are there any high strength bolts included within the boundary of these systems (Engineered Safety Features and Steam & Power Conversion Systems)?*
- The occurrence of SCC in stainless steel bolts can depend on a combination of factors such as stainless steel grade, method of hardening (for example, strain, precipitation or age hardening) environment and stress levels. Discuss how these factors were taken into account to determine whether or not SCC is an applicable aging effect.*

#### **Clarification Requested by the Staff:**

*The applicant's response covers the Engineered Safety Features and the Steam and Power Conversion Systems. The applicant is requested to indicate whether or not the present response would change if the Auxiliary System was also included in the original RAI. Also discuss those changes if any. In addition the applicant is requested to indicate why loss of preload is not considered to be an aging mechanism.*

#### **I&M's Supplemental Response to RAI 3.4-4:**

The Bolting and Torquing Activities Program manages loss of mechanical closure integrity for both stainless steel and carbon steel bolting subjected to high temperature or significant vibration in the Auxiliary Systems. Although the original I&M response to RAI 3.4-4 provided in the referenced June 30, 2004, letter does not include carbon steel bolting, the attributes discussed in the response would not change if the Auxiliary Systems were also included in the original RAI.



Loss of preload due to long-term exposure to elevated temperatures or significant vibration, such as that due to a diesel engine, is an aging mechanism included in loss of mechanical closure integrity aging effect for carbon steel and stainless steel bolting identified in LRA Tables 3.3.-7, 3.3.2-8, 3.3.2-9, and 3.3.2-11.

Reference for Supplemental Response to RAI 3.4-4

Letter from M. K. Nazar, I&M, to NRC Document Control Desk, "Donald C. Cook Nuclear Plant, Units 1 and 2, License Renewal Application – Response to Requests for Additional Information on Engineered Safety Features, Auxiliary Systems, and Steam and Power Conversion Systems," AEP:NRC:4034-09, dated June 30, 2004 [Accession No. ML041890378].

Donald C. Cook Nuclear Plant, Units 1 and 2

cc:

Regional Administrator, Region III  
U.S. Nuclear Regulatory Commission  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4351

Township Supervisor  
Lake Township Hall  
P.O. Box 818  
Bridgman, MI 49106

U.S. Nuclear Regulatory Commission  
Resident Inspector's Office  
7700 Red Arrow Highway  
Stevensville, MI 49127

David W. Jenkins, Esquire  
Indiana Michigan Power Company  
One Cook Place  
Bridgman, MI 49106

Mayor, City of Bridgman  
P.O. Box 366  
Bridgman, MI 49106

Special Assistant to the Governor  
Room 1 - State Capitol  
Lansing, MI 48909

Mr. John A. Zwolinski  
Director, Design Engineering and  
Regulatory Affairs  
Indiana Michigan Power Company  
Nuclear Generation Group  
500 Circle Drive  
Buchanan, MI 49107

Patricia Lougheed  
2443 Warrenville Rd.  
Lisle, IL 60532

Michigan Department of Environmental  
Quality  
Waste and Hazardous Materials Div.  
Hazardous Waste & Radiological  
Protection Section  
Nuclear Facilities Unit  
Constitution Hall, Lower-Level North  
525 West Allegan Street  
P.O. Box 30241  
Lansing, MI 48909-7741

Michael J. Finissi, Plant Manager  
Indiana Michigan Power Company  
Nuclear Generation Group  
One Cook Place  
Bridgman, MI 49106

Mr. Joseph N. Jensen, Site Vice President  
Indiana Michigan Power Company  
Nuclear Generation Group  
One Cook Place  
Bridgman, MI 49106

Mr. Fred Emerson  
Nuclear Energy Institute  
1776 I Street, N.W., Suite 400  
Washington, DC 20006-3708

Richard J. Grumbir  
Project Manager, License Renewal  
Indiana Michigan Power Company  
Nuclear Generation Group  
500 Circle Drive  
Buchanan, MI 49107

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