

May 10, 2004

LICENSEE: Indiana Michigan Power Company

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

SUBJECT: SUMMARY OF TELEPHONE CONFERENCES ON MARCH 25 AND 26, 2004,
BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION (NRC) AND
INDIANA MICHIGAN POWER COMPANY (I&M) REPRESENTATIVES
CONCERNING DRAFT 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 telephone conference calls on March 25 and 26, 2004, to discuss draft requests for additional information (D-RAIs) and audit item questions concerning the Donald C. Cook Nuclear Plant (Cook) license renewal application (LRA).

The conference calls were useful in clarifying the intent of the staff's questions. On the basis of the discussions, the applicant was able to better understand the staff's D-RAI and audit item questions. No staff decisions were made during the meeting. In some cases, the applicant agreed to provide information for clarification.

Enclosure 1 provides a list of the telephone conference participants. Enclosure 2 contains a listing of the D-RAIs and audit items discussed with the applicant, including a brief description on the status of the items. The applicant has had an opportunity to review and 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/enclosures: See next page

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SUBJECT: SUMMARY OF TELEPHONE CONFERENCES ON MARCH 25 AND 26, 2004, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION (NRC) AND INDIANA MICHIGAN POWER COMPANY (I&M) REPRESENTATIVES CONCERNING DRAFT 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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DRAFT REQUESTS FOR ADDITIONAL INFORMATION AND AUDIT QUESTIONS**

Thursday, March 25, 2004

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**DRAFT REQUESTS FOR ADDITIONAL INFORMATION (D-RAIs) DISCUSSED FOR
DONALD C. COOK (COOK), UNITS 1 AND 2, LICENSE RENEWAL
DURING MARCH 25, 2004 TELEPHONE CONFERENCE**

3.5 Structures and Components Supports

D-RAI 3.5-1

In line item 3.5.1-3 of Table 3.5.1 of the LRA, the applicant indicates that the aging effects related to loss of material due to corrosion of bellows, and dissimilar metal welds are managed consistent with NUREG-1801. NUREG-1801 recommends the examination of penetration bellows and the associated dissimilar welds based on the operating experience with the stress corrosion cracking of bellows as documented in NRC Information Notice 92-20. The applicant is requested to provide the following information related to the examination and/or testing of containment penetration bellows:

How many penetration bellows are in the Cook Nuclear Station (CNS) containments? Please summarize the operating experience related to the examination of these bellows. If provisions are made to assess their leaktightness (as they are not accessible for visual examination), please provide a summary of these provisions (including frequency of tests), and indicate if such leaktightness assessment of the bellows is part of the LRA AMP B.1.15 or B.1.8.

Status: I&M indicated that the question is clear.

D-RAI 4.3.3-1

Section 4.3.3 of the LRA discusses I&M's evaluation of the impact of the reactor water environment on the fatigue life of components. The discussion references the fatigue sensitive component locations for an early vintage Westinghouse plant identified in NUREG/CR-6260, "Application of NUREG/CR-5999 Interim Fatigue Curves to Selected Nuclear Power Plant Components." The LRA indicates that the design usage factors provided in Table 5-98 of NUREG/CR-6260 were used for the evaluation of the charging nozzle, safety injection nozzle and residual heat removal (RHR) tee. The design usage factors were based on an evaluation of the Turkey Point facility, including a plant specific evaluation of the RHR piping and detailed finite element analyses of the charging and safety injection nozzles. Discuss the applicability of these analyses to the Cook facility. The discussion should include a comparison of piping sizes and thicknesses, including the design of the thermal sleeves between Cook and Turkey Point. The discussion should also include a comparison of the number and type of design transients cycles between Cook and Turkey Point.

Status: I&M indicated that the question is clear.

**AUDIT QUESTIONS DISCUSSED FOR DONALD C. COOK (COOK), UNITS 1 AND 2,
LICENSE RENEWAL DURING MARCH 25, 2004 TELEPHONE CONFERENCE**

Item 190:

The core exit thermocouple nozzle assembly, holddown nut, compression collar and lockwasher component types (Page 3.1-44 of LRA) are not included in GALL Vol. 2 item IV.A2.2-b. Please justify why these component types can be grouped into this GALL line item.

Item 199:

Is the nickels based alloy cladding for the primary side (bottom of the tubesheet) only? Does applicant's steam generator integrity program include S.G. secondary side inspection program to ensure water chemistry program is effective? Has this component been inspected under S.G. secondary side inspection program? Does applicant have sludge lancing program to clean this component? Justify why Cook considers the water chemistry control program alone is sufficient to manage loss of material.

Item 202:

Please describe how steam flow restrictors are inspected and what type of examination method is used.

Item 271:

This program monitors aging effects through visual examination of the seal. The LRA elements of "Parameter Monitored or Inspected" and "Detection of Aging Effects" states that the aging effects are cracking and change in material properties of elastomeric pressure seals. Please explain how visual examination can detect "change in material properties."

Item 81:

1. NUREG 1801 requires Code Evaluation per IWB-3500 and flow tolerance evaluation per IWB-3640 (ferrite to 15%). Please indicate existing plant Section XI procedures that will guarantee these evaluations for CASS components.
2. NUREG 1801 Corrective Actions requires repairs conforming to IWA-4000, IWB-4000, or IWC-4000 and Replacement to IWA, B, C-7000. Please indicate existing plant Section XI R & R procedures that will guarantee these repairs and replacements for relevant CASS Components.

Status: The applicant stated that it will response to these questions in a supplemental letter rather than have them become formal RAIs.

**DRAFT REQUESTS FOR ADDITIONAL INFORMATION (D-RAIs) DISCUSSED FOR
DONALD C. COOK (COOK), UNITS 1 AND 2, LICENSE RENEWAL
DURING MARCH 26, 2004 TELEPHONE CONFERENCE**

2.2 Plant-Level Scoping Results

D-RAI 2.2-3

In a comparison of the Donald C. Cook (Cook) units, the staff's review finds that, in general, the Cook LRA does not identify design differences in the systems and components for Cook, Unit 1 compared to Unit 2. Cook, Units 1 and 2 were licensed approximately three years apart and have a 5% difference in rated thermal power.

Provide a general description of the major design differences between the systems and components of the two units. Explain how these differences have been addressed in the scoping and screening review process for the corresponding systems of the two units.

Status: I&M indicated that the question is clear.

D-RAI 2.2-4

Section 1.4 of the Cook updated final safety analysis report (UFSAR) notes that the design of Unit 1 preceded the adoption of the 10 CFR 50 Appendix A, General Design Criteria, and therefore, the Cook plant was designed and constructed to meet the intent of the Proposed General Design Criteria, published July 11, 1967. Use of the preliminary version of the plant-specific design criteria may have resulted in significant differences in the licensing bases for Cook, Units 1 and 2 from later PWRs of a similar design.

To facilitate the staff's review, provide a summary description of the impact of these differences on the Cook design, including the technical areas where these differences may impact the scoping and screening results for the two units.

Status: I&M indicated that the question is clear.

2.3.3.11 Miscellaneous Systems

D-RAI 2.3.3.11-1

Section 2.3.3.11 of the LRA describes 17 systems within the scope of license renewal and subject to an AMR based on the criterion of 10 CFR 54.4(a)(2), i.e., these systems contain non-safety-related components whose failure could potentially result in the failure of safety-related equipment to perform its intended function. However, it is not explained how failure of these systems or components within these systems may effect the safety-related components/systems intended functions. Provide additional information which describes how failure of these non-safety-related systems results in the failure of a safety-related system or component to perform its intended function.

Status: I&M indicated that the question is clear.

2.3.4.4 Steam Generator Blowdown System

D-RAI 2.3.4.4-1

UFSAR Section 10.11.2 states that the steam generator blowdown is monitored for radioactivity prior to reaching either the startup or normal blowdown flash tanks. It is further stated that these radiation monitors close the steam generator blowdown system isolation valves upon detection of high radioactivity. However, the staff has examined the license renewal drawings for Units 1 and 2 referenced in LRA Section 2.3.4.4 and is unable to locate radiation monitors upstream of the flash tanks. In effecting closure of the isolation valves, these monitors support the intended function of containment isolation and, therefore, the passive pressure boundary retaining housings for these monitors should be within the scope of license renewal and subject to an AMR. Provide information to locate the aforementioned radiation monitors and verify whether pressure boundary retaining housings for these components are subject to an AMR. If not, justify the exclusion of these radiation monitors from the being the subject of an AMR, or else revise Table 2.3.4-4 to include these items.

Status: I&M indicated that the question is clear.

2.3.4.5 Main Turbine System

D-RAI 2.3.4.5-1

LRA Section 2.3.4.5 states that the only intended function of the mechanical components of the main turbine system is to effect a turbine trip (via the turbine control system) in response to an anticipated transient without scram or a station blackout event. Since a pressure boundary failure of the mechanical components of the control system will automatically cause a trip (a fail-safe condition), the pressure boundary intended function of these components is not required following these events. LRA Section 2.3.4.5 also states that no passive mechanical component of the main turbine system is subject to an AMR.

In accordance with the criteria of 10 CFR 54.4(a)(3), the mechanical components of the main turbine control system should be within the scope of license renewal. Since LRA Section 2.3.4.5 does not reference or provide any boundary drawings which show these components, the staff is unable to determine if all components which should be subject to an AMR have been identified. Provide a drawing or a text description of the main turbine system that identifies the mechanical components of the turbine control system which are subject to an AMR.

Status: I&M indicated that the question is clear.

Donald C. Cook Nuclear Plant, Units 1 and 2

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