

July 27, 2004

LICENSEE: Indiana Michigan Power Company
FACILITY: Donald C. Cook Nuclear Plant, Units 1 and 2
SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALLS HELD ON
MAY 17 AND 21, 2004, BETWEEN THE U.S. NUCLEAR REGULATORY
COMMISSION (NRC) AND INDIANA MICHIGAN POWER COMPANY (I&M)
REPRESENTATIVES CONCERNING RESPONSES TO REQUEST 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 May 17 and 21, 2004, to discuss the applicant's response to the staff's request for additional information (RAIs) concerning the Donald C. Cook Nuclear Plant (CNP) license renewal application (LRA).

These conference calls were useful in clarifying both the staff's questions and the applicant's responses to those questions. On the basis of the discussions, the applicant was able to better understand the intent of the staff's RAIs. No staff decisions were made during the meeting.

Enclosure 1 provides a listing of the telephone conference calls participants. Enclosure 2 contains a listing of the 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

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SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALLS HELD ON MAY 17 AND 21, 2004, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION (NRC) AND INDIANA MICHIGAN POWER COMPANY (I&M) REPRESENTATIVES CONCERNING RESPONSES TO REQUEST 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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**LISTING OF PARTICIPANTS FOR TELEPHONE CONFERENCE CALLS CONCERNING
DRAFT REQUESTS FOR ADDITIONAL INFORMATION AND AUDIT QUESTIONS
HELD ON MAY 17 AND MAY 21, 2004**

Monday, May 17, 2004

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**NRC REQUEST FOR ADDITIONAL INFORMATION (RAIs) AND I&M RESPONSES
DISCUSSED FOR DONALD C. COOK (CNP), UNITS 1 AND 2, LICENSE RENEWAL
DURING MAY 17 AND 21, 2004 TELEPHONE CONFERENCE CALLS**

Donald C. Cook (CNP) LRA Section 2.1, “Scoping and Screening Methodology”

RAI 2.1-3

By letters dated December 3, 2001, and March 15, 2002, the U.S. Nuclear Regulatory Commission (NRC) issued a staff position to the Nuclear Energy Institute (NEI) which described areas to be considered and options it expects licensees to use to determine what systems, structures, or components (SSCs) meet the 10 CFR 54.4(a)(2) criterion (i.e., all nonsafety-related SSCs whose failure could prevent satisfactory accomplishment of any safety-related functions identified in paragraphs (a)(1)(i), (ii),(iii) of this section).

The December 3rd letter provided specific examples of operating experience which identified pipe failure events (summarized in Information Notice (IN) 2001-09, “Main Feedwater System Degradation in Safety Related ASME Code Class 2 Piping Inside the Containment of a Pressurized Water Reactor”) and the approaches that the NRC considers acceptable to determine which piping systems should be included in scope based on the 54.4(a)(2) criterion.

The March 15th letter further described the staff’s expectations for the evaluation of non-piping SSCs to determine which additional nonsafety-related SSCs are within scope. The position states that applicants should not consider hypothetical failures, but rather should base their evaluation on the plant’s current licensing basis (CLB), engineering judgment and analyses, and relevant operating experience. The letter further describes operating experience as all documented plant specific and industry wide experience which can be used to determine the plausibility of a failure. Operating experience documentation sources would include NRC generic communications and event reports, plant specific condition reports, industry reports such as SOERs, and engineering evaluations.

Based on a review of the license renewal application (LRA), the applicant’s scoping and screening implementation procedures, and discussions with the applicant, the staff determined that additional information is required with respect to certain aspects of the applicant’s evaluation of the 10 CFR 54.4(a)(2) scoping criteria. Please address the following issues:

- a. For nonsafety-related piping attached to safety-related piping, the applicant stated in LRA Section 2.1.1.2.2, “Spatial Failures of Nonsafety-Related SSCs,” that the nonsafety-related piping and supports up to and including the first equivalent anchor beyond the safety/nonsafety interface were within the scope of license renewal and subject to aging management review. However, during the audit, the applicant stated that the location of the first equivalent anchor point has not been physically located in the as-built plant. Therefore, the staff requires additional information regarding the process used by the applicant to ensure that all nonsafety-related components and structures between the safety/nonsafety interface and the first equivalent anchor point were adequately considered during scoping. In particular, the applicant should describe the method used to ensure that all material/environment combinations between the

safety/nonsafety interface and the first equivalent anchor were considered during aging management review.

- b. Section 2.1.1.2.2, "Spatial Failures of Nonsafety-Related SSCs," of the LRA states that nonsafety-related systems and nonsafety-related portions of safety-related systems containing steam or liquid that are near safety-related equipment are considered within the scope of license renewal per 10 CFR 54.4(a)(2). However, this section of the LRA also states that long-term exposure to conditions resulting from a failed nonsafety-related SSC (such as leakage or spray) is not considered credible. The staff requests that the applicant clarify its position and methodology relative to the consideration of spray and wetting of safety-related SSCs due to the failure of nonsafety-related equipment. Specifically, the applicant should address the following:
1. Clarify how the determination that long-term exposure to conditions resulting from a failed nonsafety-related SSC was not considered credible was applied during scoping evaluations. Specifically address if nonsafety-related SSCs were excluded from the scope of license renewal based on this determination.
 2. Describe how the effects of short-term wetting and spray on passive and active safety-related SSCs were considered during 10 CFR 54.4(a)(2) scoping. During the methodology audit, the applicant indicated that the methodology for evaluating spatial interactions assumed that safety-related SSCs were capable of withstanding short-term duration spray and wetting without loss of intended function. The applicant should clarify how the effects of short term spray and wetting were considered during scoping. Furthermore, if it was assumed that safety-related SSCs could withstand short-term spray or wetting without loss of intended function, the applicant should describe the basis for this assumption.
 3. Identify if the walkdown aging management program described in Section B.1.38, "System Walkdown," of the LRA was used as the sole aging management program for any nonsafety-related structures or components that could potentially spatially interact with safety-related SSCs. If the effects of aging for any nonsafety-related SSC are managed solely by the system walkdown aging management program, the applicant should describe how the effects of short term spray and wetting were considered during scoping and aging management review evaluations.

In addressing each of the above issues, if your review indicates that use of the scoping methodology screened out potential nonsafety-related SSCs that could spatially interact with safety-related SSCs, describe any additional scoping evaluations performed to address the 10 CFR 54.4(a)(2) criteria. As part of your response, list any additional SSCs included within scope as a result of your efforts, and list those SCs for which aging management reviews were conducted, and for each SC describe the aging management programs, as applicable, to be credited for managing the identified aging effects.

I&M Response to RAI 2.1-3:

- a. For nonsafety-related piping connected to safety-related piping, the piping and supports up to the first equivalent anchor beyond the safety/nonsafety interface are within the scope of

license renewal and subject to aging management review. The safety/nonsafety interface is shown on the LRA drawings. However, the exact location of the equivalent anchor is not shown on these drawings. To assure that all material and environmental combinations were included in the LRA aging management review summary tables, a review of Group 1 systems was performed. As defined in LRA Section 2.3.2.11, Group 1 systems are those within the scope of license renewal for 10 CFR 54.4(a)(1) or 10 CFR 54.4a(3), as well as 10 CFR 54.4a(2). Piping classifications beyond the license renewal boundary indicated on the drawings for these systems were reviewed to ensure that no new material and environmental combinations exist. Piping was traced from the license renewal boundary back to an obvious anchor point (e.g., a larger line, a larger component such as a pump, heat exchanger, etc.) to identify piping classification changes. This approach assured that the piping reviewed would include the first equivalent anchor. If a piping material or environmental change was identified, it was compared with the aging management review results for that system or a connected system to validate that the material and environmental combination was addressed.

The essential service water (ESW) and CCW systems did not require a drawing review. As indicated in the aging management review results tables, LRA Tables 3.3.2-2 and 3.3.2-3, all possible material (carbon steel, stainless steel, and copper alloy) and environmental combinations for these two systems have been addressed, since the CNP piping specifications allow only these materials.

Review of the Group 1 systems confirmed that all applicable material and environmental combinations up to and including the first equivalent anchor were included in LRA Section 3.0, Aging Management Review Results.

- b. Clarification of the methodology relative to the consideration of spray and wetting of safety-related SSCs due to the failure of nonsafety-related equipment is provided in the following paragraphs.

LRA Section 2.1.1.2.2, under the heading Leakage, Spray, or Flooding, states that “Long-term exposure to conditions resulting from a failed nonsafety-related SSC (such as leakage or spray) is not considered credible.” This conclusion was not applied during scoping evaluations. If a steam or liquid-filled nonsafety-related system (or nonsafety-related portion of a safety-related system) was in a safety-related building, then that system was considered in scope for 10 CFR 54.4(a)(2) regardless of potential exposure duration. Nonsafety-related SSCs were not excluded from the scope of license renewal based on the consideration that long-term exposure to conditions resulting from a failed nonsafety-related SSC was not credible.

The potential for wetting or spray on passive and active safety-related components was considered in scoping evaluations. Nonsafety-related systems containing steam or liquid that are near safety-related equipment are considered in scope for 10 CFR 54.4(a)(2) regardless of potential exposure duration. An assumption that safety-related SSCs could withstand short-term spray or wetting without loss of intended function was not applied during scoping or screening.

As indicated in LRA Table 3.3.2-11, the System Walkdown Program is credited as the sole aging management program for some nonsafety-related components that could spatially

interact with safety-related SSCs. As stated above, the duration of potential spray or wetting was not a consideration during scoping. The System Walkdown Program, as described in LRA

Appendix B.1.38, is considered adequate since it requires periodic walkdowns that will detect and correct failures caused by long-term exposure to spray or wetting. Short-term exposure is not a concern for passive components such as valve bodies and piping. Active safety-related component failures due to short-term exposure would be detected in the course of normal operation or through monitoring required by the Maintenance Rule and appropriate corrective actions would be taken. This is consistent with the Statement of Considerations (SOC) that states:

“On the basis of consideration of the effectiveness of existing programs which monitor the performance and condition of systems, structures, and components that perform active functions, the Commission concludes that structures and components associated only with active functions can be generically excluded from a license renewal aging management review. Functional degradation resulting from the effects of aging on active functions is more readily determinable, and existing programs and requirements are expected to directly detect the effects of aging.”

Discussion: The applicant was requested to address for Part A: (a) a clear definition of what constitutes an equivalent anchor, (b) clarification and definition of “major component” if used as an equivalent anchor, (c) linkage of the equivalent anchor definitions to the current licensing basis, and (d) does the license renewal boundary for nonsafety-related piping attached to safety-related terminate at a major component. I&M indicated that the revised response will be submitted in a supplemental letter.

RAI 2.1-5

During the audit, the applicant was unable to adequately describe the evaluation that was performed to determine if any insulation installed in the plant was required to support any system intended functions identified during the scoping process. As a result the staff requests that the applicant describe any intended functions performed by insulation or the basis for determining that insulation (e.g. piping insulation) did not meet the scoping criteria described in 10 CFR 54.4(a)(1), (a)(2) or (a)(3).

I&M Response to RAI 2.1-5:

In some internal plant locations, piping insulation serves the intended function of limiting heat loss in order to reduce area heat loads during an accident. Insulation that functions only to maintain the environment (temperature) during normal operation does not perform an intended function as described in 10 CFR 54.4. An example of such insulation is that which is installed on hot piping in containment. Degradation of this insulation could result in local concrete temperature exceeding the temperature assumed for the environment in the aging management review. However, maintaining the environment assumed for the aging management review is not an intended function, as described in 10 CFR 54.4. NUREG-1801, *Generic Aging Lessons Learned (GALL) Report*, recommends further evaluation for concrete exposed to elevated temperatures; however,

NUREG-1800, *Standard Review Plan for Review of License Renewal Applications of Nuclear Power Plants*, Section 3.5.3.2.2.1, states that further evaluation of concrete at elevated temperature is necessary only if the concrete is not covered by the structures monitoring program. Concrete is included in the CNP Structures Monitoring Program, which provides assurance that aging effects, including those due to high temperature that could be caused by insulation degradation, will not compromise the ability of the concrete to perform its intended functions. Therefore, in accordance with the guidance specified in NUREG-1800, further evaluation of this concrete is unnecessary, and the subject piping insulation is not subject to aging management review.

Insulation that performs an intended function is indoors and hence is protected from the weather. A review of CNP operating experience verified that the plant has not experienced aging-related degradation of piping insulation in dry indoor environments. Therefore, based on operating experience, there are no aging effects requiring management for indoor insulation at CNP. This is consistent with NUREG-1705, *Safety Evaluation Report Related to the License Renewal of Calvert Cliffs Nuclear Power Plant Units 1 and 2*, which states: "The staff concludes that, even if the CVCS [chemical and volume control system] relied on the insulation to perform any accident mitigation functions, there are no plausible aging effects for the insulation that would warrant an aging management program."

Discussion: The applicant stated that they would provide a clarification on the scoping of thermal insulation from a generic point of view for this question.

CNP LRA Section 2.4, "Scoping and Screening Results: Structures"

RAI 2.4-2

Based on its review of LRA Sections 2.1, 2.2, 2.3, 2.4, and 2.5, the staff identified the following three (3) issues related to scoping and screening:

- a. It is not clear to the staff if the applicant has addressed thermal insulation on piping and structures in its scoping and screening evaluation.
- b. LRA Section 2.4.1 (Page 2.4-2) states that: "Seals are provided on the boundary of the lower and upper compartments and on the hatches in the operating deck to limit steam bypassing the ice condenser." However, LRA Table 2.4-1 does not appear to include these seals.
- c. LRA Section 2.4.1 identifies the equipment hatch as part of the containment structure evaluation boundary. However, LRA Table 2.4-1 does not appear to include the equipment hatch.

For each issue above, the applicant is requested to: (1) identify if it is within the scope of license renewal; (2) if not within the scope of license renewal, provide the technical basis for that determination; (3) if within the scope of license renewal, identify the specific table and row in LRA Section 2.3 or 2.4 that includes the item; and (4) if within the scope of license renewal, identify the location in LRA Section 3 that addresses the AMR for the item.

I&M Response to RAI 2.4-2:

- a. For information related to thermal insulation on piping, refer to the RAI 2.1-5 response.

Structural thermal insulation is addressed in the scoping and screening evaluation as follows:

- (1) The thermal barriers for the ice condenser, wall duct panels, intermediate and upper deck curtains, and concrete walls are within the scope of license renewal.
 - (2) Not applicable – within the scope of license renewal.
 - (3) The thermal barriers for the ice condenser, wall duct panels, intermediate and upper deck curtains, and concrete walls are included in the “Ice condenser intermediate and upper deck curtains” entry in LRA Table 2.4-1 on page 2.4-16.
 - (4) The “Ice condenser intermediate and upper deck curtains” entry in LRA Table 3.5.2-1 on page 3.5-40 addresses the aging management review for these items.
- b. Seals that provide a boundary between the lower and upper compartments are of three types.
- Divider barrier seals between the bottom of the ice condenser compartment slab and the containment wall and up the sides of the ice condenser end walls.
 - Divider barrier hatch seals provided on the hatches in the operating deck.
 - Divider barrier penetration seals installed around penetrations and openings through the divider barrier.

For these seals:

- (1) All three types of seals described above are within the scope of license renewal. The seals are sub-components within the containment structure and are not explicitly called out. LRA Table 2.2-3 lists the containment as a structure within scope.
- (2) Not applicable – within the scope of license renewal.
- (3) The first two types of seals, divider barrier seals and the divider barrier hatch seals, are not listed in LRA Table 2.4-1 as subject to aging management review since they are considered short-lived. The determination that the divider barrier seals and the divider barrier hatch seals are short-lived is based on guidance in the SOC and in NUREG-1800.

SOC on “Long-Lived” SRP Section 2.1.3.2.2:

"It is important to note, however, that the Commission has decided not to generically exclude passive structures and components that are replaced based on performance or condition from an [AMR]...such generic exclusion is not appropriate...However, the Commission does not intend

to preclude a license renewal applicant from providing site-specific justification in a license renewal application that a replacement program on the basis of performance or condition for a passive structure or component provides reasonable assurance that the intended function of the passive structure or component will be maintained in the period of extended operation."

Specific Staff Guidance on "Consumables" SRP Table 2.1-3

"...The consumables in category (c) are short-lived and periodically replaced, and can be excluded from an AMR on that basis. Likewise, the consumables that fall within category (d) are typically replaced based on performance or condition monitoring that identifies whether these components are at the end of their qualified lives and may be excluded, on a plant-specific basis, from AMR under 10 CFR 54.21(a)(1)(ii)."

The divider barrier seals are inspected and replaced based on their condition in accordance with CNP Technical Specification Surveillance Requirement 4.6.5.9. The divider barrier hatch seals are visually inspected before final closure each outage and replaced as needed and are inspected every ten years per CNP Technical Specification Surveillance Requirement 4.6.5.5.2. Therefore, these seals are short-lived and not subject to aging management review. The divider barrier penetration seals are listed in the "Divider barrier penetration seals" entry in LRA Table 2.4-5 on page 2.4-22.

- (4) The "Divider barrier penetration seals" entry in LRA Table 3.5.2-5 on page 3.5-66 addresses the aging management review for divider barrier penetration seals.
- c. The equipment hatch is grouped with the personnel airlocks in the component type "Air lock doors." The equipment hatch is located near the top of the fuel transfer canal. One personnel access opening is located within the equipment hatch. The other is located at the instrument room, El. 612'. The component type "Air lock doors" corresponds to items 3.5.1-4 and 3.5.1-5 "Personnel airlock and equipment hatch" in LRA Table 3.5-1 on page 3.5-17.
- (1) The equipment hatch is within the scope of license renewal and is subject to aging management review.
 - (2) Not applicable – within the scope of license renewal.
 - (3) The equipment hatch is included in component type "Air lock doors" entry in LRA Table 2.4-1 on page 2.4-14.
 - (4) The "Air lock doors" entry in LRA Table 3.5.2-1 on page 3.5-27 addresses the aging management review for the equipment hatch.

Discussion: The staff indicated that the thermal insulation scoping issue needs to be more specific. The applicant stated that this question was very similar to RAI 2.1-5 and that they would provide a clarification on the scoping of thermal insulation along similar lines but from a structures approach for Part A of this question. For Part B, the staff indicated that the

“consumables” described in the SRP were not applicable to the seals in question. I&M indicated that the revised response will be submitted in a supplemental letter.

RAI 2.4-3

The staff has reviewed the following information submitted by the applicant, in order to identify all of the structures and components that are essential to ensure access to the ultimate heat sink (Lake Michigan), for safe shutdown following a design basis event:

LRA Section 2.3.3.2 (Essential Service Water);
LRA Section 2.3.3.11 (Screen Wash System);
LRA Section 2.4.3 (Turbine Building and Screenhouse);
UFSAR Section 9.8.3 (Service Water Systems);
UFSAR Section 10.6 (Circulating Water System);
UFSAR Figure 1.3-1 (Plot Plan); and
UFSAR Figure 10.6-1 (Circulating Water System)

As a result of this review, additional information are needed before the staff can reach a conclusion that all essential elements have been included in the LRA scope and have been subject to aging management review.

LRA Section 2.4.3, under “Evaluation Boundaries,” lists the structural elements that are evaluated for the turbine building and screenhouse. The following elements in the list appear to directly relate to the availability of cooling water for safe shutdown:

- Screenhouse superstructure, which houses the ESW and CW pumps, as well as the traveling screens, stop logs, and bar grills;
- Structural components and commodities from, and including, the intake cribs up to but not including the CW pump intake piping;
- Structural components and commodities from, and including, the intake cribs up to but not including the ESW pump intake piping;
- Structural components and commodities from, and including, the discharge tunnels up to, and including, the discharge jets;
- Structural components and commodities that support CW pumps and intake piping;
- Structural components and commodities that support ESW pumps and intake piping; and
- Structural components and commodities associated with the following:
Intake cribs, Discharge piping, Forebay, Traveling screens, Trash baskets, Trash collection, Sluice gates, De-icing tunnels, Discharge tunnels, Screenhouse, Piping supports, pump supports, baseplates, and anchors contained within the screenhouse.

However, many of the elements listed above are not specifically identified in LRA Table 2.4-3, “Turbine Building And Screenhouse Components Subject to Aging Management Review,” and only two (2) items in the table specify an intended function “SCW” (provide source of cooling water for plant shutdown). These are intake corrugated steel piping and intake crib steel framing and plate. LRA Table 2.4-5, “Structural Commodities Components Subject to Aging Management Review,” does not list any components specifically related to the availability of cooling water for safe shutdown.

Therefore, the applicant is requested to:

1. List all structures and components depicted in UFSAR Figure 10.6-1 (Circulating Water System), and any additional structures and components, that are essential to ensure the availability of cooling water for safe shutdown, up to (but not including) the ESW pumps;
2. Correlate the list developed in response to (a) above with the structures and components identified in LRA Section 2.4.3 "Evaluation Boundaries;"
3. For each listed structure and component, identify the applicable line item in LRA Table 2.4-3 or LRA Table 2.4-5;
4. If it is not included in either of these tables, identify where it is addressed in the LRA;
5. Identify the applicable AMR reference for each structure and component.

I&M Response to RAI 2.4-3:

The structures and components that are essential to ensure availability of cooling water for safe shutdown and perform an intended function per 10 CFR 54.4(a) are the de-icing tunnels, discharge tunnels, forebay, intake cribs, intake pipe, screenhouse, and traveling screens. These structures and components are depicted in UFSAR Figure 10.6-1 "Circulating Water System." The structures and components that are not essential to ensure availability of cooling water for safe shutdown include the sluice gates, roller gates, stop log guides, and the discharge elbows.

Correlation of evaluation boundaries in LRA Section 2.4.3 to line items in LRA Table 2.4-3, and to structures and/or components/commodities (i.e., aging management review references) in LRA Table 3.5.2-3 is provided in the table below. All structures and components related to cooling water availability are correlated to line items in the referenced LRA Tables.

Item	Evaluation Boundaries	Line Item in LRA Tables 2.4-3 and 3.5.2-3
De-icing tunnels	Structural components and commodities that support ESW and CW pumps and intake piping and those associated with the de-icing tunnels	De-icing tunnels
Discharge tunnels	Structural components and commodities from, and including, the discharge tunnels up to, and including, the discharge jets and those associated with the discharge tunnels	Discharge tunnels and bays
Forebay	Screenhouse superstructure which houses the ESW and CW pumps, as well as the traveling screens, stop logs, and bar grilles and those associated with the forebay	Screenhouse forebay bar grille and base

Intake crib	Structural components and commodities that support ESW and CW pumps and intake piping and those associated with the intake cribs	Intake crib framing and plate
Intake crib	Structural components and commodities from, and including, the intake cribs up to but not including the ESW and CW pump intake piping and those associated with the intake cribs	Intake cribs (surrounding sacked concrete)
Intake pipe	Structural components and commodities that support ESW and CW pumps and intake piping	Intake corrugated piping
Screenhouse	Screenhouse superstructure which houses the ESW and CW pumps, as well as the traveling screens, stop logs, and bar grilles	Superstructure framing
Screenhouse	Interior and exterior masonry, including concrete walls and slabs, concrete block walls, concrete pads, and embedded equipment supports	Screenhouse below grade walls, beams, and slabs
Screenhouse	Interior and exterior masonry, including concrete walls and slabs, concrete block walls, concrete pads, and embedded equipment supports	Screenhouse exterior above grade walls
Screenhouse	Interior and exterior masonry, including concrete walls and slabs, concrete block walls, concrete pads, and embedded equipment supports	Table 2.4-3 – Foundation mat (turbine building and screenhouse) Table 3.5.2-5 – Foundation mat (screenhouse)
Screenhouse	Screenhouse superstructure which houses the ESW and CW pumps, as well as the traveling screens, stop logs, and bar grilles	Superstructure steel column concrete encasing
Traveling screens	Structural components and commodities from, and including, the intake cribs up to but not including the CW pump intake piping and those associated with the traveling screens	Not applicable. The screens move in order to perform their function. Since these components are active, they are not subject to aging management review.

Discussion: The staff indicated that according to USFAR 10.6-2, the gates should be in scope. The staff was directed to see Figure 1.3-6, Page A.8 for clarification. The applicant stated that it would provided this information for clarification in a supplemental letter.

RAI 2.4-4

It is not clear to the staff about the scope of load handling systems included in the D. C. Cook license renewal scope. LRA Section 2.3.3.12, "Material/Equipment Handling" and "Refueling," identify specific cranes that are in the scope of license renewal, and refer to LRA Section 2.4 for the evaluation. LRA Sections 2.4.1, 2.4.2, 2.4.3, and 2.4.5 all identify load handling systems under "Evaluation Boundaries" and/or in the associated Table 2.4-x. However, there is not a one-to-one correspondence between all of the cranes listed in LRA Section 2.3.3.12 and the information in LRA Section 2.4. Also, it is not clear if there are additional load handling systems in the LR scope and covered by LRA Section 2.4.

With the concerns stated above, the applicant is requested to: (1) provide a listing of all load handling systems in the LR scope; (2) identify specific components that are subject to an AMR, for each in-scope load handling system; (3) identify the specific line item in LRA Tables 2.4-1, 2.4-2, or 2.4-5 that covers each component; and (4) identify the applicable AMR reference for each component.

I&M Response to RAI 2.4-4:

(1) LRA Section 2.3.3.12 provides a general description of the material handling system and provides a reference to LRA Section 2.4 for cranes that are evaluated as structural components. Load handling systems that perform an intended function for license renewal are:

- Ice condenser equipment access end wall cranes
- Ice condenser bridge cranes
- Polar cranes
- Auxiliary building cranes
- Spent fuel cranes
- Emergency diesel generator cranes
- Auxiliary building hoists:
 - Motor driven and turbine driven auxiliary feed pump room manual hoists,
 - Reactor coolant filter and seal water return filter hoists,
 - Concentrates, seal water injection, and ion exchange filters hoists,
 - Reciprocating charging pump room hoists,
 - Centrifugal charging pump room hoists,
 - Safety injection pump room hoists,
 - Containment spray pump room hoists,
 - Residual heat removal pump room hoists,
 - Main steam stop enclosure hoists, and
 - Recirculation valve enclosure hoists

(2) Crane rails, girders, and their associated supports and anchorages are subject to aging management review for all in-scope load handling systems.

(3) The following table provides the cross-reference to specific line items in LRA tables.

Load Handling System	LRA Table Cross Reference	Table Line Item
Ice condenser equipment access end wall cranes	Table 2.4-1 and Table 3.5.2-1	Ice condenser bridge cranes, crane rails, and supports
Ice condenser bridge cranes	Table 2.4-1 and Table 3.5.2-1	Ice condenser bridge cranes, crane rails, and supports
Polar cranes	Table 2.4-1 and Table 3.5.2-1	Polar cranes, crane rails, and supports
Auxiliary building cranes	Table 2.4-2 and Table 3.5.2-2	Cranes, rails, and supports
Spent fuel cranes	Table 2.4-2 and Table 3.5.2-2	Cranes, rails, and supports
Emergency diesel generator cranes	Table 2.4-2 and Table 3.5.2-2	Cranes, rails, and supports
Auxiliary building hoists listed in response to sub-part (1) of this question	Table 2.4-5 and Table 3.5.2-5	Cranes, rails, and girders

(4) The applicable aging management review reference in the LRA for each component is shown in the LRA Section 3 tables listed in sub-part (3) of this question.

Discussion: The staff requested clarification of what constituted the crane. The applicant stated that the crane itself was an active component. All others (i.e. rail, girders) were passive parts.

RAI 2.4-5

Section 2.4 of the LRA does not describe the cable feed-through assembly, which is part of containment electrical penetrations. This assembly serves a pressure boundary intended function. Therefore, the applicant is requested to clarify whether the cable feed-through assembly is in scope or not. If it is in scope, identify the applicable table number and component name in LRA Section 2.4, and the applicable AMR table number and component name in LRA Section 3.5. If it is not in scope, provide the justification for its exclusion.

I&M Response to RAI 2.4-5:

LRA Table 2.1.1 identifies electrical portions of electrical and instrumentation and control penetration assemblies (e.g., electrical penetration assembly cables and connections) as a

commodity group that serves an intended function. The cable feed-through assemblies are part of these electrical penetrations, and are therefore in scope for license renewal.

As described in LRA Section 2.1.2.3.3, all electrical penetration assemblies (including the cable feed-through assemblies) are included in the EQ Program. Under the EQ Program, cable feed-through assemblies are subject to replacement based on a qualified life and thus in accordance with 10 CFR 54.21(a)(1)(ii) are not subject to aging management review.

In addition to replacing these components based on a qualified life, the EQ Program also incorporated pressure testing of the cable feed-through assemblies in the qualification of the electrical containment penetrations. Furthermore, while not subject to aging management review, electrical penetrations are tested in accordance with the requirements of 10 CFR 50 Appendix J. Steel elements of the penetrations were included in the containment aging management review as "Containment penetrations (mechanical and electrical)," listed in LRA Tables 2.4-1 and 3.5.2-1, on pages 2.4-14 and 3.5-28 through 3.5-29.

Discussion: The staff indicated to the applicant that the feed-through assemblies should be treated as structures. The applicant stated that it would review their response to determine if any changes needed to be made based on the staff's input.

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