

## **NRR-PMDAPEm Resource**

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**From:** Dietrich, Allison  
**Sent:** Tuesday, June 14, 2016 9:04 AM  
**To:** hlkish@aep.com  
**Cc:** Terry L Curtiss (tlcurtiss@aep.com); Dickson, Elijah; Shoop, Undine; Wrona, David  
**Subject:** D.C. COOK UNITS 1 AND 2 - ARCB RAI CONCERNING LAR TO ADOPT TSTF-490 AND IMPLEMENT FULL-SCOPE AST (CAC NOS. MF5184 AND MF5185)  
**Attachments:** ARCB RAI 10 REGARDING AST MF5184 MF5185.pdf

By letter dated November 14, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14324A209), as supplemented by letter dated February 12, 2015 (ADAMS Accession No. ML15050A247), Indiana Michigan Power Company (I&M) submitted a license amendment request for the Donald C. Cook Nuclear Plant, Units 1 and 2. The proposed amendment consists of adoption of Technical Specifications Task Force (TSTF)-490, Revision 0, and implementation of a full scope alternate source term radiological analysis methodology.

The U.S. Nuclear Regulatory Commission (NRC) staff in the Radiation Protection and Consequence Branch of the Office of Nuclear Reactor Regulation has reviewed your submittal, as supplemented. The staff has determined that additional information is needed in order to complete the review, as described in the attached request for additional information (RAI). The draft RAI was sent to I&M via electronic mail on May 26, 2016. Clarification telephone conferences were held on June 6, 2016 and June 13, 2016. Please provide your response by July 13, 2016.

Please let me know if you have any questions or concerns.

Sincerely,

Allison W. Dietrich, Project Manager  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation  
301-415-2846

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REQUEST FOR ADDITIONAL INFORMATION REGARDING  
ADOPTION OF TSTF-490, REVISION 0  
AND IMPLEMENTATION OF FULL-SCOPE ALTERNATE SOURCE TERM  
DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2  
DOCKET NOS. 50-315 AND 50-316  
CAC NOS. MF5184 AND MF5185

RAI-ARCB-10

The proposed change to the Donald C. Cook Nuclear Plant (CNP), Units 1 and 2, technical specification (TS) 3.4.16, in part, modifies Condition B to provide a Condition and Required Action for dose equivalent Xe-133 instead of gross specific activity. In the current TS 3.4.16, Condition A specifies that when dose equivalent I-131 is greater than 1.0 microcuries per gram ( $\mu\text{Ci/gm}$ ), the required action is to restore dose equivalent I-131 to within limit, with a Completion Time of 48 hours. During this Condition, Limiting Condition for Operation (LCO) 3.0.4.c is applicable. If the dose equivalent I-131 is not restored within limit in 48 hours, the required action is to be in Mode 3 with average reactor coolant temperature ( $T_{\text{avg}}$ ) less than 500 °F within 6 hours.

For the modified Condition B, the licensee proposes a Completion Time of 48 hours to restore dose equivalent Xe-133 within limits. A Note is also added allowing the applicability of LCO 3.0.4.c.

Technical Specification Task Force (TSTF)-490, Revision 0, provided the following justification for this change:

The Completion Time for revised TS 3.4.16 Required Action B.1 will require restoration of Dose Equivalent Xe-133 to within limit in 48 hours. This is consistent with the Completion Time for current Required Action A.2 for Dose Equivalent I-131. The Completion Time of 48 hours for revised Required Action B.1 is acceptable since it is expected that, if there were a noble gas spike, the normal coolant noble gas concentration would be restored within this time period. Also, there is a low probability of an accident occurring during this time period.

While it is a correct statement that the proposed change makes the Completion Times of TS 3.4.16 Required Action A.2 and B.1 in NUREG-1431, "Standard Technical Specifications Westinghouse Plants," consistent, it is not clear why the Completion Times should be consistent. The plant Conditions for these Required Actions are different.

The CNP TS 3.4.16 Required Action A.2 is required when the plant is in a condition analyzed in the design basis accident analyses (reactor coolant dose equivalent I-131 is bound between 1 and 60  $\mu\text{Ci/gm}$ ). The new proposed TS 3.4.16 Required Action B.1 is required when the plant is in a condition not analyzed in the design basis accident analyses (dose equivalent Xe-133 is greater than 215.1  $\mu\text{Ci/gm}$ ).

Typically, the Required Action for a condition not analyzed requires the plant to take immediate actions to begin shutdown of the plant. The proposed change does not require immediate actions to begin shutdown of the plant, but allows 48 hours before the plant is required to begin shutting down.

- Provide justification for the proposed Completion Time of 48 hours for TS 3.4.16 Condition B, to include why it is acceptable to be in an unanalyzed condition for 48 hours when the reactor coolant dose equivalent Xe-133 is greater than 215.1  $\mu\text{Ci/gm}$  without an upper bound.