

**From:** Wall, Scott  
**Sent:** Monday, June 29, 2020 1:33 PM  
**To:** Michael K. Scarpello  
**Cc:** Helen L Levendosky  
**Subject:** Final RAI - D.C. Cook 1 - One-Time Extension, Containment Type A ILRT Frequency (EPID: L-2020-LLA-0126)

Dear Mr. Scarpello,

By letter dated June 8, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20164A044), Indiana Michigan Power Company (I&M, the licensee) submitted a license amendment request (LAR) to revise the Technical Specifications (TSs) for the Donald C. Cook Nuclear Plant, Unit No. 1 (CNP 1). The amendment revises TS 5.5.14, "Containment Leakage Rate Testing Program," to extend the frequency of the primary containment integrated leak rate test (ILRT), or Type A test, at CNP 1. Specifically, the amendment allows for a one-time extension of the ILRT frequency from 15 years to no later than the plant restart after the CNP 1 Spring 2022 Refueling Outage (RFO) (i.e., approximately 15.5 years).

The NRC staff has reviewed the submittal and determined that additional information is needed to complete its review. The specific questions are found in the enclosed request for additional information (RAI). During a telephone call on June 29, 2020, I&M staff indicated that a response to the RAI would be provided by July 9, 2020.

If you have questions, please contact me at 301-415-2855 or via e-mail at [Scott.Wall@nrc.gov](mailto:Scott.Wall@nrc.gov).

**Scott P. Wall, LSS BB, BSP**  
Senior Project Manager  
Plant Licensing Branch III  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation  
301.415.2855  
[Scott.Wall@nrc.gov](mailto:Scott.Wall@nrc.gov)

Docket No. 50-315

Enclosure:  
Request for Additional Information

cc: Listserv

---

**RAI-SCPB (ILRT)**

REQUEST FOR ADDITIONAL INFORMATION

ONE-TIME EXTENSION OF THE CONTAINMENT TYPE A LEAK RATE TESTING

INDIANA MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 1

DOCKET NO. 50-315

By letter dated June 8, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20164A044), Indiana Michigan Power Company (I&M, the licensee) submitted a license amendment request (LAR) to revise the Technical Specifications (TSs) for the Donald C. Cook Nuclear Plant, Unit No. 1 (CNP 1). The amendment revises TS 5.5.14, "Containment Leakage Rate Testing Program," to extend the frequency of the primary containment integrated leak rate test (ILRT), or Type A test, at CNP 1. Specifically, the amendment allows for a one-time extension of the ILRT frequency from 15 years to no later than the plant restart after the CNP 1 Spring 2022 Refueling Outage (RFO) (i.e., approximately 15.5 years).

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing the application and has determined that the following additional information is required in order to complete the review.

Applicable Regulation and Guidance

Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.54(o) requires primary reactor containments for water-cooled power reactors be subject to the requirements of Appendix J to 10 CFR Part 50, "Leakage Rate Testing of Containment of Water-Cooled Nuclear Power Plants." Appendix J specifies containment leakage testing requirements, including the types required to ensure the leak-tight integrity of the primary reactor containment and systems and components which penetrate the containment. In addition, Appendix J discusses leakage rate acceptance criteria, test methodology, frequency of testing and reporting requirements for each type of test.

10 CFR 50.36(c)(3), "Surveillance requirements," states, in part, that TS shall include the "requirements relating to test, calibration or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met."

As stated in Enclosure 2 to the License Amendment Request (LAR):

On March 30, 2015, the NRC approved Amendment No. 326 for CNP Unit 1, authorizing the adoption of NEI 94-01 Rev 3-A as the implementation document to develop the performance-based primary containment leakage testing program at CNP Unit 1, in accordance with 10 CFR Part 50, Appendix J, Option B, and

allowing [Indiana Michigan Power Company] to extend the containment Type A test interval for CNP Unit 1 from 10 years to 15 years.

### **RAI-SCP-01**

Section 4.2, "Integrated Leak Rate History" of Enclosure 2 to the LAR states the following:

Previous CNP Unit 1 ILRT results have confirmed that the containment is acceptable, with considerable margin, with respect to the TS acceptance criterion of 0.25% leakage of containment air weight per day at the design basis loss of coolant accident pressure. Since the last three Type A test results meet the performance leakage rate criteria from NEI 94-01, Revision 3-A ["Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," dated July 31, 2012 (ADAMS Accession No. ML 12221A202)], a test frequency of 15 years would be acceptable.

It should be noted that Amendment 332 to CNP Unit 1 TS, issued in October 2016 [Letter from A. W. Dietrich, NRG, to J. P. Gebbie, Indiana Michigan Power Company, Donald C. Cook Nuclear Plant, Units 1 and 2 - Issuance of Amendments Re: Adoption of TSTF-490, Rev. 0, "Deletion of E-Bar Definition and Revision to Reactor Coolant System Specific Activity Technical Specification" and Implementation of Full-Scope Alternative Source Term (CAC Nos. MF5184 and MF5185), dated October 20, 2016 (ADAMS Accession No. ML 16242A111)], changed the value of the allowable leakage rate (La) from 0.25% of containment air weight per day to 0.18% of containment air weight per day. When implementing the TS change into the ILRT procedure and the calculation of La, a more conservative value for containment free volume was also used, resulting in a change of La from 110,219 standard cubic centimeters per minute (sccm) to 68,559 sccm in March of 2017. However, even comparing the past ILRT leakage to the newer, more stringent value of La shows significant margin.

Enclosure 2 to the LAR provides Unit 1 ILRT results for Type A tests done in June 1989, October 1992, November 2006 as 0.419, 0.044, 0.336 of La which were modified as 0.582, 0.061, 0.467 of new La, respectively established in March of 2017. The staff notes that the modified results reflect correction for La from 0.25% of containment air weight per day to 0.18% of containment air weight per day but not the change in containment free volume. Considering both La and containment free volume changes, the staff calculated modified test results of 0.674, 0.071, and 0.540 of new La, respectively established in March of 2017, which are higher than the values provided in the LAR.

- (1) Please clarify the modified Unit 1 ILRT Type A test results as a fraction of the new La provided in the LAR. The updated results and values shall be part of the basis in the NRC staff's safety evaluation for the license amendment request.

**Hearing Identifier:** NRR\_DRMA  
**Email Number:** 657

**Mail Envelope Properties** (MN2PR09MB3374690C843C6E47A34F8E65926E0)

**Subject:** Final RAI - D.C. Cook 1 - One-Time Extension, Containment Type A ILRT  
Frequency (EPID: L-2020-LLA-0126)  
**Sent Date:** 6/29/2020 1:33:02 PM  
**Received Date:** 6/29/2020 1:33:04 PM  
**From:** Wall, Scott

**Created By:** Scott.Wall@nrc.gov

**Recipients:**  
"Helen L Levendosky" <hllevendosky@aep.com>  
Tracking Status: None  
"Michael K. Scarpello" <mkscarpello@aep.com>  
Tracking Status: None

**Post Office:** MN2PR09MB3374.namprd09.prod.outlook.com

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	7000	6/29/2020 1:33:04 PM

**Options**  
**Priority:** Normal  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**