From: Lingam, Siva
Sent: Friday, May 29, 2020 11:49 AM
To: Shaw, Jim
Cc: Dixon-Herrity, Jennifer; Wittick, Brian; Wagage, Hanry; Karipineni, Nageswara
Subject: Grand Gulf - Official RAI for LAR Associated with Containment ILRT Interval Change from 10 Years to 15 Years (EPID L-2020-LLA-0027)

By application dated February 19, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20050R656), Entergy Operation, Inc. (the licensee) submitted a license amendment request (LAR) to revise the Technical Specifications (TSs) for Grand Gulf Nuclear Station, Unit 1 (Grand Gulf). The proposed change revises TS 5.5.12, "10 CFR 50 [Title 10 of the *Code of Federal Regulations* Part 50], Appendix J, Testing Program," to allow for a permanent extension of the Type A Integrated Leak Rate Testing (ILRT) frequency to 15 years.

Section 10 CFR 50.54(o) requires primary reactor containments for water-cooled power reactors be subject to the requirements of 10 CFR Part 50, Appendix J "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, Appendix J, Option B requires that test intervals for Type A, Type B, and Type C testing be determined by using a performance-based approach. Performance-based test intervals are based on consideration of the operating history of the component and resulting risk from its failure. The use of the term "performance-based" in 10 CFR 50, Appendix J refers to both the performance history necessary to extend test intervals as well as to the criteria necessary to meet the requirements of Option B.
Section 3.4 "Plant Specific Risk Assessment" of Enclosure to the LAR states the following:

As shown in NUREG-1493, Performance-Based Containment Leak-Test Program [dated January 1995], increasing the test frequency of ILRTs up to a 20-year test interval was found to lead to an imperceptible increase in risk. The estimated increase in risk is very small because ILRTs identify only a few potential containment leakage paths that cannot be identified by Type B or Type C testing. The study also concluded that extending the frequency of Type B tests is possible with no adverse impact on risk as identified leakage through Type B mechanical penetrations are both infrequent and small. Finally, the study concluded that Types B and C tests could identify the vast majority (greater than 95 percent) of all potential leakage paths.

Therefore, from a deterministic perspective, a robust local leak rate testing program with margins between allowable and tested values is an important aspect for extending ILRT test intervals to 15 years. LAR Enclosure Section 3.5 provides non-risk based assessment, with Section 3.5.1 addressing the Type B and Type C tests performed, including as-found and as-left leakage values during refueling (RF) outages RF16 through RF21. However, the licensee also completed additional Type B and Type C testing for Grand Gulf during the current RF22 on-going outage (spring 2020).

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed your application and concluded that additional information is required for complete evaluation. Please note the

following **official** request for additional information (RAI) and provide your response within 30 days from the date of this e-mail. Please also include revised Technical Specification mark-up pages and clean pages as a result of NRC-approved Exigent amendment on April 15, 2020 (ADAMS Accession No. ML20101G054).

SCPB RAI-1

Provide the latest results of Type B and Type C testing performed during the Cycle 22 Refueling Outage. The updated results and values would be part of the basis in the NRC staff's safety evaluation for the license amendment request.

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