

**OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3 (ONS)  
SUBSEQUENT LICENSE RENEWAL APPLICATION (SLRA)  
REQUEST FOR ADDITIONAL INFORMATION (RAIs)**

**SECOND ROUND RAI B2.1.27-1a**

**SAFETY REVIEW**

**RAI B2.1.27-1a**

Regulatory Basis

Title 10 of the Code of Federal Regulations (10 CFR) 54.21(a)(3) requires an applicant to demonstrate that the effects of aging for structures and components will be adequately managed so that the intended function(s) will be maintained consistent with the current licensing basis for the period of extended operation. One of the findings that the staff must make to issue a renewed license (10 CFR 54.29(a)) is that actions have been identified and have been or will be taken with respect to managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21, such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis. In order to complete its review and enable making a finding under 10 CFR 54.29(a), the staff requires additional information regarding the matters described below.

Background:

As amended by letter October 22, 2021 (ADAMS Accession No. ML21295A035), the SLRA states that the Open-Cycle Cooling Water System program will manage the following internally-coated components exposed to raw water: (1) main condenser water boxes and tube sheets cited in SLRA Table 3.4.2-1; (2) main turbine oil tank oil cooler heat exchanger head cited in SLRA Table 3.3.2-30; and (3) main condenser discharge piping cited in SLRA Table 3.3.2-48. In addition, the October 22, 2021, submittal states the following with respect to the raw water environment at Oconee:

The internal environment for this equipment is raw water from Lake Keowee. Water from Lake Keowee is non-aggressive, and a review of operating experience shows that leaks due to microbiologically influenced corrosion [MIC] are rare. A total of five piping segments in raw water systems have experienced leaks at Oconee over the past 10 years where MIC was identified as a contributing cause or potential contributing cause and they are all stagnant or intermittent flow lines.

GALL-SLR Report AMP XI.M42, "Internal Coatings/Linings for In -Scope Piping, Piping Components, Heat Exchangers, and Tanks," states AMP XI.M20, "Open -Cycle Cooling Water System," is an acceptable alternative to the inspections recommended in AMP XI.M42 for internal coatings when six conditions are met. One of the conditions is that the internal environment would not promote MIC of the base metal. As an alternative to meeting these six conditions, the "scope of program" program element of AMP XI.M42 states an applicant may elect to manage the aging effects for internal coatings/linings using AMP XI.M20 as long as the following are met: (a) the recommendations of AMP XI.M42 are incorporated into AMP XI.M20;

(b) exceptions or enhancements associated with the recommendations in AMP XI.M42 are included in AMP XI.M20; and (c) the FSAR supplement for AMP XI.M42 as shown in the GALL-SLR Report Table XI-01, "FSAR Supplement Summaries for GALL-SLR Report Chapter XI Aging Management Programs," is included in the application with a reference to AMP XI.M20.

Issue:

Based on its review of the October 22, 2021, submittal, it is unclear to the staff how the raw water environment at Oconee would not promote MIC of the base metal. The staff notes that at least 5 leaks have occurred over the past 10 years where MIC was a contributing cause or potential contributing cause.

Request:

Provide additional information demonstrating how the raw water environment at Oconee would not promote MIC of the base metal for internally-coated components within the scope of the Open-Cycle Cooling Water System program. Alternatively, revise the application as appropriate to reflect that the recommendations associated with AMP XI.M42 will be incorporated into the Open-Cycle Cooling Water System program for internally-coated components (or provide an alternative basis demonstrating the adequacy of the Open-Cycle Cooling Water System program to manage the subject components).