

MCB Issue List Regarding APR1400, FSAR Section 5.2.1.1

In accordance with Title 10 of the Code of Federal Regulations (10 CFR) Section 50.55a, systems and components of pressurized water reactors like APR1400 are to meet the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code). The requirement ensures that facilities will also meet the requirements of 10 CFR Part 50, Appendix A, General Design Criterion 1, such that structures, systems, and components important to safety shall be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety function to be performed. The staff has identified the following issues in regards to the applicant's use of ASME Codes and Standards Rule, 10 CFR 50.55a.

Issue 1

For the APR1400 Final Safety Analysis Report (FSAR), it is identified that the components and code classes that are listed in FSAR Table 5.2-1 are in accordance with the provisions of 10 CFR 50.55a in that the applicable ASME Code edition is the 2007 Edition with the 2008 Addenda.

For clarity, a combined license (COL) action item should be included in the APR1400 FSAR which states that a COL applicant referencing the APR1400 design will be expected to ensure that the design is consistent with the construction practices (including inspection and examination methods) of the ASME Code edition and addenda of the APR1400. If the ASME Code edition and addenda cited in a COL application differ from that specified in the APR1400 FSAR, the COL applicant must identify the portions of the later editions and addenda for NRC staff review and approval.

Issue 2

During the review of the APR1400 the term "ASME Code" and "Code" are used throughout the application. For clarity, revise FSAR Section 5.2.1.1 to add statements that identify the following:

- Construction and welding of structures, systems, and components shall be in accordance with ASME Boiler and Pressure Vessel Code, Section III, "Rules for Construction of Nuclear Facility Components."
- Inservice Inspection shall be in accordance with ASME Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components."
- Inspections of structures, systems, and components constructed in accordance with ASME Section III shall be in accordance with ASME Boiler and Pressure Vessel Code, Section V, "Non Destructive Examination."
- Qualification of Welding Procedures and Welding Operators shall be in accordance with ASME Boiler and Pressure Vessel Code Section IX, "Welding and Brazing Qualifications."

- Specifications for construction base materials and welding materials shall be in accordance with ASME Boiler and Pressure Vessel Code, Section II, “Material Specifications.”
- Operation and maintenance of nuclear power plants shall be in accordance with the ASME Boiler and Pressure Vessel Code, Operations and Maintenance (OM) Code, “Code for Operation and Maintenance of Nuclear Power Plants.”

Issue 3

For the APR1400 FSAR, it is identified that the components and code classes that are listed in FSAR Table 5.2-1 are in accordance with the provisions of 10 CFR 50.55a in that the applicable ASME Code edition is the 2007 Edition with the 2008 Addenda. In APR1400 FSAR Section 5.2.7, “References,” item number 7 identifies that the OM Code will be used for the operation and maintenance of nuclear power plants, however, the 2004 Edition and the 2005 and 2006 Addenda of the ASME OM Code is referenced. Please provide justification for using an earlier edition of the OM Code.