

NRC Perspective on Use of Commercial Standards for Advanced Reactors

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- Regulations allow the use of commercial codes and standards (C&S) when it can be demonstrated that they meet requirements for the issuance of a license
 - For structures, systems, and components (SSCs) to which the commercial C&S will be applied, staff will consider their design attributes and risk significance
 - Applicants are expected to provide the basis for the selection of the C&S with sufficient information to justify that these are appropriate for the intended use
 - NRC guidance generally endorses C&S as one acceptable method for safety-related SSCs

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- Staff approved at the preliminary design (Construction Permit) stage a limited number of requests to use commercial C&S (e.g., ASME Section VIII) for safety related SSCs
 - Kairos Hermes 2 rupture disks for a non-power reactor with commitment to further justification at the final design stage
 - Kemmerer Unit 1 (KU1) guard vessel as a secondary barrier with enhancements to the commercial C&S
 - Commercial C&S with enhancements (special treatments) have been accepted by the staff in the KU1 CP application for SSCs classified as non-safety related with special treatment (NSRST)
 - Preapplication engagement with staff is encouraged to maintain efficiency of licensing process when use of commercial C&S is planned