

commercial operation. Therefore, the Commission proposes to amend § 52.79(b) (proposed § 52.211(b)) to implement its original intent in adopting 10 CFR Part 52 and its policy on advanced reactors that it is necessary to demonstrate the performance of new or innovative safety features through design qualification testing for all advanced nuclear reactors.

#### Probabilistic Risk Assessments

The proposed rule would also amend the current § 52.79(b) (proposed § 52.211(b)) to adopt a requirement to submit a plant-specific PRA as part of an application for a combined license. The current § 52.79(b) references § 52.47(a)(1)(v), which requires a design-specific PRA within a design certification application. This amendment (§ 52.211(b)(2)) would require an application for a combined license to contain a plant-specific PRA that covers all of the nuclear plant design, including site-specific design features (*e.g.*, the ultimate heat sink). If the combined license application referenced a certified design, this amendment (§ 52.211(b)(5)) would require the design-specific PRA to be updated to include site-specific design features and to account for any design changes. In a letter dated April 3, 2001 (comment 11.1a), NEI stated “we agree on the NRC vision for a plant-specific PRA at COL that supplements the DC PRA with any changes that affect the DC PRA plus site-specific (interface) design information.”

The purpose of the requirement for a plant-specific PRA is to identify and address potential design and operational vulnerabilities, gain insights about the risk of the design, assess the balance between preventive and mitigative features in the design, to determine quantitatively whether the design represents a reduction in risk over current operating plants, and to determine how the risk associated with the new design relates to the Commission's safety goals. Accordingly, the Commission proposes to amend § 52.211(b) to require an application for a combined license to contain a plant-specific PRA.

#### Resolution of ITAAC

The proposed rule would amend the current § 52.79(c) (proposed § 52.211(c)), current § 52.97(a) (proposed § 52.227(a)), current § 52.99 (proposed § 52.229(e)), and current §§ 52.103(a) and (g) (proposed §§ 52.231(a) and (g)) to provide an applicant for a combined license with a process for resolving certain acceptance criteria in one or more of the ITAAC

required by the proposed § 52.211(c) before issuance of the combined license. In a letter dated November 13, 2001 (comment 20), NEI recommended that Subpart C be revised to allow for completion of design acceptance criteria (DAC) at the COL application stage. NEI made this recommendation because applicants might want to complete certain DAC before construction. DAC are special design certification rule ITAAC. DAC set forth processes and criteria for completing certain design information, such as information about the digital instrumentation and control system. DAC were originally written to be verified as part of the normal, post-combined license, ITAAC verification process.

The Commission agrees with NEI's recommendation that combined license applicants be permitted to demonstrate DAC completion as part of the combined license application, for several reasons. First, completion of the design matters covered by DAC before the issuance of a combined license is consistent with the Commission's original concept for design certification and issuance of a combined license. When it adopted 10 CFR part 52, the Commission intended that a design certification contain final and complete design information. Allowing a finding of acceptable completion of DAC before issuance of a combined license is, therefore, consistent with the Commission's original intent. Second, completion of DAC before issuance of the combined license is consistent with the Commission's goal of resolving issues before construction. Determining whether DAC have been successfully completed before issuance of the combined license avoids the possibility that improperly completed DAC will result in the construction of improperly designed structures, systems, and components. Finally, the Commission believes that completion of DAC before issuance of the combined license will enhance public confidence in the overall licensing process because the public will have an opportunity to challenge whether the design has been properly completed before construction begins. Accordingly, the Commission proposes that a finding of successful completion of DAC may be made when a combined license is issued, if the combined license applicant demonstrates that the DAC have been successfully completed. This new process would also allow findings on successful completion of inspections or tests of components procured before the issuance of the combined license.

The proposed rule would also amend the current § 52.99 (proposed § 52.229

(b), (c) and (d)) and the current § 52.103 (proposed § 52.231(h)) to incorporate rule language from the design certification rules in 10 CFR part 52 regarding the completion of ITAAC (see paragraphs IX.A and IX.B.3 of Appendix A to part 52). During the preparation of the design certification rules for the ABWR and System 80+ designs, the NRC staff and nuclear industry representatives agreed on certain requirements for the performance and completion of the inspections, tests, or analyses in ITAAC. In the design certification rulemakings, the Commission codified these ITAAC requirements into Section IX of the rules. The purpose of the requirement in paragraph (b) of proposed § 52.229 is to make it clear that an applicant may proceed at its own risk with design and procurement activities subject to ITAAC, and that a licensee may proceed at its own risk with design, procurement, construction, and preoperational testing activities subject to an ITAAC, even though the NRC may not have found that any particular ITAAC has been successfully completed. Paragraph (c) of proposed § 52.229 requires the licensee to notify the NRC that the required inspections, tests, and analyses in the ITAAC have been completed and that the acceptance criteria have been met. Paragraph (d) simply states the options that a licensee will have in the event that it is determined that any of the acceptance criteria in the ITAAC have not been met. Finally, paragraph (h) of § 52.231 states that ITAAC do not, by virtue of their inclusion in the DCD, constitute regulatory requirements after the licensee has received authorization to load fuel or for renewal of the license. However, subsequent modifications must comply with the design descriptions in the design control document unless the applicable requirements in the current § 52.97 and Section VIII of the design certification rules have been complied with.

In a letter dated April 3, 2001 (comment 23), NEI stated “consider incorporating DCR general provisions into subpart C as appropriate.” The Commission has decided to add these ITAAC requirements to proposed § 52.229 because it believes that these provisions embody general principles that are applicable to all holders of combined licenses.

#### Commission Finding on Acceptance Criteria

The proposed rule would amend the current § 52.83 (proposed § 52.215) and the current § 52.99 (proposed § 52.229(e)) to clearly state the