

DG-1145, Section 16.0 - Technical Specifications

Chapter 16. TECHNICAL SPECIFICATIONS

16.1 Technical Specifications

An application for a combined construction permit and conditional operating license for a nuclear power plant (COL) should include technical specifications and associated bases conforming to the approved generic technical specifications for the certified plant design (if applicable) and consistent with the standard technical specifications in NUREG-1430 through 1434, as appropriate, with appropriate site-specific deviations.

The proposed technical specification bases should provide justification that the specified variables, conditions, or other limitations are those required by 10 CFR 50.36 to be the subject of limiting conditions for operation (LCOs). Special attention should be given to those areas that are influenced by the design, especially when a design certification is being referenced in the COL application, in order to minimize later facility modifications or license changes needed to harmonize the as-built plant and the final technical specifications. In particular, this review should determine the design suitability of those features and specifications that affect the type, capacity, and number of safety-related systems and the capability for performance of surveillance activities involving those safety-related systems.

The technical specifications and bases should be included (or included by reference) in this chapter of the safety analysis report (SAR)/COL application. Each specification should be as complete as possible and should include numerical values, graphs, tables, and other data. References to the applicable sections of the SAR/COL application that support the bases and provide clarifying details for each specification should be supplied. Justification should be provided for deviations from the certified design generic or standard technical specifications pertinent to the selected nuclear steam supply system (NSSS) vendor.

Section 50.36 of 10 CFR Part 50 requires that each operating license issued by the Commission contain technical specifications that set forth the limits, operating conditions, and other requirements imposed on facility operation for, among other purposes, the protection of the health and safety of the public. Each applicant for an operating license is required to submit proposed technical specifications and their bases for the facility. They should be consistent with the content and format of the certified design generic or standard technical specifications for the appropriate vendor. After review and approval by the NRC staff, the final technical specifications will be issued by the Commission as part of the license.

This chapter also requires submission of the bases or reasons for specifications other than those covering administrative controls, but the bases are not a part of the technical specifications.

The applicant must propose plant specific technical specifications that meet the 10 CFR 50.36 and 50.36a requirements for operating reactors and comply with the certified design generic technical specifications with appropriate site-specific deviations. These deviations either fulfill

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the certified design combined license information items or are addressed by a separately submitted exemption request.

Provide technical specifications that are derived from the analyses and evaluation included in the and ensure the submittal includes the following as required by 10 CFR 50.36 and 50.36a for nuclear reactors:

- Safety limits;
- Limiting safety system settings,;
- Limiting Conditions for Operation;
- Surveillance requirements;
- Design features; and
- Administrative controls.

Submit limiting conditions for operation for each item that meets one or more of the following Section 50.36(c)(2)(ii) criteria:

(A) Criterion 1. Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

(B) Criterion 2. A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

(C) Criterion 3. A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

(D) Criterion 4. A structure, system, or component which operating experience or probabilistic risk assessment (PRA) has shown to be significant to public health and safety.

The technical specifications document is a part of the license and is to be treated as a separate document from the SAR for updating, distribution, and control purposes. Similarly, the technical specifications bases document is also to be treated as a separate document from the SAR and from the technical specifications for updating, distribution, and control purposes.

Manuals, reports, and program documents identified in the technical specifications administrative controls section or applicable governing regulations, are considered neither a part of the SAR, nor a part of the technical specifications or technical specifications bases documents. These documents, such as the Offsite Dose Calculation Manual and Core Operating Limits Report, are to be prepared as needed for operation and submitted to the NRC as required by the associated technical specification administrative control requirements or applicable governing regulations.

Provide a description of the appropriate procedures developed for including PRA in the process for developing the technical specifications and for processing changes to regulatory requirements including technical specifications. It is, of course, understood that the intent of

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this policy is that existing rules and regulations shall be complied with unless these rules and regulations are revised.

Describe how the five key principles of the risk-informed decision making in Regulatory Guide 1.177 are used for assessing the nature and impact of proposed technical specification changes by considering engineering issues and applying risk insights.

Provide a description of the controls used to prepare the risk information included in the submittal (whether on an applicant's own initiative or at the request of the staff) to address each of the principles of risk-informed regulation discussed in Section B, "Discussion," of Regulatory Guide 1.177. Applicants should identify how chosen approaches and methods (whether they are quantitative or qualitative, and traditional or probabilistic), data, and criteria for considering risk are appropriate for the decision to be made regarding their proposed technical specification changes.

Provide a description of controls to assure changes to technical specifications ensure that the current regulations, orders, and license conditions are met, consistent with the principles of risk-informed regulation. [The NRC regulations specific to technical specifications are stated in 10 CFR 50.36, "Technical Specifications." Additional information with regard to the NRC's policies on technical specifications is contained in the "NRC Final Policy Statement on Technical Specification Improvements for Nuclear Power Reactors" (58 FR 39132), of July 22, 1993. These documents define the main elements of technical specifications and provide criteria for items to be included in the technical specifications. The final policy statement and the statement of considerations for 10 CFR 50.36 (60 FR 36953), of July 19, 1995 (Ref. I 1), also discuss use of probabilistic approaches to improve technical specifications.]

Describe controls to assure regulations regarding application for and issuance of license amendments, found in 10 CFR 50.90, 50.91, and 50.92 are met. In addition, describe controls to ensure that any discrepancies between proposed technical specification changes and applicant or licensee commitments are identified and considered in the evaluation. Include a description of the three-tiered approach in evaluating the risk associated with proposed technical specification changes, in keeping with the fundamental principle that the proposed change is consistent with the defense-in-depth philosophy, and to provide assurance that defense-in-depth will not be significantly impacted by the proposed change.

REFERENCES:

1. USNRC, "Use of Probabilistic Risk Assessment Methods in Nuclear Activities: Final Policy Statement," Federal Register, 60 FR 42622, August 16, 1995.
2. "Quarterly Status Update for the Probabilistic Risk Assessment Implementation Plan," SECY-97-234, October 14, 1997.
3. USNRC, "Standard Technical Specifications, Babcock and Wilcox Plants," NUREG-1430 (latest revision).

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4. USNRC, "Standard Technical Specifications, Westinghouse Plants," NUREG-1431 (latest revision).
5. USNRC, "Standard Technical Specifications, Combustion Engineering Plants," NUREG-1432 (latest revision).
6. USNRC, "Standard Technical Specifications, General Electric Plants, BWRI/4," NUREG-1433 (latest revision).
7. USNRC, "Standard Technical Specifications, General Electric Plants, BWR/6," NUREG-1434 (latest revision).
8. USNRC, "An Approach for Plant-Specific Risk-Informed Decision-making: Technical Specifications," Regulatory Guide 1.177, August 1998.
9. USNRC, Statement of Considerations, "Technical Specifications for Facility Licensees; Safety Analyses Reports," Federal Register, 33 FR 18612, December 17, 1968.