WordPerfect Document Compare Summary

Original document: P:\RG 1.206 draft\C.I.16.wpd
Revised document: @PFDesktop\:MyComputer\C:\ADAMS\Cache\ML0624903420.wpd
Deletions are shown with the following attributes and color:
~~Strikeout~~, Blue RGB(0,0,255).
Deleted text is shown as full text.
Insertions are shown with the following attributes and color:
Double Underline, Redline, Red RGB(255,0,0).

The document was marked with 177 Deletions, 144 Insertions, 0 Moves.

C.I.16~~. Technical~~ Technical Specifications

The U.S. Nuclear Regulatory Commission (NRC) sets forth its regulations specific to technical specifications (TS) ~~are set forth~~ in Title 10~~ CFR~~, Section 50.36, "Technical Specifications~~." Additional information regarding the NRC's policies on TS is contained in the~~," of the *Code of Federal Regulations* (10 CFR 50.36) and 10 CFR 50.36a, "Technical Specifications on Effluents from Nuclear Power Reactors." In accordance with 10 CFR 52.83, "Applicability of Part 50 Provisions," these regulations also apply to holders of combined licenses (COLs). The "NRC Final Policy Statement on Technical Specification Improvements for Nuclear Power Reactors" found in Volume 58 of the *Federal Register* (FR), page 3912 (58 FR 39132), dated July 22, 1993~~. These documents define the main elements of technical specifications and provide criteria for items to be included in the technical specifications~~, contains additional information regarding the NRC's policies on TS. The final policy statement and the statement of considerations for 10~~-~~ CFR 50.36 (60 FR 36953), dated July~~-~~ 19, 1995~~ (Ref. I 1)~~, also discuss the use of probabilistic approaches to improve ~~technical specifications.~~ TS.

Neither 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," nor 10 CFR Part 52, "Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants," specifies detail in the content or format for the TS. In 1992, the NRC issued Standard Technical Specifications (STS) to clarify the content and format of requirements necessary to ensure safe operation of nuclear power plants in accordance with 10 CFR 50.36. The following five NUREGs contain the STS that differ according to the design of the nuclear steam supply system (NSSS). For each NUREG, Volume 1 contains the specifications, and Volume 2 contains the associated TS bases. The STS include bases for safety limits, limiting safety system settings, limiting conditions for operation (LCOs), and associated action and surveillance requirements.

- NUREG-1430, "Standard Technical Specifications Babcock and Wilcox Plants"
- NUREG-1431, "Standard Technical Specifications Westinghouse Plants"
- NUREG-1432, "Standard Technical Specifications Combustion Engineering Plants"
- NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4"
- NUREG-1434, "Standard Technical Specifications General Electric Plants, BWR/6"

The format and content of the TS and bases for a COL referencing a certified design must be based on the generic TS and bases for one of the approved certified designs listed as appendices to 10 CFR Part 52 (e.g., Appendix A, "Design Certification Rule for the U.S. Advanced Boiling Water Reactor," and Appendix D, "Design Certification Rule for the AP1000 Design"). Generic TS and associated bases developed and approved for a certified design contain general requirements on use and application as well as conventions regarding formatting and organization that were adapted from the most recent version of the STS appropriate to the NSSS design at the time of certification. The format and content of the TS and bases for a COL application not referencing a certified design should be based on the most recent version of the STS appropriate to the NSSS design.

In accordance with 10 CFR 50.36(a), each operating license that the Commission issues for a nuclear power plant must contain TS that set forth all limits, operating conditions, and other requirements that the NRC imposes on operation of the facility to protect the health and safety of the public (among other purposes). Consequently, each applicant for a ~~combined construction permit and conditional operating license (~~COL~~)~~ for a nuclear power plant ~~is required to~~must submit the proposed TS for the facility.

Toward that end, Chapter 16 of the COL application and the associated final safety analysis report (FSAR) should include~~ (~~, explicitly or by reference~~)~~, the proposed plant~~-~~-specific TS~~; (~~and ~~associated~~ bases~~, as discussed later in this chapter)~~. In so doing, the applicant should ensure that the

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proposed plant-specific TS meet the requirements of 10~~-~~ CFR 50.36 and 10 CFR 50.36a for operating reactors. ~~The plant-specific~~The plant-specific TS and bases should~~-~~ be consistent with the content and format ~~of the referenced~~of the "referenced TS and bases, ~~whether an~~" either the approved generic TS and bases for ~~a~~the referenced certified plant design ~~-~~or the ~~current~~most recent version of the ~~standard TS in NUREG-1430 through NUREG-1434~~STS appropriate for the selected ~~nuclear steam supply system (~~NSSS~~) vendor~~ design. The proposed plant-specific TS and bases may include appropriate ~~site-specific~~plant-specific deviations from the referenced TS and bases when warranted. For applications referencing a certified design, the applicant should justify these deviations~~ should be justified~~ in a separately submitted exemption request. Applicant-supplied information to fulfill COL information items ~~for a~~for a certified design or, as discussed in Section C.IV.3.3.3, to replace information bracketed ~~information~~ in the ~~referenced~~ generic TS and bases, is not considered a deviation from the generic TS~~,~~ and bases and does not require an exemption; however, ~~such information~~the application should ~~be justified in the application~~include the justification for such information. Applications referencing the ~~standard TS~~STS should include justifications~~s~~ for any deviations~~s,~~ as well as justification for information to replace ~~bracketed~~information bracketed in the STS.

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The COL application must include information required for plant-specific adoption of topical reports listed in the referenced TS bases. If the COL application references a certified design, a separately submitted exemption request must address any deviation from the referenced topical reports or the required information. If referencing the STS, the COL application must include justification for each such deviation.

The NRC published major revisions to the STS in 1995 (Revision 1), 2001 (Revision 2), and 2004 (Revision 3). The STS continue to evolve to incorporate improvements identified from experience in their use. The process for initiating changes to the STS involves the industry-sponsored Technical Specifications Task Force (TSTF) submitting STS change proposals (called TSTF travelers) to the NRC for review, approval, and subsequent incorporation into the next revision of the STS. Once the NRC staff approves a TSTF traveler, the associated changes are considered to be a part of the STS and are available for adoption by nuclear plant licensees and license applicants. Consistent with the Commission's policy statement on TS and the use of probabilistic risk assessment (PRA), the NRC and the industry continue to develop more fundamental risk-informed improvements to the STS.

For a COL application that references a certified design, the plant-specific TS and bases may deviate from the certified generic TS and bases to incorporate approved TSTF travelers adapted to the certified design. The COL applicant may propose such deviations concurrently with the COL application through a separately submitted exemption request, such as, in accordance with Section VIII.C.4 of Appendix A to 10 CFR Part 52. The exemption request must include justification for each deviation from the certified generic TS and bases.

For a COL application that does not reference a certified design, the plant-specific TS and bases may deviate from the STS, which includes all approved travelers. The COL application must include justification for each deviation from the STS.

Whether referencing a certified design or not, when a TSTF traveler is approved during the NRC review of the COL application, the applicant may elect to add the traveler to its application. After the COL is issued, the COL licensee may adopt approved TSTF travelers through the license amendment process in accordance with 10 CFR 50.90 and the TS bases control program set forth in the administrative controls section of the plant-specific TS.

As required by 10 CFR 50.36(a), the COL application shall include a summary statement of the

bases or reasons for the proposed plant-specific specifications other than those contained in the TS administrative controls section. Consistent with the standard TSSTS, bases are only required for TS sections related to safety limits, limiting conditions for operation (safety system settings, LCOs), and any associated action and surveillance requirements. No bases are required for the TS sections related to TS usage rules (definitions, logical connectors, required action completion times, and surveillance requirement frequencies) and the TS section for, design features, and administrative controls. However, the bases are not a part of the technical specifications.TS.

Each specificationTS provided in the COL application should be as complete as possible and should include the relevant numerical values, graphs, tables, and other data. The bases for each specificationfor each TS provided in the COL application should reference the applicable FSAR sections that provide clarifying details in support of the bases.

The proposed TS bases should provide justification that the specified variables, conditions, or other limitations are those that 10 CFR 50.36(c)(2)(ii) requires to be the subject of LCOs. SThe applicant should give special attention should be given to those specificationsTS that are influenced by the design in order to minimize subsequent facility modifications or license changes to harmonize the as-built plant andensure the final plant-specific TS reflect the as-built plant. In particular, the TS bases should contain sufficient information, consistent with the FSAR, to confirm the design suitability of features and specifications that affect the type, capacity, and number of LCO-required systems, as well as the capability for performance of surveillance activities involving those LCO-required systems.

The TS are part of the license, and are to be treatedthe applicant should treat them as a standaloneseparate document (separate from the FSAR) for the purposes of updating, distribution, and control. Similarly, the applicant also should treat the TS bases are also to be treated as a standaloneseparate document (separate from both the FSAR and the TS) for the purposes of updating, distribution, and control.

Manuals, reports, and program documents identified in the administrative controls section of the of the TS or applicable governing regulations, are not considered to be neither part of the FSAR, nor part of the TS or the associated bases. These documents (such as the Offsite Dose Calculation Manual and Core Operating Limits Report) are to be prepared and submitted to the NRC as requiredTS, or TS bases. The applicant should prepare these documents such as the offsite dose calculation manual, core operating limits report, and the Reactor Coolant System Pressure and Temperature Limits Report, and submit them to the NRC as required by the associated TS administrative control requirements and any applicableany applicable governing regulations. Applicants may, but are not required to, submit such documents with the COL application.

The COL application should contain plant-specific TS that are derived from the analyses and evaluations included in the FSAR. The plant-specific TS should include the following categories of information as required by 10 CFR 50.36 and 10 CFR 50.36a for operating reactors:

- safety limits
- limiting safety system settings
- limiting conditions for operationLCOs (and associated remedial actions, if any)
- surveillance requirements
- design features
- administrative controls (includesincluding requirements on effluents containing radioactive material)

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The COL application should include LCOs for each item that meets one or more of the following criteria set forth in 10 CFR 50.36(c)(2)(ii)~~:~~

~~(A)~~ • Criterion 1~~. Installed~~—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~~—a process variable, design feature, or operating restriction that is an initial condition of a ~~Design Basis A~~design-basis accident or ~~T~~transient ~~A~~analysis that either assumes the failure of, or presents a challenge to, the integrity of a fission product barrier~~.~~

~~(C)~~

• Criterion 3~~. A~~—a structure, system, or component that is part of the primary success path and ~~which~~that functions or actuates to mitigate a ~~Design Basis A~~design-basis accident or ~~T~~transient analysis that either assumes the failure of, or presents a challenge to, the integrity of a fission product barrier~~.~~

~~(D)~~

• Criterion 4~~. A~~—a structure, system, or component ~~which~~that operating experience or ~~probabilistic risk assessment~~PRA has shown to be significant to public health and safety~~.~~

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The COL application should describe the applicant's processes and governing procedures that ensure that (1) the proposed TS include ~~a limiting condition for operation (~~an LCO~~)~~ for each structure, system, or component ~~(SSC)~~ and parameter meeting one or more of the four criteria set forth in 10 CFR 50.36(c)(2)(ii)~~;~~ and (2) ~~probabilistic risk assessment~~PRA is appropriately included in the development of, and revisions to, the TS, consistent with existing NRC rules and regulations.

Regulatory Guide 1.177, "An Approach for ~~Plant-Specific~~Plant-Specific, Risk~~-~~-Informed Decision~~-M~~making: Technical Specifications,"~~ dated August 1998,~~ contains guidance for proposing TS changes, such as relaxations of required action completion times and surveillance requirement frequencies. If any proposed TS requirements are based on risk insights~~;~~ or such risk insights are used to support relaxation of a referenced generic or standard TS requirement, the COL application should discuss ~~how~~the following:

- the use of the five key principles of the risk~~-~~-informed ~~decision making~~decisionmaking process (as specified in Section B, "Discussion," of Regulatory Guide 1.177)~~ are used~~ to assess the nature and safety impact of such TS requirements and the controls used to prepare this risk information~~;~~
- the ~~selected approaches and methods (whether quantitative or qualitative, and traditional or probabilistic), data, and criteria for considering risk are appropriate~~appropriateness, for the NRC's decision regarding the proposed risk-informed TS requirements~~;~~
- , of the selected approaches and methods (whether quantitative or qualitative, traditional or probabilistic), data, and criteria for considering risk

- how the controls used to ensure that proposed risk-informed TS requirements meet current regulations, orders, and license conditions are consistent with the principles of risk-informed regulation;
- how the regulations regarding application for, and issuance of, license amendments, as set forth in 10 CFR 50.90--50.92, are met;
- the controls used10 CFR 50.90 through 10 CFR 50.92, "Issuance of Amendment," are met
- the use of controls to ensure that any discrepancies between the proposed risk-informed TS requirements and the applicant or licensee commitments are identified and considered in the evaluation; and
- the use of the three-tiered approach is used in accordance with Regulatory Guide 1Guide 1.177 to evaluate the risk associated with the proposed risk-informed TS requirements, in keeping with the fundamental principle that the proposed TS requirements are consistent with the defense-in-depthdefense-in-depth philosophy, thereby ensuring that defense-in-depth will not be significantly impacted by the proposed risk-informed TS requirements.

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REFERENCES:

(1) USNRC will not significantly impact defense in depth

References

(1) U.S. Nuclear Regulatory Commission, "Use of Probabilistic Risk Assessment Methods in Nuclear Activities: Final

Policy Statement," *Federal Register*, 60 FR 42622, August 16, 1995.

(2) USNRC SECY-97-234, "Quarterly Status Update for the Probabilistic Risk Assessment Implementation Plan,"

SECY-97-234, October 14, 1997.

(3) USNRC NUREG-1430, "Standard Technical Specifications: Babcock and Wilcox Plants," NUREG-1430 (latest revision).

(4) USNRC NUREG-1431, "Standard Technical Specifications; Westinghouse Plants," NUREG-1431

(latest revision).

(5) USNRC NUREG-1432, "Standard Technical Specifications; Combustion Engineering Plants," NUREG-1432 (latest revision).

(6) USNRC NUREG-1433, "Standard Technical Specifications; General Electric Plants, BWRI/4," NUREG-1433 (latest revision).

(7) USNRC NUREG-1434, "Standard Technical Specifications, General Electric Plants, BWR/6," NUREG-1434 (latest revision).

(8) Regulatory USNRCGuide 1.177, "An Approach for Plant-Specific, Risk-Informed Decision-making: Technical Specifications," Regulatory Guide 1.177, August 1998.

(9) U.S. USNRCNuclear Regulatory Commission, "Statement of Considerations: Technical Specifications for Facility Licensees; Safety Analyses Reports," *Federal Register*, 33 FR 18612, December 17, 1968.

(10) U.S. Nuclear Regulatory Commission, "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors," *Federal Register*, 58 FR 39132, July 22, 1993.

(11) U.S. Nuclear Regulatory Commission, "10 CFR 50.36, 'Technical Specifications,'" *Federal Register*, 60 FR 36953, July 19, 1995.

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