



U.S. NUCLEAR REGULATORY COMMISSION
STANDARD REVIEW PLAN
OFFICE OF NUCLEAR REACTOR REGULATION

1.8 INTERFACES FOR STANDARD DESIGNS

REVIEW RESPONSIBILITIES

Primary - All review branches (~~except Quality Assurance Branch (QAB)~~)¹

Secondary - None

I. AREAS OF REVIEW

The areas of review will depend on whether the application is for a standard plant design, a nuclear steam supply system (NSSS), or the balance-of-plant (BOP) portion of a nuclear plant design.² The areas of review include all of the ~~safety-related~~ interfaces important to the staff review for safety that exist between the standard design and the structures, systems, and components, ~~and structures within a standard design as they relate to matching systems, components, and structures within~~ that are wholly or partially outside the scope of the standard design (the remaining unspecified portion of the plant design). Also included is the implementation of interface requirements in the ~~standard design of matching safety-related~~ for structures, systems, and components, ~~and structures~~ that are wholly or partially outside the scope of the standard design.³ For additional guidance on the review of interfaces for standard plant designs, refer to the requirements in either Subpart B or Appendix O to 10 CFR Part 52 and the guidance in SRP section 14.3. The specific interfaces identified for the nuclear steam supply system (NSSS) and for the balance-of-plant (BOP) portions of a nuclear plant design are given in "Interfaces for Standard Designs," Appendix A to Regulatory Guide 1.70.⁴

DRAFT Rev. 2 - April 1996

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Standard review plans are prepared for the guidance of the Office of Nuclear Reactor Regulation staff responsible for the review of applications to construct and operate nuclear power plants. These documents are made available to the public as part of the Commission's policy to inform the nuclear industry and the general public of regulatory procedures and policies. Standard review plans are not substitutes for regulatory guides or the Commission's regulations and compliance with them is not required. The standard review plan sections are keyed to the Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants. Not all sections of the Standard Format have a corresponding review plan.

Published standard review plans will be revised periodically, as appropriate, to accommodate comments and to reflect new information and experience.

Comments and suggestions for improvement will be considered and should be sent to the U.S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation, Washington, D.C. 20555.

II. ACCEPTANCE CRITERIA

The acceptance criteria for interfaces, as appropriate, are contained in the sections of the SRP applicable to the particular area under review. ~~While~~ Although these acceptance criteria ~~are~~ may not be specifically identified as pertinent to interfaces, they nevertheless apply to the interfaces that are encompassed by the review area to which the criteria apply.⁵

III. REVIEW PROCEDURES

The reviewer in each responsible review branch will select and emphasize material from this review plan, as may be appropriate for a particular case. The particular interfaces to be addressed ~~in SSARs describing standard NSSS and BOP designs and in SARs describing the entire plant design in support of licenses are presented in Regulatory Guide 1.70, Appendix A~~ are described in the standard safety analysis report (SAR) and the SARs for a plant that references a standard design.⁶

1. Standard designs, i.e. ~~for the NSSS~~, are reviewed to ~~assure~~ ensure that the applicable ~~safety-related~~ interfaces to, and in several instances assumed for, the matching; but unspecified portions of the plant, BOP, site, ~~and~~ or utility portions are identified and defined.⁷
2. Standard designs for the BOP are reviewed to ~~assure~~ ensure that: (a) those applicable ~~safety-related~~ interfaces established for the NSSS are addressed;; (b) those interfaces assumed by the NSSS are compatible with the BOP design;; and (c) the applicable ~~safety-related~~ interfaces to the matching, but unspecified, site and utility portion are identified and defined.⁸
3. Utility applications are reviewed to ~~assure~~ ensure that the applicable ~~safety-related~~ interfaces established for the referenced standard ~~NSSS design alone, or the referenced standard NSSS and BOP designs combined~~; are addressed.⁹

IV. EVALUATION FINDINGS

Each review branch verifies that sufficient interface information has been provided and properly implemented, as appropriate, and that the review is adequate to support conclusions of the following type, to be included in the staff's safety evaluation report:

For standard design reviews:

Interfaces provide the means for ~~assuring~~ ensuring that the standard design and other unspecified portions of the plant design are compatible with regard to the performance of ~~all safety-related~~ systems, components, and structures under all modes of operation and shutdown. The scope of our review included an evaluation of the interfaces defined by the applicant in accordance with the regulation in either Subpart B or Appendix O to 10 CFR Part 52, ~~the guidelines given in Regulatory Guide 1.70, Appendix A~~, and the applicable criteria for acceptance given in the appropriate sections of the SRP. Based on our

evaluation, we find the interface information provided in the standard design application acceptable.¹⁰

For applications referencing standard designs:

Interfaces established for the standard design are addressed in the referencing application to demonstrate the compatibility of the standard design with the remaining portions of the plant design regarding the performance of ~~all safety-related~~ systems, components, and structures that are wholly or partially outside the scope of the standard design under all modes of operation and shutdown. The scope of our review included an evaluation of the matching ~~safety-related~~ systems, components, and structures to assure compatibility in accordance with the regulations in 10 CFR Part 52 and the applicable criteria for acceptance given in the appropriate sections of the SRP. Based on our evaluation, we find that the interfaces have been properly addressed and that compatibility of the standard design with the remaining portions of the plant design can be achieved.¹¹

V. IMPLEMENTATION¹²

The following is intended to provide guidance to applicants and licensees regarding the NRC staff's plans for using this SRP section.

This SRP section will be used by the staff when performing safety evaluations of license applications submitted by applicants pursuant to 10 CFR 52.

The provisions of this SRP section apply to reviews of applications docketed six months or more after the date of issuance of this SRP section.

VI. REFERENCES

1. ~~"Interfaces for Standard Designs," Regulatory Guide 1.70, Appendix A.~~¹³
1. 10 CFR Part 52, "Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants."¹⁴

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SRP Draft Section 1.8
Attachment A - Proposed Changes in Order of Occurrence

Item numbers in the following table correspond to superscript numbers in the redline/strikeout copy of the draft SRP section.

Item	Source	Description
1.	Editorial	Removed exception for outdated review branch title.
2.	Integrated Impact 1549	Added discussion of types of applications for which interface review will differ.
3.	Editorial, Integrated Impact 1549	Clarified the statement of Areas of Review such that is not limited to safety related interfaces, consistent with the requirements of Part 52.
4.	Integrated Impact 1549	Added reference to 10 CFR 52 for guidance on review interfaces for standardized designs and removed reference to RG 1.70, Appendix A of which was superseded by Part 52.
5.	Editorial	Clarified the sentence.
6.	Editorial, Integrated Impact 1549	Clarified sentence and eliminated discussion of RG 1.70.
7.	Editorial, Integrated Impact 1549	Revised the sentence to broaden review of interfaces beyond safety-related SSCs, consistent with Part 52.
8.	Editorial, Integrated Impact 1549	Revised the sentence to broaden review of interfaces beyond safety-related SSCs, consistent with Part 52.
9.	Integrated Impact 1549; Editorial	Revised the sentence to broaden review of interfaces beyond safety-related SSCs, consistent with Part 52 and to indicate that standard design reviews are not limited to the NSSS.
10.	Integrated Impact 1549; Editorial	Added reference to Part 52 as the source of requirements that must be met for a standard design application. Revised the paragraph to broaden review of interfaces beyond safety-related SSCs and eliminate discussion of RG 1.70.
11.	Integrated Impact 1549; Editorial	Clarified reference to 10 CFR to be Part 52. Revised the paragraph to broaden review of interfaces beyond safety-related SSCs, consistent with Part 52.
12.	Editorial; SRP-UDP Guidance	Added Subsection V, "Implementation" in accordance with standard SRP format, including standard sentences regarding the intended use of this SRP section.
13.	Integrated Impact 1549	Deleted reference to RG 1.70 Appendix A since it was superseded by Part 52.
14.	Integrated Impact 1549	Added References listing of 10 CFR Part 52 to support citations in the SRP text.

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SRP Draft Section 1.8
Attachment B - Cross Reference of Integrated Impacts

Integrated Impact No.	Issue	SRP Subsections Affected
1549	Modify Acceptance Criteria to include reference to requirements for a description, analysis and evaluation of the interfaces between the submitted design and the balance of the nuclear power plant as required by 10 CFR 52.	Subsection I, Areas of Review Subsection, III Review Procedures Subsection IV, Evaluation Findings Subsection VI, References