



U.S. NUCLEAR REGULATORY COMMISSION

STANDARD REVIEW PLAN

OFFICE OF NUCLEAR REACTOR REGULATION

13.1.1 MANAGEMENT AND TECHNICAL SUPPORT ORGANIZATION

REVIEW RESPONSIBILITIES

Primary - ~~Licensee Qualification Branch (LQB)~~ Human Factors Assessment Branch (HHFB)¹

Secondary - ~~None~~ Emergency Preparedness and Radiation Protection Branch (PERB)²

I. AREAS OF REVIEW

The ~~LQB~~ HHFB³ will review the corporate level management and technical organizations of the applicant for a ~~CP and OL~~ construction permit (CP), operating license (OL), or combined license (COL);⁴ and its of the applicant's major contractors; including the nuclear steam supply system (NSSS) vendor, and architect/engineer (A/E) for the project; ~~including~~ The technical resources to support the nuclear power plant design, construction, testing, and operation are also reviewed.⁵ The review for a ~~construction permit~~ CP or COL⁶ will include an examination of the ~~utility's~~⁷ responsibilities, technical staff, ~~and the~~ interface arrangements,⁸ and management controls used to ~~assure~~ ensure⁹ that the design and construction of the facility will be performed in an acceptable manner. The review for an ~~operating license~~ OL or COL¹⁰ will examine the applicant's corporate organization and technical staff, ~~which that~~¹¹ will be in place to provide support for safe plant operation.

The objective of this review is to ~~assure~~ ensure that the corporate management is involved with, informed about, and dedicated to the safe design, construction, test and operation of the nuclear plant and that sufficient technical resources have or are being and will be provided to adequately accomplish these objectives.

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USNRC STANDARD REVIEW PLAN

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.

Part A below describes in detail the areas of review for a CP or COL related to design and construction matters and Part B below describes in detail the areas of review for an OL or COL related to facility operation.¹²

A. Construction-Permit-Related Reviews¹³

The applicant's past experience in the design and construction of nuclear power plants, and past experience in activities of similar scope and complexity should be described. The applicant's ~~(utility's)~~¹⁴ management, engineering, and technical support organization; should also be described. ~~including~~ The description should include organizational charts ~~reflecting the applicant's~~ for the current headquarters and engineering structure, as well as ~~and~~ planned modifications and additions to it thereto to reflect the added functional responsibilities associated with the addition of the nuclear plant, ~~should also be described.~~¹⁵ These added responsibilities should be identified and should include items listed in 1 and 2 below.

1. Design and Construction Responsibilities

A description of the implementation or delegation of the following areas of responsibility should be included.

- a. Principal site-related engineering work such as meteorology, geology, seismology, hydrology, demography, and environmental effects.
- b. Design of plant and ancillary systems, including fire protection systems.
- c. Review and approval of plant design features, including human factors engineering (HFE) considerations.¹⁶
- d. Site layout with respect to environmental effects and security provisions.
- e. Development of safety analysis reports (SARs).¹⁷
- f. Material and components specification review and approval.
- g. Procurement of materials and equipment.
- h. Management of construction activities.

2. Preoperational Responsibilities

The proposed plans for the management organization in regard to the following items of the initial test program should be described:

- a. Development of plans for the preoperational and startup testing of the facility.

- b. Development and implementation of staff recruiting and training programs.
- c. Development of plant maintenance programs.

~~In regard to items 1 and 2 above, the description should include how these responsibilities are delegated and implemented within and from the headquarters staff and should identify the working or performance level and responsible organization unit, including an estimate of the number of persons expected to be assigned to each of the various units with responsibility for the project. In addition describe the role the utility management will have in interfacing with the nuclear steam system suppliers and the architect/engineer, including the required review of contractor work by the utility staff.~~

~~The PSAR should also identify general qualification requirements in terms of numbers, educational backgrounds, and experience for identified positions or classes of positions; and specific educational and experience background for assigned management and supervisory positions relative to items 1 and 2 above.~~

In regard to items 1 and 2 above, the description should include the following:

1. How these responsibilities are assigned by the headquarters staff and implemented within the organizational units;
2. Identification of the responsible organizational unit, working, or performance level;
3. An estimate of the number of persons expected to be assigned to each of the various units with responsibility for the project;
4. The general qualification requirements in terms of educational backgrounds and experience for identified positions or classes of positions;
5. The role of the applicant's management in interfacing with the NSSS and A/E organizations;
6. Specific educational and experience background for assigned management and supervisory positions; and
7. The required review of contractor work by the applicant's staff.¹⁸

For identified positions or classes of positions that have functional responsibilities for other than that of the CP or COL¹⁹ application, the expected proportion of time assigned to the other activities should be described. In addition, the early plans for providing technical support for the operation of the facility should be described.

The CP- or COL-stage²⁰ review (PSAR)²¹ of the NSSS and A/E organizations includes a review of an evaluation of the ability of the their technical staffs of each organization to

support or perform the activity related to activities specified in the application, as applicable.²² The information submitted should include a description of the specific activity (including scope) to be engaged in, organizational description and charts reflecting organizational lines of authority and responsibility for the project, the number of persons assigned to the project, and qualification requirements for principal management positions related to the project. For those NSSS and A/E organizations with extensive experience, a detailed description of this experience may be provided in lieu of the details of their organization as evidence of technical capability. However, a specific description of how this experience will be applied to the particular utility²³ project should be provided.

B. Operating Licensecons-Related Reviews²⁴

The FSAR²⁵ should provide the following information: ~~(1)~~σ

1. Organizational charts of the applicant showing the corporate level management and technical support structure; ~~including t~~
2. The relationship of the nuclear oriented portions of the structure to the rest of the corporate organization; ~~and a~~
3. A description of the specific provisions which have been made for technical support for operations; and, ~~(2)~~t
4. The organizational unit and any augmenting organizations, or other personnel that will manage or execute any phase of the test program, including the responsibilities and authorities of principal participants.²⁶

Technical services and backup support for the operating organization should become available in advance of the conduct of the preoperational and startup testing program and continue throughout the life of the plant.

The FSAR²⁷ should (1) ~~identify in terms of numbers,~~ describe approximate numbers, educational background, and experience requirements for each identified position or class of positions providing technical support for plant operations, and (2) include specific educational and experience background for individuals holding the management and supervisory positions providing support in the areas identified below.²⁸

The special capabilities that should be included in the support for the operation of the plant are:

1. Nuclear, mechanical, structural, electrical, thermal-hydraulic, metallurgical and materials, and instrumentation and controls engineering
2. Plant chemistry
3. Health physics

4. Fueling and refueling operations support
5. Maintenance support
6. Operations support
7. Quality assurance
8. Training
9. Safety review
10. Fire protection
11. Emergency organization²⁹
- 11.2. Outside contractual assistance

Review Interfaces³⁰

The HHFB performs the following related reviews under the SRP sections indicated:

1. Reviews several matters related to the capabilities of the applicant's organizations and personnel to discharge assigned responsibilities and perform effectively (e.g., operating organizations, training, use of simulators, procedure adequacy, organizational provisions for independent reviews, use of human factors engineering principles, etc.) under SRP Sections 13.1.2-13.1.3, 13.2.1, 13.2.2, 13.4, 13.5.2, and 18.0 (proposed).
2. Reviews the adequacy of the human factors engineering organization and its integration into the applicant's design, construction, and operations activities as part of its primary review responsibility for SRP Section 18.0 (proposed).³¹

In addition, ~~LOB~~HHFB will coordinate other branches evaluations that interface with the overall review of the management and technical support organization as follows:

1. The ~~Emergency Preparedness Licensing Branch (EPLB)~~ PERB³² reviews the acceptability of the emergency organization as part of its primary review responsibility for Standard Review Plan (SRP)³³ Section 13.3;
2. The PERB also reviews the acceptability of the radiation protection organization as part of its primary review responsibility for SRP Section 12.5.³⁴
3. The Safeguards Branch (PSGB) reviews the acceptability of the applicant's plans and provisions for security, including the security organization, as part of its primary review responsibility for SRP Section 13.6.³⁵

4. ~~The Quality Assurance Branch (QAB)~~ Quality Assurance and Maintenance Branch (HQMB) reviews the acceptability of the ~~detailed~~ quality assurance organization as part of its primary review responsibility for SRP Section 17.0, Chapter 17.³⁶⁻

~~The Radiological Assessment Branch (RAB) reviews the acceptability of the radiation protection organization as part of its primary review responsibility for SRP Section 12.5.~~³⁷

For those areas of review identified above as being ~~reviewed as part of the primary review responsibility of other branches~~ under other SRP sections, the acceptance criteria necessary for the review and their methods of application are contained in the referenced SRP sections ~~of the corresponding primary branch.~~³⁸

II. ACCEPTANCE CRITERIA

The applicant's description of its resources to deal with safety-related problems connected with the proposed addition of nuclear generating capacity should provide contributory evidence as to the technical qualifications of the applicant, as required by 10 CFR ~~Part 50, §~~50.40(b).³⁹

Specific criteria which contributed⁴⁰ to meeting §10 CFR 50.40(b) with respect to the CP, ~~review and OL, or COL reviews~~⁴¹ are described below in subsections⁴² A and B, ~~respectively~~⁴³.

A. Construction Permit-Related Criteria (applied for CP and COL reviews)⁴⁴

1. The applicant has identified and functionally described the specific organizational groups responsible for implementing responsibilities for the project ~~(CP)~~⁴⁵.
2. The applicant has described the method of implementing its responsibilities for dealing with the safety-related aspects of the design and construction of the project and the transition to operation of the facility, including control of major contractors.
3. Clear unambiguous management control and communications exist between the organizational units involved in the design and construction of the project.
4. Substantive breadth and level of experience and availability of manpower exist to implement the responsibility for the project.
5. The applicant has clearly described the role and function of the A/E and NSSS vendor during both design and construction and has demonstrated ~~utility~~ appropriate⁴⁶ control over the ~~decisions~~ project-related activities⁴⁷ of the A/E and NSSS vendor.
6. The applicant has designated the responsible organizations that will participate in the test program and early plans indicate reasonable assurance that such designated organizations can collectively provide the necessary level of staffing with suitable skills and experience to develop and conduct the test program.

7. The applicant plans to utilize the plant operating and technical staff in the development and conduct of the test program and in the review of test results.
8. For applicants subject to 10 CFR 50.34(f), the applicant has identified plans for the organization and staffing to oversee design and construction of the nuclear facility in accordance with the guidelines of Item II.J.3.1 of NUREG-0718 (Reference 8) as related to the requirements of 10 CFR 50.34(f)(3)(vii).⁴⁸ As reflected in SRP Section 18.0 (proposed), the review criteria for the HFE design team is provided in NUREG-0711 (Reference 7), Chapter 2, "Element 1 - HFE Program Management."⁴⁹

B. Operating License, Combined License Cons-Related Criteria (applied for OL and COL reviews)⁵⁰

The review and evaluation of management and technical organizational structure for ~~Operating License~~ A OL and COL applicants is based on ~~meeting~~⁵¹ the guidelines of TMI Action Plan Item I.B.1.2 ~~originally described in~~⁵² NUREG-0694 (Reference 6)⁵³ as augmented. Specific criteria are as follows:

1. The applicant has identified and described the organizational groups responsible for implementing responsibilities for the initial test program, and technical support for the operation of the facility.
2. The applicant has described the method of implementing its responsibilities for dealing with the initial test program, technical support, and operation of the facility.
3. The organizational structure provides for the integrated management of activities that support the operation and maintenance of the facility.
4. Clear management control and effective lines of authority and communications exist between the organizational units involved in the management, operation, and technical support for the operation of the facility ~~(OL)~~.⁵⁴
5. Substantive breadth and level of experience and availability of manpower exist to implement the responsibility for the initial test program and technical support for the operation of the facility. The need to supplement the corporate structure with additional experienced personnel for the initial years of operation will be determined on case-by-case basis.
6. Qualifications of the "Engineer in Charge" should meet or exceed those given in Section 4.6.1 of ANSI N18.1,⁵⁵ as endorsed by Regulatory Guide 1.8.
7. Responsibilities for fire protection should conform to BTP ~~CMEBSPLB~~ 9.5-1 attached to SRP Section 9.5.1 (Reference 5)⁵⁶.

8. The technical staff will be utilized in the initial test program to the maximum extent practicable. Participants in the test program should receive plant-specific training/indoctrination in the administrative controls for the test program prior to the start of testing. The level of staffing should be adequate based on the reviewer's judgment.

TMI Action Plan Item I.B.1.2 was revised in NUREG-0737 (Reference 9) to require establishment of an onsite independent safety engineering group (ISEG) to perform independent reviews of plant operations. The ISEG reports to corporate management, develops and presents detailed recommendations, and advises management on the overall quality and safety of operations. Compliance with Item I.B.1.2 with respect to the adequacy of the provisions for an ISEG organization is reviewed under SRP Section 13.4.⁵⁷

Technical Rationale⁵⁸

The technical rationale for application of the above acceptance criteria to the review of the management and technical support organization is discussed in the following paragraphs.⁵⁹

1. Compliance with the relevant requirements of 10 CFR 50.40(b) requires that the applicant be technically qualified to engage in activities associated with the design, construction, and operation of a nuclear power plant in accordance with the regulations in 10 CFR 50.

The management and technical support organization established by the applicant to oversee the design and construction of a nuclear power plant provides valuable insight into the corporate management's understanding of its safety role in the design, construction, operation, and maintenance of the facility. This information contributes to the determination that an applicant is technically qualified by ensuring that appropriate considerations were used in the establishment of general qualification requirements and staffing levels for all key positions on which the safety of the facility will depend.

Meeting the requirements of 10 CFR 50.40(b) provides assurance that the applicant is technically qualified to engage in the proposed activities and has established the necessary management and technical support organization to safely operate the proposed facility.⁶⁰

III. REVIEW PROCEDURES

Each element of the SAR information is to be reviewed against this SRP section. The reviewer's judgment during the review is to be based on an inspection of the material presented, whether items of special safety significance are involved, and the magnitude and uniqueness of the project. Any exceptions or alternatives are to be carefully reviewed to ~~assure~~ ensure that they are clearly defined and that an adequate basis exists for acceptance. The applicant should identify the applicable version of references, Regulatory Guides, and Codes and Standards used. The reviewer should identify the applicable version of references, Regulatory Guides, and Codes and Standards used in the review.

In the review and evaluation of the subject matter of this section of the SAR, the following points should be taken into consideration.

The corporate level management and technical support structure, as demonstrated by organizational charts and descriptions of functions and responsibilities, should be free of ambiguous assignments of primary responsibility. A corporate officer should clearly be responsible for nuclear activities, without having ancillary responsibilities that might detract from his⁶¹ attention to nuclear safety matters. Design and construction responsibilities should be reasonably well defined in both numbers and experience of persons required to implement their responsibilities. Similarly, management and organizational responsibilities should be clearly defined with regard to HFE considerations in the management of human-system interface issues. (This subject is addressed in more detail in NUREG-0711 and in SRP Chapter 18.)⁶² The reviewer must recognize that there are many acceptable ways to define and delegate job responsibilities. For example, at the early construction⁶³ stage, with respect to technical support for operations, the applicant's plans for headquarters staffing may not yet be firm. It is acceptable, therefore, if these plans are not fully specific in terms of numbers of people, provided the commitment made is sufficiently firm to assure the responsibility can be met. Variations in staffing may also be expected between applicants who lack with and without prior experience with in nuclear plant design, construction, or operation and those who have such experience.⁶⁴ It is important that the reviewer assure himself be convinced that applicants in the former category lacking in experience⁶⁵ do not underestimate the magnitude of the task. The reviewer should be alert to the possibility that excessive workloads may be placed upon too small a number of individuals. Interface arrangements and controls between the applicant and major contractors (NSSS vendors, architect/engineers, constructors) should be examined to assure that the applicant will be in charge of and responsible for design and construction activities.

If the application involves the addition of more than one unit, the reviewer should assure that headquarters staffing plans take this fact into account. This is particularly important if additional units are scheduled to come on line at intervals of about one year or less, since the shakedown period for the operation of a new plant can be expected to produce quite heavy workloads. In some of these cases the applicant may plan to bolster the plant staff organization during such periods so that it is necessary to evaluate headquarters staffing plans in conjunction with those for the plant staff organization.

The reviewer should assess the degree of participation during the design and construction phases by that the⁶⁶ headquarters group that typically has plant operating (generating) responsibility. Interfaces between such a group and those with project engineering responsibilities should be examined.

The review procedure for this section consists, therefore, of the following:⁶⁷

1. An examination of the information submitted to determine that all subject matter identified in subsection I above has been addressed.
2. A comparison of the information with the acceptance criteria of subsection II above in the light of the additional points set forth earlier in this SRP section.

3. Review of information provided by the ~~Office of Inspection and Enforcement~~ Regional Office⁶⁸ position statement on the applicant's organizational and administrative commitments made in the SAR.
4. Corporate headquarters and site visits by one or more members of the ~~LQB~~ HHFB to review, discuss, and verify implementation of the management structure and technical resources. With respect to site visits, in addition to ~~LQB~~ HHFB members, review teams may include personnel from the ~~Office of Inspection and Enforcement and the Division of Licensing~~ Regional Offices and the Divisions of Reactor Projects.⁶⁹

In addition, if the applicant, as of the time the review takes place, has had experience in the operation of a previously licensed nuclear power plant, the reviewer may seek independent information relative to headquarters staffing and qualifications through the ~~Office of Inspection and Enforcement~~ appropriate Regional Office, e.g., by discussion with Regional inspection personnel or review of inspection reports.⁷⁰

The reviewer then determines, based on the foregoing, the overall acceptability of the applicant's management and technical support organization and staffing plans.

For standard design certification reviews under 10 CFR Part 52, the procedures above should be followed, as modified by the procedures in SRP Section 14.3 (proposed), to verify that the design set forth in the standard safety analysis report, including inspections, tests, analysis, and acceptance criteria (ITAAC), site interface requirements and combined license action items, meet the acceptance criteria given in subsection II. SRP Section 14.3 (proposed) contains procedures for the review of certified design material (CDM) for the standard design, including the site parameters, interface criteria, and ITAAC.⁷¹

IV. EVALUATION FINDINGS

The reviewer verifies that the information presented and the review of that information support conclusions of the following type to be used in the staff's safety evaluation report:

A. CP and COL Safety Evaluation Report⁷²

The applicant has described clear responsibilities and associated resources for the design and construction of the facility and has described its plans for management of the project and for utilization of the NSSS vendor⁷³ and A/E. These plans have been reviewed and give adequate assurance that an acceptable organization has been established and that sufficient staff resources are available ~~have been established~~⁷⁴ to satisfy the applicant's commitments for the design and construction of the facility. These findings contribute to the judgment that the applicant complies with⁷⁵ the requirements of 10 CFR Part 50, §50.40(b); i.e., that the applicant is technically qualified to engage in design and construction activities.

B. OL and COL Safety Evaluation Report⁷⁶

The applicant has described its organization for the management of, and its means for providing technical support for the plant staff during operation of the facility. These measures have been reviewed and ~~we conclude~~ it is concluded⁷⁷ that the applicant has an acceptable organization and adequate resources to provide offsite technical support for the operation of the facility under both normal and off-normal conditions.

These findings contribute to the ~~staff's collective~~⁷⁸ judgment that the applicant complies with the requirements of §10 CFR 50.40(b) (that the applicant is technically qualified to operate a nuclear power plant); that the applicant will have the necessary managerial and technical resources to provide assistance to the plant staff in the event of an emergency; and that the applicant has identified the organizational positions responsible for fire protection matters and the authorities that have been delegated to these positions to implement fire protection ~~responsibilities~~ requirements,⁷⁹ in accordance with the guideline of BTP ~~CMEBSPLB~~⁸⁰ 9.5-1.

For design certification reviews, the findings will also summarize, to the extent that the review is not discussed in other safety evaluation report sections, the staff's evaluation of inspections, tests, analyses, and acceptance criteria (ITAAC), including design acceptance criteria (DAC), site interface requirements, and combined license action items that are relevant to this SRP section.⁸¹

V. IMPLEMENTATION

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 50 or 10 CFR 52.⁸² Except in those cases in which the applicant proposes an acceptable alternative method for complying with specified portions of the Commission's regulations, the method described herein will be used by the staff in its evaluation of conformance with Commission regulations.

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.⁸³

Implementation schedules for conformance to parts of the method discussed herein are contained in the referenced regulatory guides and NUREGs.

VI. REFERENCES⁸⁴

1. 10 CFR Part 50, §50.34, "Contents of Applications; Technical Information."⁸⁵
12. 10 CFR Part 50, §50.40(b), "Common Standards."
23. Regulatory Guide 1.8, "~~Personnel Selection and Training~~ Qualification and Training of Personnel for Nuclear Power Plants"⁸⁶ (endorses ANSI N18.1-1971, "Selection and Training of Nuclear Power Plant Personnel" for certain organizational positions)⁸⁷

- 34. Regulatory Guide 1.68, "Initial Test Programs for Water-Cooled Nuclear Power Plants."
- 45. Standard Review Plan Section 9.5.1, "Fire Protection Program."
- 56. NUREG-0694, "TMI-Related Requirements for New Operating Licenses."
- 7. NUREG-0711, Human Factors Engineering Program Review Model, 1994.⁸⁸
- 68. NUREG-0718, "Licensing Requirements for Pending Applications for Construction Permits and Manufacturing License."
- 79. NUREG-0737, "Clarification of TMI Action Plan Requirements."

SRP Draft Section 13.1.1
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. | Current PRB abbreviation | Changed Licensee Qualification Branch (LQB) to Human Factors Assessment Branch (HHFB). |
| 2. | SRP-UDP formate item | Identified Emergency Preparedness and Radiation Protection Branch (PERB) as the branch having secondary review responsibility. |
| 3. | Current PRB abbreviation | Changed LQB to HHFB (global change for this section). |
| 4. | SRP-UDP format item | Defined CP and OL and added combined license (COL) to the review. |
| 5. | Editorial | Revised sentence to improve clarity. |
| 6. | Editorial, Incorporate PRB Comments | Revised to reflect that a COL review is performed prior to construction and thus CP-related reviews are applicable at the COL review stage. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 7. | Editorial, Incorporation of PRB Comments | Revised to clarify that major contractors are within the areas of review as previously indicated. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 8. | Editorial | Revised to improve grammar/clarity/punctuation. |
| 9. | Editorial | Replaced "assure" with "ensure" (global change for this section). |
| 10. | SRP-UDP format item | Replaced "operating license" with "OL" and added COL to the review. |
| 11. | Editorial | Revised to improve grammar/clarity/punctuation. |
| 12. | SRP-UDP format item, Incorporation of PRB Comments | Added COL to the review. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 13. | Editorial, Incorporation of PRB Comments | Revised title to reflect that this review is also performed at the COL stage since the COL is issued prior to construction. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |

SRP Draft Section 13.1.1
Attachment A - Proposed Changes in Order of Occurrence

| Item | Source | Description |
|------|--|---|
| 14. | Editorial, Incorporation of PRB Comments | Revised to eliminate unnecessary specificity. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 15. | Editorial | Revised sentence to improve clarity. |
| 16. | Integrated Impact No. 1358 | Added HFE consideration. |
| 17. | Editorial | Provided "SAR" as initialism for "safety analysis report." |
| 18. | Editorial | Revised two paragraphs to improve clarity. |
| 19. | Editorial, Incorporation of PRB Comments | Revised to reflect that a COL review is performed prior to construction and thus CP-related reviews are applicable at the COL review stage. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 20. | Editorial, Incorporation of PRB Comments | Revised to reflect that a COL review is performed prior to construction and thus CP-related reviews are applicable at the COL review stage. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 21. | Editorial, Incorporation of PRB Comments | Revised to eliminate reference to a SAR to address any source of information that may be reviewed regarding NSSS vendors and AEs. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 22. | Editorial | Revised sentence to improve clarity. |
| 23. | Editorial, Incorporation of PRB Comments | Revised to eliminate unnecessary specificity. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 24. | Editorial, Incorporation of PRB Comments | Revised title to reflect that this review is also performed at the COL stage since the COL is issued prior to construction but is also an operating license. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |

SRP Draft Section 13.1.1
Attachment A - Proposed Changes in Order of Occurrence

| Item | Source | Description |
|------|--|---|
| 25. | Editorial, Incorporation of PRB Comments | Reduced the level of specificity regarding which SAR should include this information. This level of specificity is appropriate for a revision to RG 1.70 but should not be carried over into the SRP unless it is clear that such information should only be provided in one specific type of SAR. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 26. | Editorial | Reorganized paragraph to improve clarity. |
| 27. | Editorial, Incorporation of PRB Comments | Reduced the level of specificity regarding which SAR should include this information. This level of specificity is appropriate for a revision to RG 1.70 but should not be carried over into the SRP unless it is clear that such information should only be provided in one specific type of SAR. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 28. | Editorial | Revised sentence to improve clarity. |
| 29. | Editorial | Added an organizational element normally involving corporate management that is required by 10 CFR 50.54 and Appendix E to Part 50. It should be noted that findings regarding the emergency organization are made in subsection IV although the organization is not reviewed in detail herein. |
| 30. | SRP-UDP format item | Added "Review Interfaces" to AREAS OF REVIEW and presented in numbered paragraph form to describe how HHFB coordinates the management and technical support organization review with other NRR branches. |
| 31. | Integrated Impact 1358, Editorial | Added descriptions of other HHFB reviews that are related to reviews performed under this SRP section. |
| 32. | SRP-UDP format item | Replaced EPLB with PERB. |
| 33. | Editorial | Defined "SRP" as "Standard Review Plan." |
| 34. | SRP-UDP format item | Replaced RAB with PERB. |
| 35. | Editorial | Added a review interface reflecting review of the security forces. |
| 36. | SRP-UDP format item | Replaced QAB with HQMB. Changed "Section 17.0" to "Chapter 17." |
| 37. | SRP-UDP format item | Replaced RAB with PERB. Repositioned this item to follow item 1, the review of which is also the responsibility of PERB. |

SRP Draft Section 13.1.1
Attachment A - Proposed Changes in Order of Occurrence

| Item | Source | Description |
|------|--|---|
| 38. | SRP-UDP format item | Revised to reflect interfaces in terms of other SRP sections rather than in terms of other branches since typically interfaces to other reviews by the PRB are also described in this subsection. |
| 39. | Editorial modification | Provided correct format for citing reference to Title 10 of the Code of Federal Regulation (global change for this section). |
| 40. | Editorial, Incorporation of PRB Comment | Revised to reflect present tense so that the outcome of the review does not seem predetermined. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 41. | SRP-UDP format item | Added COL to the review. |
| 42. | Editorial | Added the word "subsections." |
| 43. | Editorial, Incorporation of PRB Comments | Revised to reflect that with the addition of COL reviews to this section, the subsections no longer correspond "respectively." This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 44. | Editorial, Incorporation of PRB Comments | Revised title to reflect that this criteria is also applied at the COL stage since the COL is issued prior to construction. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 45. | Editorial, Incorporation of PRB Comment | Revised to reflect that this review is also performed at the COL stage since the COL is issued prior to construction. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 46. | Editorial | Revised to eliminate unnecessary specificity. |
| 47. | Editorial | Revised to clarify that the applicant should demonstrate appropriate control over the project activities, not necessarily AE and NSSS vendor decisions, consistent with the related review procedure described in subsection III. |
| 48. | Integrated Impact No. 1005 | Revised to also reference 10 CFR 50.34(f)(3)(vii). |
| 49. | Integrated Impact No. 1358 | Added reference to NUREG-0711 to ACCEPTANCE CRITERIA. |

SRP Draft Section 13.1.1
Attachment A - Proposed Changes in Order of Occurrence

| Item | Source | Description |
|------|---|---|
| 50. | Editorial, Incorporation of PRB Comment | Revised title to reflect that this criteria is also applied at the COL stage since the COL is issued prior to construction. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 51. | Integrated Impact 1026 , Editorial | Based on the fact that TMI Item I.B.1.2 was revised in NUREG-0737 to require an ISEG, and no longer provides any detailed criteria for corporate and technical support involvement in operations, the Item as detailed in NUREG-0694 appears to be obsolete, and the word "meeting" is no longer appropriate. |
| 52. | Integrated Impact 1026 , Editorial | Revised to reflect that based on the fact that TMI Item I.B.1.2 was revised in NUREG-0737 to require an ISEG, rather than provide detailed criteria for corporate and technical support involvement in operations, the Item as detailed in NUREG-0694 appears to be obsolete and appears to no longer constitute a legal requirement, just a basis for the criteria detailed for this review. |
| 53. | SRP-UDP format item | Added identification of the NUREG by reference number. |
| 54. | Editorial, Incorporation of PRB Comment | Removed unnecessary applicability specificity for an item included within a subsection whose title indicates its applicability. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 55. | Integrated Impact Nos. 612 and 1509 | Per impact 612, ANSI N18.1 should be updated to ANSI/ANS 3.1-1987, provided a proposed detailed comparison indicates the current standard is acceptable to NRR. Since this has not transpired to support such an SRP change, impact 1508 recommends that the citation be revised to cite the 1971 version of the N18.1 standard at this time. This recommendation was implemented in subsection VI rather than in the text. |
| 56. | SRP-UDP format item, Reference verification | Added identification of the SRP Section/BTP by current reference number and designation. |

SRP Draft Section 13.1.1
Attachment A - Proposed Changes in Order of Occurrence

| Item | Source | Description |
|------|---|---|
| 57. | Integrated Impact 1026 | Revised to reflect that based on the fact that TMI Item I.B.1.2 was revised in NUREG-0737 to require an ISEG, rather than provide any detailed criteria for corporate and technical support involvement in operations, the Item as detailed in NUREG-0694 appears to be obsolete and appears to no longer constitute a requirement. Compliance with the current requirements of Item I.B.1.2 related to the ISEG is reviewed in SRP Section 13.4. |
| 58. | SRP-UDP format item | Added "Technical Rationale" to ACCEPTANCE CRITERIA subsection and put in paragraph form. |
| 59. | SRP-UDP format item | Added lead-in sentence for "Technical Rationale." |
| 60. | SRP-UDP format item | Added technical rationale for 10 CFR 50.40(b). |
| 61. | Editorial | Deleted "his" to eliminate gender-specific reference. |
| 62. | Integrated Impact 1358 | Added two sentences pertaining to the review procedures for HFE program management consideration during the design stage, and referencing NUREG-0711 and SRP Chapter 18 for more detail. |
| 63. | Editorial, Incorporation of PRB Comment | Revised to reflect an example rather than a generally true observation. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 64. | Editorial | Revised sentence to improve clarity. |
| 65. | Editorial | Revised sentence to improve clarity. |
| 66. | Editorial | Substituted "the" for "that" to improve clarity. |
| 67. | Editorial | Added "the following" for clarity and precision. |
| 68. | SRP-UDP format item | Updated SRP section to reflect current organizational structure. |
| 69. | SRP-UDP format item | Updated SRP section to reflect current organizational structure. |
| 70. | SRP-UDP format item | Updated SRP section to reflect current organizational structure. |
| 71. | SRP-UDP Guidance, Implementation of 10 CFR 52 | Added standard paragraph to address application of Review Procedures in design certification reviews. |
| 72. | Editorial, Incorporation of PRB Comments | Revised title to reflect that the finding is also relevant to COL applications/SERs. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |

SRP Draft Section 13.1.1
Attachment A - Proposed Changes in Order of Occurrence

| Item | Source | Description |
|------|--|--|
| 73. | Editorial | Added the word "vendor" to be more precise. |
| 74. | Editorial | Revised sentence to improve clarity. |
| 75. | Editorial | Revised to improve grammar/clarity. |
| 76. | Editorial, Incorporation of PRB Comments | Revised title to reflect that the finding is also relevant to COL applications/SERs. This change incorporates the intent of PRB comments (see the January 19 Memorandum to R.W. Borchardt from C.O. Thomas transmitting comments on a previous draft revision). |
| 77. | Editorial | Revised to eliminate use of the pronoun "we." |
| 78. | Editorial | Substituted "reviewer's judgment" for "staff's collective judgment," which implies that the judgment is made by the entire HHFB staff. |
| 79. | Editorial | Substituted "requirements" for "responsibilities" to improve clarity. |
| 80. | SRP-UDP format item, Reference verification | Revised identification of the BTP to reflect its current designation. |
| 81. | SRP-UDP Format Item, Implement 10 CFR 52 Related Changes | To address design certification reviews a new paragraph was added to the end of the Evaluation Findings. This paragraph addresses design certification specific items including ITAAC, DAC, site interface requirements, and combined license action items relevant to this section. |
| 82. | SRP-UDP Guidance, Implementation of 10 CFR 52 | Added standard sentence to address application of the SRP section to reviews of applications filed under 10 CFR Part 52, as well as Part 50. |
| 83. | SRP-UDP Guidance | Added standard paragraph to indicate applicability of this section to reviews of future applications. |
| 84. | Editorial | Renumbered references to accommodate addition of references. |
| 85. | Integrated Impact No. 1005 | Added reference to 10 CFR 50.34 as an update of the SRP section. Renumbered subsequent references. |
| 86. | SRP-UDP Reference verification | Revised to reflect current title of the RG. |
| 87. | Integrated Impact 1509 | Added reference to a standard cited in the text. |
| 88. | Integrated Impact No. 1358 | Added reference to NUREG-0711 as an update of the SRP section. |

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SRP Draft Section 13.1.1
Attachment B - Cross Reference of Integrated Impacts

| Integrated Impact No. | Issue | SRP Subsections Affected |
|-----------------------|--|---|
| 612 | Standard ANSI N18.1 is cited, in conjunction with Regulatory Guide 1.8, as specific criteria for the qualifications of the applicant's corporate "Engineer in Charge." ANSI N18.1 has been replaced by ANSI/ANS 3.1-1987. Consider adopting the current industry standard ANSI/ANS 3.1-1987 as specific criteria for the qualifications of the applicant's corporate "Engineer in Charge." | No changes will be made in SRP Section 13.1.1 at the present time |
| 1005 | TMI Action Plan item II.J.3.1 addressed the requirements of a plan for organization and staffing to oversee design and construction activities of a nuclear power plant. Subsequently, the issues were addressed in 10 CFR 50.34(f)(3)(vii). Consider revising the Acceptance Criteria to cite the requirements of 10 CFR 50.34(f)(3)(vii) related to the current citation of TMI Action Plan item II.J.3.1. | Subsection II, ACCEPTANCE CRITERIA, specific criteria subsection A item A.8 Subsection VI, REFERENCES, new reference 1 |
| 1026 | Consideration should be given to coordinating with the responsible review branch and determining the continuing relevance of TMI action plan item I.B.1.2, regarding an Independent Safety Engineering Group (ISEG), referred to in NUREG-0694. A discussion with the HHFB Branch Chief revealed that NRR, in support of the Regional Offices, has recently reaffirmed the need for an ISEG at each site of an operating nuclear power plant. However, it was agreed that the reference to NUREG-0694 should be updated to NUREG-0737. | Subsection II, ACCEPTANCE CRITERIA, specific criteria subsection B. |
| 1358 | NUREG-0711, "Human Factors Engineering Program Review Model (HFE PRM)," was published in July 1994. The HFE PRM contains guidance on reviewing human factors engineering program elements, including HFE Program Management (Element 1). Element 1 of the HFE PRM addresses organizational and management considerations regarding HFE and seeks to ensure (1) that applicants integrate HFE into plant development, design, and evaluation, and (2) that the HFE programs reflect state-of-the-art human factors principles. Therefore, it is important that human-system interaction issues be considered in the review of an applicant's corporate management and technical support organization. | Subsection I, AREAS OF REVIEW, item A.1.c Subsection II, ACCEPTANCE CRITERIA, item A.8 Subsection III, REVIEW PROCEDURES, third paragraph Subsection VI, REFERENCES, Reference 7 |
| 1509 | Consider updating the citation of ANSI N18.1 to cite the 1971 version. | Subsection VI, REFERENCES, Reference 3 |