U.S. NUCLEAR REGULATORY COMMISSION

STANDARD REVIEW PLAN

2.4.14 TECHNICAL SPECIFICATIONS AND EMERGENCY OPERATION REQUIREMENTS

REVIEW RESPONSIBILITIES

Primary - Organization responsible for the review of issues related to hydrology

Secondary - None

I. AREAS OF REVIEW

Chapter 2 of the Standard Review Plan (SRP) discusses the site characteristics that could affect the safe design and siting of a plant. The staff reviews information presented by the applicant for a construction permit (CP), operating license (OL), design certification (DC), early site permit (ESP), or combined license (COL) concerning hydrological setting of the site as they relate to safety-related structures, systems, and components (SSC). This SRP section applies to reviews performed for each of these types of applications. The staff's review and findings are described in the appropriate section of the safety evaluation report (SER).

In this section of the applicant's safety analysis report (SAR), identification of the bases for technical specifications and emergency procedures are carried out that are required to implement protection against floods for safety-related facilities and to ensure that an adequate supply of water for shutdown and cooldown purposes is available.

The specific areas of review are as follows:

USNRC STANDARD REVIEW PLAN

This Standard Review Plan, NUREG-0800, has been prepared to establish criteria that the U.S. Nuclear Regulatory Commission staff responsible for the review of applications to construct and operate nuclear power plants intends to use in evaluating whether an applicant/licensee meets the NRC's regulations. The Standard Review Plan is not a substitute for the NRC's regulations, and compliance with it is not required. However, an applicant is required to identify differences between the design features, analytical techniques, and procedural measures proposed for its facility and the SRP acceptance criteria and evaluate how the proposed alternatives to the SRP acceptance criteria provide an acceptable method of complying with the NRC regulations.

The standard review plan sections are numbered in accordance with corresponding sections in Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition)." Not all sections of Regulatory Guide 1.70 have a corresponding review plan section. The SRP sections applicable to a combined license application for a new light-water reactor (LWR) are based on Regulatory Guide 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)."

These documents are made available to the public as part of the NRC's policy to inform the nuclear industry and the general public of regulatory procedures and policies. Individual sections of NUREG-0800 will be revised periodically, as appropriate, to accommodate comments and to reflect new information and experience. Comments may be submitted electronically by email to NRR_SRP@nrc.gov.

Requests for single copies of SRP sections (which may be reproduced) should be made to the U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Reproduction and Distribution Services Section, or by fax to (301) 415-2289; or by email to DISTRIBUTION@nrc.gov. Electronic copies of this section are available through the NRC's public Web site at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0800/, or in the NRC's Agencywide Documents Access and Management System (ADAMS), at http://www.nrc.gov/reading-rm/adams.html, under Accession # MLxxxxxxxxx.

1. Bases for Emergency Actions: The staff reviews controlling hydrological events, as determined in previous hydrology sections of the SAR, to identify bases for emergency actions required during these events.

2. Available Response Time: The staff reviews the amount of time available to initiate and complete emergency procedures before onset of conditions during the controlling hydrological events that may prevent such action.

3. Technical Specifications: Technical specifications related to all emergency procedures required to ensure adequate plant safety from controlling hydrological events are reviewed by the organization responsible for the review of issues related to technical specifications.

4. Consideration of Other Site-Related Evaluation Criteria: The staff reviews the potential effects of seismic and non-seismic information on the postulated technical specifications and emergency operations for the proposed plant site.

5. Additional Information for 10 CFR Part 52 Applications: Additional information will be presented dependent on the type of application. For a COL application, the additional information is dependent on whether the application references an ESP, a DC, both, or neither. Information requirements are prescribed within the "Contents of Application" sections of the applicable Subparts to 10 CFR Part 52.

Review Interfaces

Other SRP sections interface with this section as follows:

1. For DC applications and COL applications referencing a DC rule or DC application, review of the site parameters in the Design Control Document (DCD) Tier 1, Chapter 2 of the DCD Tier 2, and the supporting information in DCD Tier 2, Section 14.3, submitted by the applicant is performed under SRP Section 2.0, "Site Characteristics and Site Parameters."

2. The identification of safety-related structures and equipment that must be protected against the effects of flooding is performed under SRP Section 3.4.1, "Flood Protection."

3. The review of the design of seismic Category I structures that may affect plant flooding protection requirements is performed under SRP Section 3.4.2, "Analysis Procedures."

4. The review to ensure that adverse environmental conditions will not preclude the safety function of the ultimate heat sink is performed under SRP Section 9.2.5, "Ultimate Heat Sink."

5. The staff's review related to flooding from local probable maximum precipitation is described in SRP Section 2.4.2; that related to PMF in streams and rivers is described in SRP Section 2.4.3; that related to dam failure scenarios is described in SRP Section 2.4.4; that related to effects of storm surges and seiches including probable maximum windstorm is described in SRP Section 2.4.5; that related to tsunami hazards is described in SRP Section 2.4.6; that related to ice hazards is described in SRP Section 2.4.7; that related to channel diversions is described in SRP Section 2.4.9; and that related to low water is described in SRP Section 2.4.11.

The specific acceptance criteria and review procedures are contained in the referenced SRP sections.

II. ACCEPTANCE CRITERIA

Requirements

Acceptance criteria are based on meeting the relevant requirements of the following Commission regulations:

1. 10 CFR Part 100, as it relates to identifying and evaluating hydrological features of the site. The requirements to consider physical site characteristics in site evaluations are specified in 10 CFR 100.10(c) for applications before January 10, 1997, and in 10 CFR 100.20(c) for applications on or after January 10, 1997.

2. 10 CFR 100.23(d) sets forth the criteria to determine the siting factors for plant design bases with respect to seismically induced floods and water waves the site.

3. 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 2, for CP and OL applications, as it relates to consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area, with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated.

4. 10 CFR 52.17(a)(1)(vi), for ESP applications, and 10 CFR 52.79(a)(1)(iii), for COL applications, as they relate to identifying hydrologic site characteristics with appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding areas and with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated.

5. 10 CFR 50.36, as it relates to identifying limiting conditions on technical specifications for safe operation of the plant.

SRP Acceptance Criteria

Specific SRP acceptance criteria acceptable to meet the relevant requirements of the NRC's regulations identified above are as follows for the review described in this SRP section. The SRP is not a substitute for the NRC's regulations, and compliance with it is not required. However, an applicant is required to identify differences between the design features, analytical techniques, and procedural measures proposed for its facility and the SRP acceptance criteria and evaluate how the proposed alternatives to the SRP acceptance criteria provide acceptable methods of compliance with the NRC regulations.

Appropriate sections of the following Regulatory Guides are used by the staff for the identified acceptance criteria:

Regulatory Guide 1.29 identifies seismic design bases for SSC important to safety.

Regulatory Guide 1.59, as supplemented by current best practices, provides guidance for developing the hydrometeorological design bases.

Regulatory Guide 1.102 describes acceptable flood protection to prevent the safety-related facilities from being adversely affected.

1. Bases for Emergency Actions: To meet the requirements of 10 CFR 50.36, GDC 2, 10 CFR 52.17, and 10 CFR Part 100, an assessment of the hydrological bases for emergency actions is needed. These bases should be consistent with site characteristics identified by the staff during review of other SAR sections with respect to flood water surface elevations, hydrodynamic forces, coincident wind-induced waves and runup, and water supply limitations caused by droughts and other natural phenomena.

2. Available Response Time: To meet the requirements of 10 CFR 50.36, GDC 2, 10 CFR 52.17, and 10 CFR Part 100, estimates of available response times to initiate and complete emergency procedures are needed. These estimates are derived from the analysis of the controlling hydrological events and should be consistent with site characteristics identified during the staff's review of other SAR sections.

3. Technical Specifications: To meet the requirements of 10 CFR 50.36, GDC 2, 10 CFR 52.17, and 10 CFR Part 100, the applicant's proposed technical specifications related to emergency procedures are reviewed. These technical specifications should be appropriate and should be consistent with the site characteristics.

4. Consideration of Other Site-Related Evaluation Criteria: To meet the requirements of 10 CFR 50.36, GDC 2, 10 CFR 52.17, and 10 CFR Part 100, the applicant's assessment of the potential effects of site-related proximity, seismic, and non-seismic information on the postulated technical specifications and emergency operations is needed. This assessment should be sufficient to demonstrate that the applicant's analyses appropriately account for these effects.

5. 10 CFR 50, Appendix A, General Design Criterion (GDC) 44, for CP and OL applications, as it relates to providing an ultimate heat sink for normal operating and accident conditions.

Technical Rationale

The technical rationale for application of these acceptance criteria to the areas of review addressed by this SRP section is discussed in the following paragraphs:

1. Compliance with 10 CFR 50.36 requires establishing appropriate limiting conditions for operation (LOCs) based on analyses and evaluations included in the SAR. LOCs define the lowest functional capability or performance levels of equipment required for safe operation of a facility.

   As applied to SRP Section 2.4.14, technical specifications and emergency operation requirements need to be established if the design basis flood would have an impact on safety-related structures, systems, or components. In this case, the plant would be shut down before floodwaters reach an unsafe level and appropriate emergency procedures would be implemented by the licensee.

   Meeting the requirements of 10 CFR 50.36 provides a level of assurance that the nuclear power plant will be shut down and any necessary emergency measures taken

before floodwaters reach an unacceptable level or any other water level, such as a critically low water level resulting from loss of water control structures, prolonged drought, tsunami, seiche, or any other cause relevant to the hydrology of the site.

2. Compliance with GDC 2 requires that SSC important to safety be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions.

   GDC 2 applies to SRP Section 2.4.14 because this section deals with actions specified in the technical specifications to shut down the plant and take appropriate emergency measures when the site is susceptible to flooding. This criterion also applies to measures needed to protect safety-related equipment. Regulatory Guide 1.59 discusses the design basis floods that nuclear power plants should be able to withstand without loss of capability to achieve and maintain cold shutdown. Regulatory Guide 1.102 describes types of flood protection acceptable to the NRC staff and acceptable methods for protecting plants from the effects of probable maximum precipitation falling directly on the site.

   For applications pursuant to 10 CFR Part 52, meeting the applicable requirements of 10 CFR 52.17 and 10 CFR 52.79 that correspond to GDC 2 provides a level of assurance that the most severe hydrologic site characteristics have been identified; whether GDC 2 is met with respect to the adequacy of the associated design bases will be evaluated pursuant to other SRP sections.

3. Sections 100.10(c) and 100.20(c) of 10 CFR Part 100 require that physical characteristics of a site (including seismology, meteorology, geology, and hydrology) be taken into account to determine its acceptability for a nuclear power reactor. Section 100.23 addresses the need to consider an adequate cooling water supply for emergency and shutdown decay heat removal in the design of a nuclear power plant. The evaluation shall include consideration of river blockage or diversion, tsunami runup or drawdown, and failure of dams and intake structures, as appropriate.

   Meeting the requirements of 10 CFR Part 100 provides assurance that technical specifications and emergency operations are consistent with severe phenomena and are adequate to ensure safe operation of SSC important to safety during adverse environmental conditions.

III. REVIEW PROCEDURES

The reviewer will select material from the procedures described below, as may be appropriate for a particular case.

The procedures outlined below are used to review CP applications, ESP applications, and COL applications that do not reference an ESP to determine whether data and analyses for the proposed site meet the acceptance criteria given in Subsection II of this SRP section. For reviews of OL applications, these procedures are used to verify that the data and analyses remain valid and that the facility's design specifications are consistent with these data. As applicable, reviews of OLs and COLs include a determination on whether the content of technical specifications related to hydrology-related site characteristics are acceptable and whether the technical specifications reflect consideration of any identified unique conditions.

These review procedures are based on the identified SRP acceptance criteria. For deviations from these acceptance criteria, the staff should review the applicant's evaluation of how the proposed alternatives provide an acceptable method of complying with the relevant NRC requirements identified in Subsection II.

1. Bases for Emergency Actions: The staff reviews controlling hydrological events, including floods and low-water events, that may require emergency actions to ensure safe operation of the plant. The staff reviews flood-causing mechanisms in SAR Sections 2.4.2 through 2.4.7 and in Section 2.4.9. The controlling hydrologic event with its effects (e.g., flood water surface elevation, hydrostatic and hydrodynamic forces, erosion, sedimentation) should be identified as well as the emergency actions are to be initiated.

   The staff also reviews low-water events that may require emergency actions. Low-water events resulting from loss of storage due to dam-failures are reviewed in SAR Section 2.4.4; those due to surges and seiches are reviewed in SAR Section 2.4.5; those due to tsunamis are reviewed in SAR Section 2.4.6; those due to ice are reviewed in SAR Section 2.4.7; those due to channel diversions are reviewed in SAR Section 2.4.9; and those due to droughts are reviewed in SAR Section 2.4.11. The staff reviews these low-water events to identify the controlling low-water event and any emergency action that may be needed for safe operation of the plant during this event.

   As described by Regulatory Guide 1.59, SSC important to safety may be "hardened," that is, SSC may have protection built into their structural design bases which provides a passive, "always-in-place" protection measure. Regulatory Guide 1.59 also allows for SSC not to have hardened protection if certain criteria regarding alternative protection are met. The staff should ask the organization responsible for review of the SSC to review hardened protection provided for SSC important to safety. Alternative protection measures that are non-permanent measures (i.e., are not always inplace) should be reviewed to ensure that these measures can be implemented.

2. Available Response Time: The staff analyzes the controlling hydrological events for which emergency action (e.g., sandbagging, shutdown, installation of flood gates and stop logs, etc.) is needed for the plant to determine the time available for initiation and completion of these emergency actions. The controlling hydrological events, including flooding and low-water events, are analyzed to determine the warning time available for emergency actions before onset of conditions that may preclude these actions.

   The environmental conditions likely to prevail during all potential flooding and low-water events, up to and including events of the severity of the controlling event, are reviewed to establish the minimum time available for implementation of emergency procedures. The physical parameters, such as the rate of rise or fall (of river or lake water levels), as well as evaluation (based on experience and engineering judgment) of flood warning networks or drought forecasts, provide the staff with an independent estimate of available time. This data is provided to organizations responsible for the review of issues related to plant emergency procedures for their independent evaluation of the time required to implement shutdown and emergency protection measures. The environmental conditions likely during the controlling hydrological event should be such that the procedures can be carried out.

It should be shown that all SSC important to safety exposed to the effects of the controlling hydrological events either have adequately designed hardened protection or that a set of adequate emergency actions and measures is available which can be implemented and completed within the available response time to ensure safety of these SSC.

3. Technical Specifications: An appropriate item in the plant Technical Specifications should be required in cases where emergency procedures are needed to ensure adequate protection. For those plants for which shutdown (if specified under Regulatory Guide 1.59 Position 2) and installation of protective measures are necessary in the event of a major flood, the procedures for carrying out these measures are reviewed by the organization responsible for the review of issues related to technical specifications for compatibility of available and required times, as established above. The Technical Specifications should reference an emergency plan which allows for the orderly installation of required protection measures.

4. Consideration of Other Site-Related Evaluation Criteria: 10 CFR Part 100 describes site-related proximity, seismic, and non-seismic evaluation criteria for power reactor applications. Subpart A to 10 CFR Part 100 addresses the requirements for applications before January 10, 1997 and Subpart B is for applications on or after January 10, 1997. The staff's review should include evaluation of pertinent information to determine if these criteria are appropriately used in postulation of technical specifications and emergency operations at the proposed plant site.

5. Review Procedures Specific to 10 CFR Part 52 Application Types

A. Early Site Permit Reviews: Subpart A to 10 CFR Part 52 specifies the requirements and procedures applicable to the Commission's review of an ESP application for approval of a proposed site. Information required in an ESP application includes a description of the site characteristics and design parameters of the proposed site. The scope and level of detail of review of data parallel that used for a CP review.

In the absence of a compliance or adequate protection issue, a modification necessary based on updating early site permit-emergency preparedness information, or a variance, 10 CFR 52.39 precludes the staff from imposing new site characteristics, design parameters, or terms and conditions on the early site permit at the COL stage. Accordingly, the reviewer should ensure that all physical attributes of the site that could affect the design basis of SSCs important to safety are reflected in the site characteristics, design parameters, or terms and conditions on the early site permit.

B. Standard Design Certification Reviews: DC applications do not contain general descriptions of site characteristics because this information is site-specific and will be addressed by the COL applicant. However, pursuant to 10 CFR 52.47(a)(1), a DC applicant must provide site parameters postulated for the design. The reviewer verifies that:

i. The postulated site parameters would be representative of a reasonable number of sites that may be considered within a COL application;

ii. The appropriate site parameters are included as Tier 1 information per SRP Section 14.3.1; and

iii. Pertinent parameters are stated in a site parameters summary table.

C. Combined License Reviews: For a COL application referencing a certified standard design, NRC staff reviews that application to ensure sufficient information was presented to demonstrate that the characteristics of the site fall within the site parameters specified in the DC rule. Should the actual site characteristics not fall within the certified standard design site parameters, the COL applicant should need to demonstrate by some other means that the proposed facility is acceptable at the proposed site. This might be done by re-analyzing or redesigning the proposed facility.

For a COL application referencing an ESP, NRC staff reviews the application to ensure the applicant provided sufficient information to demonstrate that the design of the facility falls within the site characteristics and design parameters specified in the early site permit as applicable to this SRP section. Should the design of the facility not fall within the site characteristics and design parameters, the application should include a request for a variance from the ESP that complies with the requirements of 10 CFR 52.39 and 52.93.

In addition, long-term environmental changes and changes to the region resulting from human or natural causes may have introduced changes to the site characteristics that could be relevant to the design basis. The requirements of 10 CFR 52.39 preclude the Commission from changing or imposing new site characteristics, design parameters, or terms and conditions on an ESP, unless the change is: necessary to assure adequate protection of the public health and safety; necessary to bring the permit or site into compliance with the Commission's regulatory requirements in effect when the permit was issued; necessary based upon an update to early site permit-emergency preparedness information; or based on a variance. Consequently, the staff's review of a COL application referencing an ESP should not include a re-investigation of the site characteristics that have previously been accepted in the referenced ESP. However, in accordance with 10 CFR 52.6, "Completeness and Accuracy of Information," the applicant or licensee is responsible for identifying changes of which it is aware, that would satisfy the criteria specified in 10 CFR 52.39. Information provided by the applicant in accordance with 10 CFR 52.6(b) will be addressed by the staff during the review of a COL application referencing an ESP or a DC.

For a COL application referencing either an ESP or DC or both, the staff should review the corresponding sections of the ESP and DC FSER to ensure that any unresolved items, commitments, assumptions, and deferred issues identified in the FSERs are appropriately handled in the COL application.

IV. EVALUATION FINDINGS

The review should document the staff's evaluation of site characteristics against the relevant regulatory criteria. The evaluation should support the staff's conclusions as to whether the regulations are met. The reviewer should state what was done to evaluate the applicant's

safety analysis report. The staff's evaluation may include verification that the applicant followed applicable regulatory guidance, performance of independent calculations, and/or validation of appropriate assumptions. The reviewer may state that certain information provided by the applicant was not considered essential to the staff's review and was not reviewed by the staff. While the reviewer may summarize or quote the information offered by the applicant in support of its application, the reviewer should clearly articulate the bases for the staff's conclusions.

The reviewer verifies that the applicant has provided sufficient information and that the review and calculations (if applicable) support conclusions of the following type to be included in the staff's safety evaluation report. The reviewer also states the bases for those conclusions.

1. Construction Permit, Operating License, and Combined License Reviews

The following statements should be preceded by a summary of the site characteristics and parameters used for the plant:

> As set forth above, the applicant has presented and substantiated information relative to the technical specifications and emergency operations important to the design and siting of this plant. The staff has reviewed the available information provided and for the reasons given above, concludes that the identification and consideration of the technical specifications and emergency operations is acceptable and meets the requirements of 10 CFR 50.36, 10 CFR Part 50, Appendix A, General Design Criteria 2, and 10 CFR Part 100 [10 CFR 100.10(c) or 10 CFR 100.20(c), as applicable], with respect to determining the acceptability of the site.
>
> The staff finds that the applicant has considered the appropriate site phenomena in establishing the technical specifications and emergency operations for SSCs important to safety. The staff has generally accepted the methodologies used to determine the technical specifications and emergency operations, as documented in safety evaluation reports for previous licensing actions. Accordingly, the staff concludes that the use of these methodologies results in design bases containing margin sufficient for the limited accuracy, quantity, and period of time in which the data have been accumulated. The staff concludes that the identified design bases meet the requirement(s) of 10 CFR 50.36, 10 CFR Part 50, Appendix A, General Design Criteria 2, and 10 CFR 100.10(c) [or 10 CFR 100.20(c)], with respect to establishing the design basis for SSCs important to safety.

2. Early Site Permit Reviews

The following statements should be preceded by a summary of the site characteristics to be included in any ESP that might be issued for the proposed site:

> As set forth above, the applicant has presented and substantiated sufficient information pertaining to the technical specifications and emergency operations at the proposed site. Section 2.4.14, "Technical Specifications and Emergency Operation Requirements," of NUREG-0800, Standard Review Plan, provides that the site safety analysis report should address the requirements of 10 CFR 50.36, and Parts 52 and 100 as they relate to identifying and evaluating flood protection measures at the site. Further, the applicant considered the most severe natural

phenomena that have been historically reported for the site and surrounding area while describing the hydrologic interface of the plant with the site, with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated. The staff has generally accepted the methodologies used to determine the severity of the phenomena reflected in these site characteristics, as documented in safety evaluation reports for previous licensing actions. Accordingly, the staff concludes that the use of these methodologies results in site characteristics containing sufficient margin for the limited accuracy, quantity, and period of time in which the data have been accumulated. In view of the above, the site characteristics previously identified are acceptable for use in establishing the design bases for SSCs important to safety, as may be proposed in a COL or CP application.

Therefore, the staff concludes that the identification and consideration of the climatic site characteristics set forth above are acceptable and meet the requirements of 10 CFR 52.17(a)(1)(vi), 10 CFR 100.20(c), and 10 CFR 100.21(d).

In view of the above, the staff finds the applicant's proposed site characteristics related to hydrology for inclusion in an ESP for the applicant's site, should one be issued, acceptable.

3. Design Certification Reviews

The following statement should be preceded by a list of the applicable site parameters used for the plant:

The NRC staff acknowledges that the applicant has selected the site parameters referenced above for plant design inputs (a subset of which is included as Tier 1 information), but does not claim that they are representative of any particular percentile of possible sites in the United States, and does not assert the acceptability of the basis for the choice of values with respect to siting. Technical specifications and emergency operations are site-specific and will be addressed by the COL applicant. This should include the provision of information sufficient to demonstrate that the design of the plant falls within the site parameters specified by the siting review.

V. IMPLEMENTATION

The staff will use this SRP section in performing safety evaluations of DC applications and license applications submitted by applicants pursuant to 10 CFR Part 50 or 10 CFR Part 52. Except when the applicant proposes an acceptable alternative method for complying with specified portions of the Commission's regulations, the staff will use the method described herein to evaluate 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.

VI. REFERENCES

1. 10 CFR 50.36, "Technical Specifications."

2. 10 CFR Part 50, Appendix A, General Design Criterion 2, “Design Bases for Protection Against Natural Phenomena.”

3. 10 CFR Part 100, “Reactor Site Criteria.”

4. Regulatory Guide 1.29, “Seismic Design Classification.”

5. Regulatory Guide 1.59, “Flood Design Basis for Nuclear Power Plants.”

6. Regulatory Guide 1.102, “Flood Protection for Nuclear Power Plants.”

7. ANSI/ANS-2.8-1992, “Determining Design Basis Flooding at Power Reactor Sites.” Historical Technical Reference.

PAPERWORK REDUCTION ACT STATEMENT

The information collections contained in the Standard Review Plan are covered by the requirements of 10 CFR Part 50 and 10 CFR Part 52, and were approved by the Office of Management and Budget, approval number 3150-0011 and 3150-0151.

PUBLIC PROTECTION NOTIFICATION

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

SRP Section 2.4.14
Description of Changes

This SRP section affirms the technical accuracy and adequacy of the guidance previously provided in Draft Revision 3, dated April 1996 of this SRP. See ADAMS accession number ML052070264.

In addition, this SRP section was administratively updated in accordance with NRR Office Instruction, LIC-200, Revision 1, "Standard Review Plan (SRP) Process." The revision also adds standard paragraphs to extend application of the updated SRP section to prospective submittals by applicants pursuant to 10 CFR Part 52.

The technical changes are incorporated in Revision 3, dated 2007:

REVIEW RESPONSIBILITIES - Reflects changes in review branches resulting from reorganization and branch consolidation. Change is reflected throughout the SRP.

I. AREAS OF REVIEW

1. An introductory paragraph was added at the beginning of this section.

2. Review was added of seismic and non-seismic criteria during determination of flooding protection requirements.

3. The Review Interfaces subsection in this section was rewritten to provide a list of other SRP sections which interface with the review in this section.

4. A statement that the review of site parameters for DC applications and COL applications that reference a DC is performed in SRP Section 14.3 was added to the Review Interfaces subsection.

5. A statement that identification of safety-related structures and equipment is performed under SRP Section 3.4.1 was added to the Review Interfaces subsection.

6. A statement that review of design of seismic category I structures that may affect the determination of technical specifications and emergency operation requirements is performed in SRP Section 3.4.2 was added to the Review Interfaces subsection.

7. A statement that review of the effects of adverse environmental conditions on the safety function of the ultimate heat sink is performed in SRP Section 9.2.5 was added to the Review Interfaces subsection.

8. A statement indicating interface of this section with other hydrology SRP sections was added to the Review Interfaces subsection.

II. ACCEPTANCE CRITERIA

1. Specific acceptance criteria for each item in area of review were rewritten to realign with the Commission's regulations.

2. The Acceptance Criteria section was updated to include requirements of 10 CFR Part 100.23(d) as it applies to determination of plant design bases with respect to seismic site characteristics.

3. The Acceptance Criteria section was updated to include requirements of 10 CFR Part 100 as it relates to site evaluations in 10 CFR 100.10(c) for applications before January 10, 1997, and 10 CFR 100.20(c) for applications on or after January 10, 1997, in the Acceptance Criteria.

4. The Acceptance Criteria section was updated to include currently available best practices to supplement recommendations of Regulatory Guide 1.59.

III. REVIEW PROCEDURES

1. Introductory paragraphs were added at the beginning of this section to provide guidance related to application of the procedures described therein to different types of applications.

2. This section was rewritten to provide specific guidance related to each area of review.

IV. EVALUATION FINDINGS

1. This section was rewritten to provide specific guidance related to each type of application. Sample statements addressing evaluation findings for each application type were also rewritten.

V. IMPLEMENTATION

1. This section was revised to indicate that this SRP section will also be used in reviews of design certification applications.

VI. REFERENCES

1. The References list was updated.