



U.S. NUCLEAR REGULATORY COMMISSION

STANDARD REVIEW PLAN

APPENDIX 8-B¹ GENERAL AGENDA, STATION SITE VISITS

An important part of the review at the operating license stage is a site visit. It is preferable to have the site visit sometime before the completion of the drawing review. The purpose of the site visit is to supplement the review of the design based on the drawings and to evaluate the actual implementation of the design as installed at the site. The Regional Office having jurisdiction over the plant under consideration should be notified ahead of time of the visit so that the regional inspectors can become familiar on a first-hand basis with findings that may require followup action. Since proper implementation of design is the ultimate goal of the technical review process, the importance of a site visit is self-evident. The following is a typical general agenda that may be used as a guide for developing a specific agenda for the plant under review.

1. Preliminary Discussions
 - A. Unresolved items.
 - B. Plant layout for touring.
 - C. Special interest areas.

2. Control Room
 - A. General layout.

¹ Formerly part of SRP Section 7 Appendix 7B.

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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 the Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition)." Not all sections of the standard format have a corresponding review plan section. The SRP sections applicable to a combined license application for a new light-water reactor (LWR) will be based on Regulatory Guide 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)," until the SRP itself is updated.

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.

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- B. Diesel control board.
- C. Cabling in control room (separation, loading, etc.).
- D. Engineered safety feature initiation and bypass switch arrangements and status panels.
- E. Power system control and mimic panel.
- F. DC system monitoring and alarms.
- G. **Offsite communication/protocol with grid operator.**

3. Cable Runs and Cable Spreading Area

- A. General layout.
- B. Degree of separation.
- C. Diverse wiring.
- D. Tray or wireway density (percentage fill).
- E. Fire detection and protection.
- F. Penetrations and cable terminations.
- G. Identification of cables and raceways.
- H. **Identification of safety-related cable locations susceptible to submergence and design measures to prevent failure due to moisture intrusion.**

4. Switchgear Rooms

- A. General layout.
- B. Physical and electrical separation of redundant units and incoming independent power supply circuits [e.g., onsite, offsite (preferred), alternate AC].
- C. Potential for damage due to fire, missiles, etc.
- D. Cable installation.
- E. Fire protection.

5. Battery and Charger Installations

- A. General layout.
- B. Physical and electrical separation.
- C. Potential for damage due to fire, missiles, etc.
- D. Fire protection.
- E. Ventilation protection.
- F. Monitoring instrumentation and alarms.

6. Diesel Generators

- Applies to:**
- 1) safety-related DG's in Active Design plants
 - 2) non-safety-related and ancillary DG's in Passive Design plants
 - 3) Appendix R DG's

- A. General layout.
- B. Physical and electrical separation of redundant units.
- C. Fuel supply system.
- D. Fire protection.
- E. Diesel generator local control panel(s) and instruments and controls.
- F. Auxiliary systems - starting air, combustion air, ventilation, engine cooling, etc.
- G. Potential for damage and degradation due to flooding, missiles, dust, etc.

7. Instrument Piping
 - A. Potential for damage due to fire, flooding, etc.
8. Switchyard
 - A. General layout.
 - B. Physical and electrical separation of transmission circuits, buses, breakers, and control circuits.
 - C. Relay house.
 - D. Control power supplies (AC and DC).
 - E. Potential for damage due to fire, missiles, etc.
 - F. Fire detection and protection.
 - G. **Lightning protection systems.**
9. Reactor Building
 - A. General layout.
 - B. Potential for cable damage due to fire, missiles, pipe breaks etc.
 - C. Separation of piping and cable to redundant equipment.
10. Turbine Building
 - A. General layout.
 - B. Turbine overspeed protection systems: instrumentation arrangement and layout.
 - C. Provisions for testing overspeed protection system; turbine stop, control, intercept, and extraction steam valves.
 - D. Potential for cable damage due to fire, missiles, pipe break, etc.
 - E. Turbine bypass system, general arrangement.
 - F. **Generator circuit breakers or load-break switches.**
11. Shared Systems for Multi-Unit Sites
 - A. Equipment location and potential for damage.
 - B. Control room control and assignment to accident unit.
 - C. Status information provided to all operators.
 - D. Availability upon completion of first unit.
12. Main Steam Lines
 - A. Flow path below MSIVs - type of shutoff valves and source of control (local, control room, etc.).
13. Shutdown Outside Control Room
 - A. Remote shutdown panels arrangement, separation, and layout.
 - B. Potential for damage due to fire, missiles, etc.
 - C. Identification of control and monitoring equipment.

14. Relay Room
- A. General layout.
 - B. Nuclear and reactor protection instrument cabinet arrangement, separation, and identification.
 - C. Potential for damage due to fire, missiles, etc.

15. ESF Systems and Pump Rooms
- A. General layout.
 - B. Physical and electrical separation of redundant equipment.
 - C. Potential for damage due to fire, missiles, etc.
 - D. Cable and raceway layout.
 - E. Identification of cables, raceways, and equipment.

16. Vital Instrumentation Power Supply Installation
- A. General layout.
 - B. Physical and electrical separation.
 - C. Potential for damage from fire, missiles, etc.
 - D. Monitoring instrumentation.
 - E. Cable and raceway layout.
 - F. Identification of cables, raceways, and equipment.
 - G. **Grounding and EMI/RFI protection.**

17. Alternate AC Source(s) for Station Blackout

Applies to Active Design plants that have elected to provide an AAC source for SBO.

- A. General layout, including buildings housing generating unit(s) or portions thereof.
- B. Fuel supply system.
- C. Physical separation and electrical isolation (at interfaces with the onsite power system) of power circuits, buses, breakers, and control circuits from offsite and onsite power supplies.
- D. Control power supplies.
- E. Potential for damage due to fire, missiles, etc.
- F. Control panel(s) and associated instruments and controls.
- G. Auxiliary systems - starting air, combustion air, ventilation, engine cooling, etc.
- H. Fire detection and protection.

18. Plant Lighting System
- A. General layout and arrangement including separation and isolation from Class 1E circuits and equipment where applicable.
 - B. Identification of cables, raceways, and equipment.
 - C. Lighting power supply arrangement in safety-related areas and access routes to/from such areas.
 - D. Equipment location and potential for damage.

For combined license (COL) applications under 10 CFR Part 52, site visits may be conducted in conjunction with inspection activities rather than reviews of the application. The agenda for such

site visits should appropriately reflect the design set forth in the safety analysis report, including inspections, tests, analysis, and acceptance criteria (ITAAC), site interface requirements, and combined license action items, to ensure that the licensee's implementation of the design is consistent with relevant regulatory requirements, inspection/review criteria, and commitments. SRP Section 14.3 (proposed) contains procedures for the review of site specific information, interface criteria, and ITAAC during the review of the license application.

PAPERWORK REDUCTION ACT STATEMENT

The information collections contained in the draft 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 8B
Description of Changes

This SRP section affirms the technical accuracy and adequacy of the guidance previously provided in (Draft) Revision 1, dated April 1996 of this SRP. See ADAMS accession number ML052070494.

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 1, dated 200X:

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

1. Added a site visit agenda item under the "Control Room" category for offsite communication/protocol with grid operator.
2. Added a site visit agenda item under the "Cable Runs and Cable Spreading Area" category for safety-related cable locations susceptible to submergence.
3. Added site visit agenda item under the "Switchyard" category for lightning protection systems.
4. Added site visit agenda item under the "Turbine Building" category for generator circuit breakers or load-break switches.
5. Added a site visit agenda item under the "Vital Instrumentation Power Supply Installation" category for grounding and EMI/RFI protection
6. Added an applicability note to site visit category of agenda items for "Alternate AC Sources for Station Blackout".
7. Added applicability note to "Diesel Generators" site visit category.
8. Added site visit guidance for combined license applications.