



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

9.5.2 COMMUNICATIONS SYSTEMS

REVIEW RESPONSIBILITIES

Primary - Power Systems Branch (PSB)

Secondary - None

I. AREAS OF REVIEW

The PSB review of the communication system is limited to that portion of the system used in intra-plant and plant-to-offsite communications during transient, fire and accident conditions. The system is reviewed with respect to the following considerations: capability of the system to provide effective intra-plant communications and effective plant-to-offsite communications during normal plant operations and during transient, fire, and accident conditions, including loss of offsite power.

In the review of the communication system, the PSB will coordinate evaluations of other branches that interface with the overall review of the system as follows: The Emergency Preparedness Licensing Branch verifies that the offsite communication system provided will satisfy emergency plan requirements for accident conditions, including notification of personnel and implementation of evacuation procedures as part of their primary review responsibility for SRP Section 13.3. The Procedures and Test Review Branch determines the acceptability of the preoperational and startup tests as part of their primary review responsibility for SRP Section 14.0.

The review for fire protection is coordinated and performed by the Chemical Engineering Branch as part of its primary review responsibility for SRP Section 9.5.1.

For those areas of review identified above that are part of the primary review responsibility of other branches, the acceptance criteria and review procedures are contained in the referenced SRP sections.

II. ACCEPTANCE CRITERIA

Acceptability of the design of the communication system, as described in the applicant's safety analysis report (SAR), is based in part on the degree of

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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.

similarity of the design with that for previously reviewed plants with satisfactory operating experience. There are no general design criteria or regulatory guides that directly apply to the safety-related performance requirements for the design and use of the communication system during normal plant operations and transient conditions. The PSB will use the following criterion to assess the system design capability: the communication system is acceptable if the integrated design of the system will provide effective communication between plant personnel in all vital areas during normal plant operation and during the full spectrum of accident or incident conditions (including fire) under maximum potential noise levels.

III. REVIEW PROCEDURES

The information provided in the SAR pertaining to the design of the communication system will be evaluated to determine that intra-plant communication equipment needed in vital areas during recovery actions from transient, fire or accident conditions is provided. Material will be selected and emphasized from this SRP section as may be deemed appropriate for a particular case.

The design basis, design criteria, system description sections, and the analyses that demonstrate the effectiveness of the system when maximum plant noise levels are being generated during incident and accident conditions are reviewed to verify that the communication system will function effectively. Engineering judgment is used in conjunction with a comparison of the system capabilities with equipment and communication systems provided for previously approved plants. The PSB will accept the communication system if a statement in the SAR commits the applicant to perform a functional test under conditions that simulate the maximum plant noise levels being generated during the various operating conditions, including fire and accident condition, to demonstrate system capabilities.

IV. EVALUATION FINDINGS

The reviewer verifies that sufficient information has been provided and that the his review supports conclusions of the following type, to be included in the staff's safety evaluation report:

The communication system includes all components for intra-plant and plant-to-offsite communications. The scope of review of the communications system for the _____ plant included verification that offsite equipment is capable of providing for notification of personnel and implementation of evacuation procedures, and verification that onsite communications are adequate in the event of an emergency.

The basis for acceptance of the communication system in our review was conformance of the design, design criteria, and design bases to staff positions and industry standards, and the ability of the systems to provide effective communications between plant personnel in all vital areas during the full spectrum of accident or incident conditions under maximum potential noise levels.

The staff concludes that the design of the communications system conforms to the staff's criteria and industry standards and is therefore acceptable.

V. IMPLEMENTATION

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

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.

VI. REFERENCES

None.