



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

SECTION 9.5.2

COMMUNICATIONS SYSTEMS

REVIEW RESPONSIBILITIES

Primary - Auxiliary and Power Conversion Systems Branch (APCSB)

Secondary - Electrical, Instrumentation and Control Systems Branch (EICSB)
 Industrial Security and Emergency Planning Branch (ISEPB)I. AREAS OF REVIEW

The APCSB review of the communication system is limited to that portion of the system used in intra-plant and plant-to-offsite communications during 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 accident conditions, including loss of offsite power.

The review of the communication system involves secondary review evaluations performed by other branches. The conclusions from their evaluations are used by the APCSB to complete the overall evaluation of the system. The evaluations provided by other branches are as follows. The ISEPB verifies that the offsite communication system provided will satisfy emergency plan requirements, including notification of personnel and implementation of evacuation procedures (Standard Review Plan 13.3). The EICSB will determine, upon request, the adequacy of the communication system with respect to its dependency upon a reliable power source during various operating conditions.

II. ACCEPTANCE CRITERIA

Acceptability of the design of the communication system, as described in the applicant's safety analysis report (SAR), is based on the degree of 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 communication system. The APCSB 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 the full spectrum of accident or incident conditions under maximum potential noise levels.

 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 Revision 2 of 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. 20546.

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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 or accident conditions is provided. The reviewer will select and emphasize material from this review plan, as may be 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. The reviewer uses engineering judgment and compares the system capabilities with equipment provided for previously approved plants. The APCSB 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 the accident condition, to demonstrate system capabilities.

IV. EVALUATION FINDINGS

The reviewer verifies that sufficient information has been provided and that 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 review has determined the adequacy of the applicant's proposed design criteria and bases for the communication system and the requirements for all conditions of plant operation. (CP)] [The review has determined that the design of the communications system and auxiliary supporting systems is in conformance with the design criteria and bases. (OL)]

"The basis for acceptance in the staff review has been conformance of the applicant's designs, design criteria and design bases for the communications system and necessary auxiliary supporting systems 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 all applicable staff positions and industry standards and is acceptable."

V. REFERENCES

1. None.

SRP 9.5-3