

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

SECTION 9.1.4

FUEL HANDLING SYSTEM

REVIEW RESPONSIBILITIES

Primary - Auxiliary Systems Branch (ASB)

Secondary - Structural Engineering Branch (SEB)  
Mechanical Engineering Branch (MEB)  
Materials Engineering Branch (MTEB)  
Instrumentation and Control Systems Branch (ICSB)  
Radiological Assessment Branch (RAB)  
Power Systems Branch (PSB)

I. AREAS OF REVIEW

The ASB reviews the fuel handling system (FHS) consisting of all components and equipment used in moving fuel from the receiving of the new fuel through the shipping of the spent fuel from the plant site to assure conformance with the requirements of Central Design Criteria 2 and 5. The design layout, which shows the functional geometric layout of the handling equipment, including the areas of movement over and around the fixed locations of safety-related facilities during fuel handling, is reviewed to determine that the various handling operations can be performed safely. The main emphasis in the FHS review is on critical load handling in which inadvertent operations or equipment malfunctions, either separately or in combination, could cause a release of radioactivity or prevent safe shutdown of the reactor.

1. The ASB reviews the transporting, hoisting, and rigging operations in the fuel handling system as to methods, selection of handling equipment, and safety devices.
2. The ASB reviews the design of the FHS with respect to the following aspects of individual components and the integrated system:
  - a. Performance and load handling requirements specified for equipment.
  - b. Handling control features.
  - c. The methods and equipment for transferring fuel assemblies from the reactor core to the storage location.
  - d. The methods and equipment for transferring stored fuel to the spent fuel shipping cask.

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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 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.

Copies of standard review plans may be obtained by request to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Attention: Office of Nuclear Reactor Regulation. Comments and suggestions for improvement will be considered and should also be sent to the Office of Nuclear Reactor Regulation.

"The potable and sanitary water systems (PSWS) include all components and piping from the supply connection to the municipal or other water source to all points of discharge to sewage facilities or other plant systems."

"Based on our review of the applicant's design criteria, and design bases for the potable and sanitary water systems, we conclude that acceptable design provisions have been made to prevent the inadvertent contamination of the systems with radioactive material, and therefore find the proposed design of the potable and sanitary water systems to be acceptable."

V. REFERENCES

None