

## SNUPPS

Standardized Nuclear Unit  
Power Plant System

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Executive Director

February 17, 1984

SLNRC 84- 0054 FILE: 0278  
SUBJ: Reactor Cavity Shielding

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Docket Nos. STN 50-482 and STN 50-483

- References:
1. NRC letter (B. Youngblood) to Union Electric (D. Schnell) and Kansas Gas & Electric (G. Koester) dated January 31, 1984: Replacement of Water Bags for Radiation Shielding
  2. SLNRC 83-0045, dated August 30, 1983: Alternate Pipe Break Criteria
  3. NRC letter (Eisenhut) to all operating PWR licensees, construction permit holders, and applicants for construction permits, dated February 1, 1984: Safety Evaluation of Westinghouse Topical Reports Dealing with Elimination of Postulated Pipe Breaks in PWR Primary Main Loops (Generic Letter 84-04)

Dear Mr. Denton:

In response to your letter dated January 31, 1984 (Reference 1) regarding replacements for water bags for reactor cavity shielding, the following clarifications are provided to Reference 2.

1. Our proposal to utilize a form of rigid shielding is contingent on acceptance by the NRC of the conclusion that a large break in a reactor coolant system (RCS) pipe within the reactor cavity need not be postulated. The technical bases for this conclusion have been presented by representatives of Westinghouse, Lawrence Livermore Laboratories, and other industry organizations to the NRC Staff and the ACRS, as summarized in our referenced letter. SNUPPS has contracted with Westinghouse to prepare documentation confirming that the conclusions reached on a generic basis are applicable to SNUPPS. We expect to submit this documentation for NRC review by April 1, 1984. An exemption request will also be submitted in accordance with the procedure described in Reference 3. The existing leakage detection

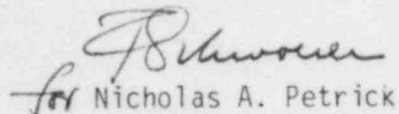
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detection systems of the SNUPPS plants, which fully comply with Regulatory Guide 1.45, satisfy the leakage detection requirements described in Reference 3. Thus all of the requirements of Reference 3 will be satisfied by the SNUPPS Utilities.

2. Presuming acceptance by the NRC of the conclusion that RCS pipe breaks in the SNUPPS plants need not be postulated, the subcompartment analysis of the reactor cavity to satisfy Standard Review Plan Section 6.2.1.2 can be limited to the pressurization effect of leakage from a postulated, detectable crack in the RCS piping.
3. The rigid shielding for the reactor cavity will meet all three of the conditions stated in Reference 1, subject to the clarification that stainless steel is considered an acceptable material to contain the shielding material. Activation of stainless steel in this application has been determined to be sufficiently low so as not to constitute a handling and storage problem.

Very truly yours,

  
for Nicholas A. Petrick

MHF/nld8b24&25

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