SNUPPS

Standardized Nuclear Unit Power Plant System

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Executive Director

January 7, 1983

SLNRC 82-002 FILE: 5790
SUBJ: NUREG 0737 Item II.D.1

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

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

Reference: 1. NRC (Eisenhut) letter to all licensees of operating plants and applicants for operating licenses and holders of construction permits dated September 29, 1981, Revised Schedule for Completion of TMI Action Plan Item II.D.1, Reflief and Safety Valve Testing (Generic letter No. 81-36).

2. SLNRC 82-017 from SNUPPS, NUREG 0737 Item II.D.1, dated 3/26/82.

3. SLNRC 82-023 from SNUPPS, NUREG 0737 Item II.D.1, dated 4/29/82.

4. SLNRC 82-040 from SNUPPS, NUREG 0737 Item II.D.1, dated 10/20/82.

Dear Mr. Denton:

NUREG 0737 Item II.D.1, as clarified by Reference 1 and 2, established a requirement for each pressurized water reactor (PWR) to submit a plant specific report for safety and relief valve qualification. Plant specific information on the Garrett relief valve qualification was provided in Reference 3, which completed the SNUPPS documentation on the relief valve qualification. Reference 4 provided the plant specific evaluation of the Crosby 6M6 safety valves used by SNUPPS and completed the SNUPPS documentation on the safety valve qualification.

Attached to this letter is the plant specific evaluation of the SNUPPS safety and relief valve piping and loads on the piping supports. This evaluation includes the ASME III Class 1 piping upstream of the valves and the ANSI B31.1 downstream piping. The analytical methods used for the evaluation were compared to the actual EPRI test data (Test 908 for cold loop seal conditions and Test 917 for hot loop seal conditions) with good results as shown in the attachment.

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Based on an earlier review of the EPRI test results and preliminary analysis of the plant specific safety and relief valve piping, the decision was made to maintain a hot loop seal on the pressurizer safety valves, by insulating the loop seal piping, in order to reduce the piping loads associated with valve actuation. This results in loop seal design conditions consistent with those for EPRI Test 917, i.e. loop seal temperature of approximately 300F at the valve, and is the basis for the final analysis presented in the attachment.

The operability and structural integrity of the SNUPPS plant specific design have been ensured for all applicable loadings and load combinations, including all pertinent safety and relief valve discharge cases. The resultant piping loads have been used as the design parameters for the associated piping supports.

In addition, acceptable operability of the Crosby 6M6 safety valves for their intended application with a hot loop seal is documented in Reference 4.

This submittal completes all of the SNUPPS commitments to meet the requirements of NUREG 0737 Item II.D.1, as clarified by Reference 1.

Very truly yours,

Nicholas A. Petrick

Attachment

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