

SNUPPS

Standardized Nuclear Unit
Power Plant System

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Nicholas A. Petrick
Executive Director

September 28, 1979

SLNRC 79-15 FILE: 0491.10.2
SUBJ: Qualification of Control Systems

Mr. Boyce Grier
Director, Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pennsylvania 19406

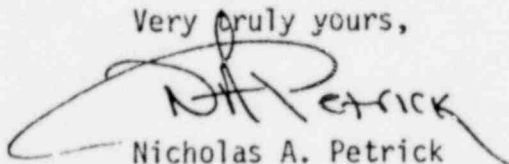
Docket Nos.: STN 50-482, STN 50-483, STN 50-485, STN 50-486

Dear Mr. Grier:

On August 30, 1979, SNUPPS informed the Nuclear Regulatory Commission, Region I Office of Inspection and Enforcement, of a potential deficiency involving the qualification of control systems. The information was communicated by telephone to Mr. Bateman of your staff pursuant to 10 CFR 50.55(e). The subject of our report was the same as that later promulgated by the NRC in IE Information Notice No. 79-22.

Westinghouse determined that, due to the environment caused by a postulated high energy line break, certain non-safety grade equipment could malfunction. The combination of the pipe break and the non-safety grade equipment failure may have more severe consequences than those presented in Safety Analysis Reports. The enclosure to this letter provides a summary of each of the four problem areas identified by Westinghouse as they pertain to the SNUPPS design. As noted in the enclosure, a supplemental report on this matter will be submitted in about three months.

Very truly yours,


Nicholas A. Petrick

RLS/dck
Enclosure

cc: Mr. James G. Keppler, Director, Region III, USNRC
✓ Mr. Karl V. Seyfrit, Director, Region IV, USNRC
Mr. Victor Stello, Jr., Director, Office of Inspection and
Enforcement, Washington, D.C.

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Enclosure

SNUPPS REPORT ON POTENTIAL SIGNIFICANT DEFICIENCY:

QUALIFICATION OF CONTROL SYSTEMS

Westinghouse identified the following four control systems for generic consideration of non-safety grade/safety grade interface interactions:

- a. Steam generator power operated relief valve control system
 - A piping failure in the vicinity of the steam generator relief valves could be assumed to cause the valves to stick open. The combination of the pipe failure, an assumed single failure, and the stuck valve(s) may result in inadequate auxiliary feedwater flow.
- b. Pressurizer power operated relief valve control system
 - A failure of secondary system piping inside the containment is assumed to cause pressurizer power operated relief valves (PORV) to open. The resultant secondary break coincident with PORV opening may have more severe consequences than those accidents previously analyzed.
- c. Main feedwater control system
 - A small secondary system break could affect normal feedwater flow control causing low steam generator levels prior to protective actions for the break.
- d. Automatic rod control system
 - An intermediate size high energy line break is assumed to affect the rod control system such that the initial conditions previously assumed for the break may not be valid.

The status of each of these matters, as they pertain to the SNUPPS design is summarized below.

- a. The SNUPPS control system and main steam line atmospheric relief valves have been procured as Class IE devices and are environmentally qualified to withstand the effects of a high energy line break. Therefore, no unreviewed safety questions exist for SNUPPS in this regard.
- b. This matter is still under review for the SNUPPS design. One possible resolution is the qualification of pressurizer PORVs to the environment caused by high energy line breaks. SNUPPS is investigating this possibility.

Enclosure
Page Two

c. This matter is still under review for the SNUPPS design.

d. This matter is still under review for the SNUPPS design.

For items b, c, and d above, a supplemental report will be submitted when the review is complete. This additional information should be available in approximately three to four months.