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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

Docket Nos. 50-482
50-483
50-485
50-486

FEB 21 1980

SNUPPS

ATTN: Mr. Nicholas A. Petrick
Executive Director
5 Choke Cherry Road
Rockville, Maryland 20850

Gentlemen:

Subject: Qualification of Control Systems (Your letter SLNRC 80-6 of
February 5, 1980)

Thank you for your letter, referenced above, which forwarded an interim report pursuant to 10 CFR 50.55(e) regarding the subject matter.

Your report will be reviewed and evaluated, and should we require additional information concerning this matter, we will contact you.

Your cooperation with us is appreciated.

Sincerely,

Robert T. Carlson, Chief
Reactor Construction and
Engineering Support Branch

CC:

J. E. Arthur, Chief Engineer, RG&E
C. R. Anderson, Manager, QA, RG&E
Lex K. Larson, Esquire
Gerald Charnoff, Esquire

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SNUPPS

Standardized Nuclear Unit
Power Plant System

5 Choke Cherry Road
Rockville, Maryland 20850
(301) 869-8010

Nicholas A. Petrick
Executive Director

February 5, 1980

SLNRC 80- 6 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

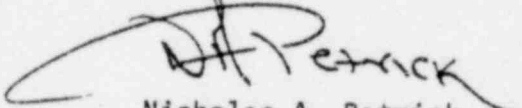
Docket Nos: STN 50-482, STN 50-483, STN 50-485, STN 50-486

Reference: SLNRC 79-15, dated September 28, 1979, same subject

Dear Mr. Grier:

The referenced letter discussed a deficiency involving the qualification of certain control systems. The enclosure to this letter provides a supplemental report on the same subject. The additional descriptions of analyses and qualification programs required for final resolution of this matter will be provided in revisions to the SNUPPS FSAR.

Very truly yours,


Nicholas A. Petrick

RLS/jdk

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

SUPPLEMENTAL SNUPPS REPORT ON POTENTIAL 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.
- b. Pressurizer power operated relief valve control system.
- c. Main feedwater control system.
- d. Automatic rod control system.

SNUPPS notified the NRC I&E Region I office of a potential significant deficiency involving the above systems which, if subjected to an adverse environment, could impact the safety analyses and the adequacy of the protective functions performed by safety grade equipment. The status of the resolution of these potential deficiencies is as follows:

- Item a. The SNUPPS pressure controllers and main steam line atmospheric relief valve have been procured as Class IE devices and are environmentally qualified to withstand the effects of a high energy pipe break. There are no unresolved safety concerns regarding this issue.
- Item b. The SNUPPS pressurizer PORV is currently being redesigned to meet Class IE requirements and will be IEEE 323 qualified to the environment inside containment including high energy line breaks. SNUPPS is currently reviewing this design modification to assure that there are no unresolved safety concerns regarding this issue.
- Item c. Regarding the main feedwater control system on SNUPPS, Westinghouse will revise WCAP-9230 to include the control and protection interaction scenarios and the Model F steam generator design parameters. The revised analysis in the next revision of WCAP-9230 will demonstrate that sufficient operator action time (greater than 30 minutes) exists before corrective action must be taken to inject auxiliary feedwater into the intact steam generators to prevent core uncovering. This analysis will demonstrate that there are no unresolved safety concerns regarding this issue.
- Item d. The SNUPPS power range ex-core detectors and associated in-containment equipment are currently being qualified, per WCAP-8587 definition of seismic and environmental conditions, to the bounding steamline break conditions. Successful qualification of these detectors ensures proper operation of the control system following

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such incidents. If total qualification proves impractical, these detectors will be qualified to a steamline break envelope temperature of 200°F and additional analyses will demonstrate that the high containment pressure set point (6 psig) is reached prior to exceeding 200°F inside containment. This analysis will demonstrate that there are no unresolved safety concerns regarding the automatic rod control system.

Upon completion of the described analyses and qualification programs, appropriate revisions will be made to the SNUPPS FSAR. The schedule for completion of these activities has not been established.