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OG-156
July 25,1985

Dr. C. O. Thomas, Chief
Standardization and Special Projects Branch
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Westinghouse Owner's Group Generic Design (WCAP-10858) of the ATWS Equipment Required for Westinghouse PWR's per 10CFR50.62(c)(1)

Dear Dr. Thomas:

Enclosed are:

1. Twenty-three (23) copies of the Westinghouse Topical Report WCAP-10585, "AMSAC Generic Design Package", June 1985.

2. One (1) copy of Application for Withholding, AW-85-049 (Non-Proprietary).

The ATWS rule, effected on July 26, 1984, requires owners of Westinghouse PWR's to install equipment that is diverse from the reactor protection system to trip the turbine and initiate the auxiliary feedwater system under conditions indicative of an ATWS. This equipment is known as the ATWS mitigation systems actuation circuitry - AMSAC.

In January of 1984, the Westinghouse Owner's Group (WOG), aware that the ATWS rule was imminent, determined that the most efficient means of developing systems that would perform the diverse functions required by the eventual ATWS rule was through a WOG program. The purpose of the program was to develop generic functional designs which would meet the requirements of 10 CFR 50.62 and apply to all of the WOG members. This program was carried out under the direction of the Technical Specification subcommittee. Three functional designs were developed. This permits each utility to select the design which best fits the plant's needs. Factors that may determine the design used at a plant are current control and protection system design, ease and cost of installation.

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The three designs are described in detail in the attached and are summarized below.

The first logic would actuate a turbine trip and auxiliary feedwater flow upon sensing that the steam generator inventory is below the low-low level setpoint. This logic senses conditions indicative of an ATWS event when a loss of heat sink has occurred but will not actuate until after the reactor protection signals should have been generated. This logic is blocked below 70 % rated thermal power to minimize spurious actuations.

The second logic mitigates the consequences of an ATWS loss of heat sink event by initiating AMSAC on low main feedwater flow measurements. This logic is also blocked below 70% of rated thermal power by the turbine load signal to permit startup operation and minimize spurious actuations.

Logic 3 determines that conditions indicative of an ATWS event are occurring by monitoring the feedwater control and isolation values OR gated with the feedwater pump status. This logic is also blocked below 70% of rated thermal power by the turbine load signal to permit startup operation.

Each design meets the requirements of 10 CFR 50.62. As such, it is requested that each design be reviewed for approval in a timely manner for use by the WOG members.

This submittal contains information proprietary to Westinghouse Electric Corporation . In conformance with the requirements of 10CFR Section 2.790 of the Commission's regulations, an application for withholding from public disclosure by the Commission is included with this submittal. Correspondence with respect to the application for withholding or affidavit should reference AW-85-049 and should be addressed to R. A. Wiesemann, Manager, Regulatory and Legislative Affairs, Westinghouse Electric Corporation, P. O. Box 355, Pittsburgh, Pennsylvania 15230.

Should you have any questions, please contact Mr. Mark Burzynski, Chairman, WOG Technical Specification Subcommitte, Tennessee Valley Authority, Watts Bar Nuclear Plant, P.O. Box 800, Spring City TN, 37381. His telephone number is area code 615 365-8761.

The application fee of $150.00 associated with review of this topical report will be submitted under separate cover and reference this submittal.

Very truly yours,

L. D. Butterfield, Chairman
Westinghouse Owners Group

Enclosure
cc: WOG Reps