Docket File

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 11, 1997

52-003

Mr. Nicholas J. Liparulo, Manager
Nuclear Safety and Regulatory Analysis
Nuclear and Advanced Technology Division
Westinghouse Electric Corporation
P.O. Box 355
Pittsburgh, PA 15230

SUBJECT: OPEN ITEMS ASSOCIATED WITH CHAPTER 20 OF THE AP600 SAFETY EVALUATION REPORT (SER)

Dear Mr. Liparulo

The Civil Engineering and Geosciences Branch of the Division of Engineering has completed its review of the AP600 Standard Safety Analysis Report, Section 1.9 through Revision 12, and WCAP-13559, "Operational Assessment Report." The input to the SER for this section has been provided to project management, however, this input contained some open items. These open items have been extracted from the SER and can been found in the enclosure to this letter.

One of the enclosed open items involves the review of a Generic Letter that was issued after revision 1 to WCAP-13559 "Operational Assessment for AP600" was submitted to the staff for review. The updating of WCAP-13559 was addressed in the Draft Safety Evaluation Report as Open Item 20.7-1. Specifically, this Open Item states that the "...inclusion of new bulletins and generic letters should continue until the draft FSER for the AP600 design is issued." The Open Item Tracking System number (1559) associated with this DSER Open Item identifies the NRC status column as "Action N". The staff requests that this status be changed to "Action W" until Westinghouse addresses updating of WCAP-13559.

You have requested that portions of the information submitted in the June 1992, application for design certification be exempt from mandatory public disclosure. While the staff has not completed its review of your request in accordance with the requirements of 10 CFR 2.790, that portion of the submitted information is being withheld from public disclosure pending the staff's final determination. The staff concludes that these followon questions do not contain those portions of the information for which exemption is sought. However, the staff will withhold this letter from public disclosure for 30 calendar days from the date of this letter to allow Westinghouse the opportunity to verify the staff's conclusions. If, after that time, you do not request that all or portions of the information in the enclosures be withheld from public disclosure in accordance with 10 CFR 2.790, this letter will be placed in the Nuclear Regulatory Commission Public Document Room.

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If you have any questions regarding this matter, you may contact me at (301) 415-1132.

Sincerely,

original signed by:

Joseph M. Sebrosky, Project Manager
Standardization Project Directorate
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

Docket No. 52-003

Enclosure: As stated

cc w/enclosure:
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Mr. Nicholas J. Liparulo
Westinghouse Electric Corporation

Docket No. 52-003
AP600

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650.1 **Issue II.D.1. Performance Testing of PWR Safety and Relief Valves**

As discussed in NUREG-0933, Issue II.D.1, addressed the requirements in NUREG-0737 for qualification testing of RCS safety, relief, and block valves under expected operating conditions for design-basis transients and accidents, including ATWS. This issue was resolved by requiring licensees to conduct testing to qualify reactor coolant relief valves, safety valves, block valves, and associated discharge piping.

A safety and relief valve test program was conducted by the EPRI for a group of PWR licensees to respond to the staff recommendations in NUREG-0587 and as clarified in NUREG-0737. The purpose of the program was to develop sufficient documentation and test data so that the participating licensees could demonstrate compliance with the II.D.1 requirements. The results were documented in the EPRI report, EPRI-NP2628-SR, "EPRI PWR Safety and Relief Valve Test Report," December 1982. EPRI also published a guide on how to apply the test results to the evaluation of plant-specific valves. The staff used the test results documented in EPRI-NP-2628-SR as a part of its acceptance criteria in its evaluations of the resolution of Issue II.D.1 for all current operating plants.

In Section 1.9.3 of the SSAR, item (2)(x), Westinghouse states that the AP600 design does not include power-operated relief valves and their associated block valves on the RCS. The safety valve and discharge piping used will either be of similar design as those valves tested and documented in EPRI Report NP-2770-LD ("EPRI/CE PWR Safety Valve Test Report," December 1982), or will be tested in accordance with the guidelines of Issue II.D.1 in NUREG-0737.

In DSER Open Item 20.4-11, the staff requested that Westinghouse clarify an apparent inconsistency in the references to the EPRI test data in Sections 1.9.3 and 1.9.7 of the SSAR. The reference in both of these sections should be EPRI NP-2628-SR, which is the latest report that documents the EPRI test data. Westinghouse has not yet responded to this request through Revision 12 of the SSAR. Therefore, Issue II.D.1 is not resolved for the AP600 design.

650.2 **GL-87-06: Periodic verification of leak tight integrity of pressure isolation valves.**

WCAP-13559, Revision 1, states that this generic letter is addressed in LCOs 3.4.8 and 3.4.9 of the plant TS in SSAR Chapter 16. Amendment 0 of SSAR Chapter 16 deleted LCO 3.4.8, "RCS Pressure Isolation Valve (PIV) Leakage." LCO 3.4.9 is not applicable to PIV leakage. The staff has determined that the resolution of GL-87-006 will ultimately depend upon the resolution of issues identified in a May 28, 1997, letter to Westinghouse entitled "Comment on the AP600 Technical Specifications related to pressure isolation valves".

650.3 **GL-95-07: Pressure locking and thermal binding of safety-related power-operated gate valves.**

WCAP-13559, Revision 1 states that this GL is not applicable because it is a procurement/surveillance issue. The staff does not agree. Although this GL was addressed to licensees of operating plants and plants under construction, the staff's position is that the concerns in this GL should also be addressed during the design stage. Therefore, the staff requests that if the AP600 design contains any safety-related power-operated gate valves, Westinghouse should add a discussion in the SSAR and WCAP-13559 to explain how the Requested Actions in GL-95-007 will be implemented.

650.4 **GL-96-05: Periodic verification of design-basis capability of safety-related motor-operated valves.**

This GL is not addressed in WCAP-13559, Revision 1. Since the staff has included GL-95-05 as a part of its evaluation of the AP600 inservice testing program, this GL should be added to WCAP-13559. In a letter dated March 19, 1997, in response to RAI 210.229, Westinghouse agreed to revise WCAP-13559 to add GL-96-05. Updating of WCAP-13559 is also tied to the resolution of DSER Open Item 20.7-1.

Note: Comments 650.5 through 650.8 are editorial in nature.

650.5 **BL-81-02: Failure of gate-type valves to close against differential pressure.**

In WCAP-13559, Revision 1, Westinghouse states that this bulletin is not applicable to the AP600 design because the issues involved procurement. The staff agrees that this bulletin was addressed to operating plants and plants under construction in 1981. However, since the subject of this bulletin led, in part, to the issuance of Generic Letter (GL) 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance," the staff's position is that the basis for disposition of this issue should be the information in SSAR Section 3.9.6 relative to GL-89-10. The staff has concluded that the commitments in SSAR Section 3.9.6 relative to inservice and qualification testing of motor-operated valves provides an acceptable basis to resolve this issue. Therefore, the Comment for Bulletin 81-02 in WCAP-13559 should be revised to reference the commitments to GL 89-10 in SSAR Section 3.9.6.

650.6 **BL-88-08: Thermal stresses in piping connected to reactor cooling systems.**

WCAP-13559 states that this bulletin is addressed in Sections 3.9.3.1.2 and 5.4.10.1 of the SSAR. Section 5.4.10.1 does not contain this information and should be deleted from the "Comment"

column for BL-88-008 in WCAP-13559. However, the staff has concluded that the information in SSAR Section 3.9.3.1.2 provides an acceptable basis for resolving BL-88-008 for the AP600.

650.7 **GL-89-04: Guidance on developing acceptable inservice testing programs.**

Westinghouse states that this generic letter is addressed in Sections 5.2.4 and 6.6 of the SSAR. The staff's evaluation and acceptance of the AP600 inservice testing program was based on the information in SSAR 3.9.6. Therefore, GL-89-004 is resolved for the AP600. SSAR Section 3.9.6 should be added in the "Comment" under GL-89-004 in WCAP-13559.

650.8 **GL-89-10: Safety-related motor operated valve testing and surveillance**

Westinghouse states that this generic letter is not applicable to the AP600 design because it involves procurement and surveillance issues; however, the generic letter is addressed in Section 3.9.6.2 of the SSAR. The staff's position is that this generic letter is applicable to the AP600. Therefore, the statement in the "Comment" under GL-89-10 should be revised. The staff's evaluation of the information in SSAR 3.9.6 relative to motor-operated valve testing and surveillance provides the basis for the staff to conclude that GL-89-10 is resolved for the AP600.