



52-003

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

November 4, 1996

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

SUBJECT: STAFF RESPONSE TO SEVERAL REQUEST FOR ADDITIONAL INFORMATION
(RAI) RESPONSES IN WESTINGHOUSE LETTER NSD-NRC-96-4823 DATED
SEPTEMBER 20, 1996

Dear Mr. Liparulo:

The Nuclear Regulatory Commission (NRC) Containment Systems and Severe Accident Branch (SCSB) has reviewed Westinghouse letter dated September 20, 1996, which is in response to certain staff RAIs. Discussions via meetings and telephone conferences between Westinghouse and the SCSB staff and its consultants have been held frequently to discuss the WGOthic computer code and passive containment cooling system (PCS). Provided below is the staff evaluation of certain responses in the September 20, 1996 letter.

In letter NSD-NRC-96-4823, Westinghouse provided responses to RAIs, including RAI# 480.330, 480.378-380, and 480.396. These responses reference the following documents:

- (1) D. R. Spencer, "Accident Specification and Phenomena Evaluation for AP600 Passive Containment Cooling System," NSD-NRC-96-4643, February 12, 1996.
- (2) D. R. Spencer, "Scaling Analysis for the AP600 Containment Pressure During Design Basis Accidents," NSD-NRC-96-4762, July 1, 1996.
- (3) J. S. Narula, "Assessment of Mixing and Stratification Effects on AP600 Containment," NSD-NRC-96-4763, July 1, 1996.

Reference 1 is used to respond to RAI# 480.396, which requested clarification on presentation material from the March 29 and 30, 1995, Advisory Committee for Reactor Safeguards (ACRS) meeting referenced in WCAP-14382, "WGOthic Code Description and Validation." The staff has provided feedback to Westinghouse on the Reference 1 structure, as well as other editorial and clarification issues. Westinghouse has informed the staff that it is revising this report. In Reference 1, Westinghouse used

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materials (e.g., steel, concrete, and PCS cooling water), structures (e.g., shell, baffle, and baffle supports), and regions (e.g., external atmosphere, in-containment refueling water storage tank (IRWST), and break pool) to evaluate the AP600. It is the staff's understanding that the revised report will be based on spacial regions, a more common approach. A preliminary version of the revised structure was provided to the ACRS at the May 1996 meeting. The response to RAI# 480.396 should not depend on a report that is under revision. This response should be withdrawn until such time that it can be answered in accordance with the revised phenomena evaluation report and the report is submitted to the staff.

The responses to RAI# 480.330, 480.378-380 refer to References 2 and 3. The staff has provided feedback to Westinghouse on Reference 2 identifying 52 items of concern including errors and omissions in the scaling formulation. The staff has provided feedback to Westinghouse on Reference 3, which was submitted as a draft chapter to WCAP-14407, "WGOTHIC Application to AP600," identifying 143 items of concern with the mixing and stratification report. The WGOTHIC Application to AP600 report, submitted by letter dated September 10, 1996, did not contain revisions based on these items. In both cases, Westinghouse has informed the staff that these two reports will be revised to incorporate the staff's comments on the preliminary versions. Reference 2 will be a separate report and Reference 3 will be a revised Section 9 in WCAP-14407. Knowing that these reports will be revised, the responses to these RAIs should be withdrawn until such a time that they can be answered in accordance with the revised reports and the reports are submitted to the staff.

The staff can not accept, as references, material that is known to be out of date or that contains known errors. If Westinghouse does not prefer to withdraw these RAI responses, then the staff will issue the comments provided on References 2 and 3 as formal RAIs. It may be necessary to reopen the reviews of the Reference 2 and 3, since the review was performed in a cursory manner once the staff was informed that revisions would be made to these reports. The staff would also have to reopen its review of Reference 1 to formalize additional RAIs for that report.

It is also noted that these same three reports are used in support of conclusions presented in WCAP-14407. We request you review this report and update any necessary information and submit it for staff review.

November 4, 1996

If you have any questions regarding this matter, you can contact me at (301) 415-8548.

Sincerely,

original signed by:

Diane T. Jackson, Project Manager
Standardization Project Directorate
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

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cc: See next page

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Docket No. 52-003
AP600

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