Westinghouse **Energy Systems** Electric Corporation Pittsburgh Pennsylvania 15230-0365 April 19, 1991 AW-91-151 Document Control Desk U.S. Nuclear Regulatory Commission Washington, DC 20555 Attention: Lynne Sapp, Planning, Program and Management Support Branch Reference: Letter from S. Tritch to Lynne Sapp, NS-NRC-91-3582, dated April 19, 1991 Subject: Submittal of WCAP-10924-P, Revision 2, Volume 2, Addendum 3 Dear Ms. Sapp: The subject document transmitted in the referenced letter contains information proprietary to the Westinghouse Electric Corporation. The material will not be employed as a part of a license application or other action identified in 10CFR2.790(a) at this time. It will be separately submitted with an Application for Withholding accompanied by an Affidavit meeting the requirements of 10CFR2.790(b) prior to such use. Accordingly, we request that the material be treated as proprietary 'nformation within the provisions of 10CFR9.5(4), "Freedom of Information Act Regulations." If there is a need to make public disclosure of the material prior to a separate Westinghouse submittal for docket in accordance with the provisions of 10CFR2.790(a), please notify Westinghouse prior to making a disclosure determination. Correspondence with respect to the proprietary aspects of this submittal should reference AW-91-151 and should be addressed to the undersigned. 1 m fr Q. O. O i Q. Very truly yours, Ronald P. DiPiazza, Manager Operating Plant Licensing Support cc: M. P. Siemien, Esq. Office of the General Counsel, NRC 9104290085 91041 1577H:RDA/041991 TOPRP EMVWE



Westinghouse Electric Corporation

**Energy Systems** 

Nuclear and Advanced Technology Division

Box 355 Pittsburgh Pennsylvania 15230 0355

NS-NRC-91-3582 \*\*
NS-SAT-THA-91-084
April 19, 1991

Document Control Desk U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Attention: Lynne Sapp, Planning, Program, and Management Support Branch

Subject: Submittal of WCAP-10924-P. Revision 2, Volume 2, Addendum 3

Dear Ms. Sapp:

Enclosed are five (5) copies of WCAP-10924-P, Revision 2, Volume 2; "Westinghouse Large Break LOCA Best Estimate Methodology: Application to Two-Loop PWRs Equipped with Upper Plenum Injection," Addendum 3, "Upper Plenum Injection Model Improvement" [Proprietary].

The enclosed addendum to the technical report is submitted for NRC review and approval. The report presents and justifies an improved model for Upper Plenum Injection (UPI) in Westinghouse two-loop pressurized water reactors for use in the WCOBRA/TRAC thermal-hydraulics code. In addition, several corrections to WCOBRA/TRAC, dealing primarily with interfacial drag relationships for gap flows, are described and justified. A code uncertainty evaluation is provided. Finally, Appendix K and Superbounded large break LOCA calculations are presented for a typical two-loop PWR using the new UPI model and the corrected code.

Timely review of this report is requested to support fuel reloads and ongoing analyses for several UPI plants.

If you have any questions, please contact either Mr. R. D. Ankney at (412) 374-4181 or Dr. L. E. Hochreiter at (412) 374-5158.

Note that at this time, only the proprietary version of this document, appropriately bracketed to identify proprietary information, has been provided. This is consistent with the guidelines given in NUREG-0390. Volume 6, No. 1, "Topical Report Review Status." Westinghouse will submit a corresponding non-proprietary version of the technical report upon receipt of an NRC acceptance letter and SER.

PDR TOPRP EMVWEST

NS-NRC-91-3582 NS-SAT-THA-91-084 April 19, 1991 Page 2

This submittal contains Westinghouse proprietary information of trade secrets, commercial, or financial information which we consider privileged or confidential pursuant to 10CFR9.5 (4). Therefore, it is requested that the Westinghouse proprietary information attached hereto be handled on a confidential basis and be withheld from public disclosure.

This material is for your internal use only and may be used only for the purpose for which it is submitted. It should not be otherwise used, disclosed, duplicated or disseminated, in whole or in part, to any other person or organization outside the Office of Nuclear Reactor Regulation without the express written approval of Westinghouse.

Correspondence with respect to the Affidavit or Application for Withholding Proprietary Information should reference AW-91-151 and should be addressed to R. P. DiPiazza, Operating Plant Licensing Support, Westinghouse Electric Corporation, P.O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

Very truly yours,

S. Tritch, Manager

Nuclear Safety Department

RDA: sm

Enclosure(s)

cc: R. Jones, RSB

F. Orr, RSB