

UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

May 3, 1996

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

SUBJECT: SUPPLEMENT TO DRAFT SAFETY EVALUATION REPORT (DSER) ON AP600 COMPUTER CODES AND TESTING PROGRAM

Dear Mr. Liparulo:

LEAR REGUL

26, 1992, Westinghouse Electric Corporation applied to the U.S. On JI Feguiatory Commission (NRC) for certification of the AP600 standard Nuc. This application was submitted under Part 52 of Title 10 of the Code desigi. of Federal Regulations: Subpart B ("Standard Design Certifications,") and Appendix O, "Standardization of Design: Staff Review of Standard Designs." The staff accepted the application formally as a docketed petition (Docket No. 52-003) for design certification on December 31, 1992.

On November 30, 1994, the NRC issued a DSER on the Westinghouse AP600 design certification application on the bas s of information that had been received by June 30, 1994. At the time the DS. R was being prepared, the Westinghouse test programs and code development and qualification efforts in support of the AP600 design were still in progress. Therefore, it was not possible for the staff to reach any final conclusions on the extent to which those programs met the applicable requirements of 10 CFR Part 52. The staff committed to issue a supplement to the draft safety evaluation report after the testing program and code qualification effort were sufficiently complete and the related documentation had been developed, analyzed, and submitted by Westinghouse to permit adequate staff review.

The staff's review is not yet complete, as discussed below. The staff has, however, prepared the enclosed supplement to the DSER to describe the status of the review. The staff addressed the following three areas of the AP600 testing program and code development and qualification effort:

- acceptability of the AP600 testing program
- quality of the AP600 analysis codes

52-003

acceptability of the analysis codes for evaluating the AP600 design

During the review, the staff made many requests for additional information. You have supplemented the application with information in the AP600 Standard Safety Analysis Report together with other supporting submittals which have been placed on the docket. Unless otherwise noted, this supplement reflects

050020 9605090038) XA 6/6/96

NRC FILE CENTER COPY

Mr. Nicholas J. Liparulo

the staff's review and consideration of information submitted through January 31, 1996. This document has been prepared in accordance with the schedule for the review of the AP600 that was described in SECY-96-068, "Status of the Staff's Review of Advanced Reactor Designs," dated April 1, 1996.

The staff has identified 120 open items and 16 confirmatory items that must be resolved before it can complete the review of the testing program and code development areas of the AP600 design certification application. These items are summarized in Sections 1.6 and 1.7 of the enclosed report. In order to close these items, the staff will require the additional information identified in this report and in applicable requests for additional information information issued by the staff. The staff will provide its conclusions on the AP600 testing program and code development as part of the overall review of the AP600 standard design in the Final Safety Evaluation Report.

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 the enclosed supplement to the DSER does not contain those portions of the information for which exemption is sought. However, the staff will withhold the enclosure 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 enclosure be withheld from public disclosure in accordance with 10 CFR 2.790, the enclosure will be placed in the NRC Public Document Room.

If you have any questions regarding this matter, please contact the project manager, Bill Huffman, at (301) 415-1141.

Sincerely,

original signed by: Brian K. Grimes, Acting Director Division of Reactor Program Management Office of Nuclear Reactor Regulation

Docket No. 52-003

Enclosure: As stated

cc: w/enclosure: See next page

DISTRIBUTION: See next page

DOCUMENT NAME: A:WEST-FWD.LTR (4D AP600 DISK) To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

D: PDST: DRPM PM: PDST : MRPM SC:PDST:DRPM (A) DORPM OFFICE NAME WHuffman RArchitzel 2 TQuay 169 fn Barimes 05/2/96 DATE 05/2/96 05/3/96 05/3/96

OFFICIAL RECORD COPY

Mr. Nicholas J. Liparulo Westinghouse Electric Corporation

cc: Mr. B. A. McIntyre Advanced Plant Safety & Licensing Westinghouse Electric Corporation Energy Systems Business Unit P.O. Box 355 Pittsburgh, PA 15230

> Mr. M. D. Beaumont Nuclear and Advanced Technology Division Westinghouse Electric Corporation One Montrose Metro 11921 Rockville Pike Suite 350 Rockville, MD 20852

Docket No. 52-003 AP600

Mr. John C. Butler Advanced Plant Safety & Licensing Westinghouse Electric Corporation Energy Systems Business Unit Box 355 Pittsburgh, PA 15230

Mr. S. M. Modro Nuclear Systems Analysis Technologies Lockheed Idaho Technologies Company Post Office Box 1625 Idaho Falls, ID 83415

Enclosure to be distributed to the following addressees after the result of the proprietary evaluation is received from Westinghouse:

Mr. Ronald Simard, Director Advanced Reactor Programs Nuclear Energy Institute 1776 Eye Street, N.W. Suite 300 Washington, DC 20006-3706

Mr. James E. Quinn, Projects Manager LMR and SBWR Programs GE Nuclear Energy 175 Curtner Avenue, M/C 165 San Jose, CA 95125

Barton Z. Cowan, Esq. Eckert Seamans Cherin & Mellott 600 Grant Street 42nd Floor Pittsburgh, PA 15219

Mr. Frank A. Ross U.S. Department of Energy, NE-42 Office of LWR Safety and Technology 19901 Germantown Road Germantown, MD 20874

Mr. Ed Rodwell, Manager PWR Design Certification Electric Power Research Institute 3412 Hillview Avenue Palo Alto, CA 94303 Ms. Lynn Connor DOC-Searach Associates Post Ofice Box 34 Cabin John, MD 20818

Mr. John E. Leatherman, Manager SBWR Design Certification GE Nuclear Energy, M/C 781 San Jose, CA 95125

Mr. Sterling Franks U.S. Department of Energy NE-50 19901 Germantown Raod Germantown, MD 20874

Mr. Charles Thompson, Nuclear Engineer AP600 Certification NE-50 19901 Germantown Road Germantown, MD 20874

DISTRIBUTION w/enclosure: *Docket File *PUBLIC PDST R/F BGrimes TQuay FCaruso, 0-8 Fl DJackson MMayfield, T-10 E8 SBahadur, T-9 F33 CAder, T-10 E49 MCunningham, T-10 E50 DMcPherson, 0-8 E2 SDinsmore, 0-10 E4 EThrom, 0-8 D7 LPhillips, 0-8 E23 GHsii, 0-8 E23 JFlack, 0-10 E4 NSaltos, 0-10 E4 J! yons, 0-8 D1 JGuo, 0-8 D1 HWalker, 0-8 D1 ACubbage, 0-8 E23 SHou, 0-7 H15 RRothman, 0-7 H15 FGrubelich, 0-7 E23 KParczewski, 0-7 D4 NTrehan, 0-7 E4 FTalbot, 0-10 A19 JPeralta, 0-10 A19 EMarinos, 0-8 H7 JBongarra, 0-10 D24 CHinson, 0-10 D4 JLee, 0-10 D4 FKantor, 0-9 H15 SShortt, T-9 D6 RMcIntyre, 0-9 Al

*Enclosure held for 30 days WRussell/FMiraglia AThadani, 0-12 G18 GHolahan, 0-8 E2 WDean, 0-17 G21 **RArchitzel** JSebrosky AMurphy, T-10 L1 JGlenn, T-9 E57 FEltawila, T-10 G8 KCampe, 0-8 E2 JKudrick, 0-8 D7 MSnodderly, 0-8 H7 WLong, 0-8 D7 TAttard, 0-8 E23 ALevin, 0-8 E23 MPohida, 0-10 E4 LLois, 0-8 E23 CLi, 0-8 D1 TChandrasekaran, 0-8 D1 JSegala, 0-8 D1 TCheng, 0-7 H15 SLee, 0-7 H15 TChan, 0-7 E23 DFischer, 0-7 E23 GGeorgiev, 0-7 D4 JLazevnick, 0-7 E4 RGramm, 0-10 A1 MReinhart, O-11 E23 HLi, 0-8 H3 GGalletti, 0-10D24 TEssig, 0-10 D4 PMcKee, 0-9 D24 EFox, 0-9 H15 WHodges, T-10 E37 RGallo, 0-9 A1 DMorrison, T-10 F12

BSheron, 0-7 D26 BBoger, 0-10 H5 JMoore, 0-15 B18 TKenyon TBoyce CSerpan, T-10 E63 TMartin, T-9 F33 FCoffman, T-10 E33 WJensen, 0-8 E2 JMonniger, 0-8 H7 ADrozd, 0-8 H7 MRubin, 0-8 E23 TCollins, 0-8 E23 FOrr, 0-8 E23 WHuffman RPalla, 0-10 E4 JRaval, 0-8 D1 SSun, 0-8 E23 KManoly, 0-7 D26 JBrammer, 0-7 H15 SAli, 0-7 H15 RLi, 0-7 E23 RHermann, 0-7 D4 DThatcher, 0-7 E4 RCorriea, 0-10 A19 RLandry, 0-8 E23 AChu, 0-11 E23 REckenrode, 0-10D24 JWigginton, 0-10 D4 JHayes, 0-10 D4 FSkip Young, 0-9 D24 TKing, T-10 E37 LShao, T-10 D20 RDube, 0-9 D24 JHuang, 0-7 H15

RZimmerman, 0-12 G18

DISTRIBUTION w/o enclosure: JBlanton, 0-5 G24