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NSD-NRC-97-4940
DCP/NRC0706
Docket No.: STN-52-003

January 14, 1997

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

ATTENTION: T. R. QUAY

SUBJECT: AP600 DESIGN CERTIFICATION; WESTINGHOUSE POSITION ON
OPEN ITEM 314.

REFERENCE: NRC LETTER, "SUMMARY OF MEETING TO DISCUSS
WESTINGHOUSE AP600 FIRE PROTECTION ANALYSIS", DATED
JANUARY 3, 1997.

Dear Mr. Quay:

This letter is to provide the Westinghouse position on Open Item 314 (M9.5.1-9) which relates to the seismic standpipe fire water supply system for AP600. This open item has been discussed in a November 19, 1996 meeting between NRC and Westinghouse and in a subsequent telephone conference on December 31, 1996. The results of these discussions are contained in the Reference.

In response to 10CFR50, Appendix R and Branch Technical Position CBTP CMEB 9.5-1, the AP600 design includes a seismic category 1 source of water for fighting fires in areas containing safe shutdown equipment. It is a passive wet standpipe system that is pressurized by the static head of water in the passive containment cooling system CPCS tank. The system and its operation are described in the AP600 SSAR, subsection 9.5.1.2. The available pressure and volume from this standpipe system is less than that available from the main non-safety, non-seismic fire water supply system.

NRC has expressed concern regarding this limited amount of water for the initial fire protection response. Westinghouse agreed to investigate a design change which would make the non-safety, non-seismic firemain the initial source of water for fire suppression. Operation action would be required to operate manual valves to switch to the seismic standpipe upon loss of the firemain.

Westinghouse has determined that this design change is not warranted. The current seismic standpipe system meets the BTP CMEB 9.5-1 requirements. Section C.6.C.(4) requires the availability of water from a seismic Category I water system capable of providing flow to its best two hose stations (approximately 75 gpm per hose station). The current seismic standpipe system provides water to all

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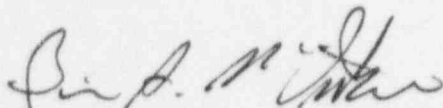
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hose station areas containing safe shutdown equipment, that is, containment and the auxiliary building. These areas are considered vital areas and have limited access. Areas in the auxiliary building containing safe shutdown equipment are not on or near access paths for plant maintenance. Transient fire sources should be minimized by plant staff. Installed fire sources are minimized by design. Currently, the flooding potential in the auxiliary building from a break in a seismic standpipe system line is limited to the amount of water in the PCS tank available for fire fighting. To have the initial water supply from the plant fire main would greatly increase the flooding consequences of a standpipe system line break. The current system allows for fire main supply in the safe shutdown equipment areas with operator action. Westinghouse considers it better practice to have operators switch to the fire main, if required, during a fire then to have the operator switch away from the fire main after an earthquake.

Another concern is the potential loss of fire water upon actuation of the PCS. Technical Specification Limiting Condition for Operation 3.6.6 and 3.6.7 include water volume requirements for the PCS tanks. The required volume includes that allocated for fire protection. Note that activation of PCS follows activation of safe shutdown features. Reduction of PCS volume follows PCS actuation by many minutes. Due to the nature of the AP600 design, safe shutdown features have activated prior to the loss of the water allocated result of the passive design of AP600, safe shutdown feature activation is no longer required and, strictly, fire fighting is for investment protection only.

Since the current AP600 design meets regulatory requirements and changing it would increase the consequences of flooding, Westinghouse considers the current design adequate. If you have any questions, please call J. W. Winters on (412) 374-5290.



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/jml

cc: W. E. Cummins, Westinghouse
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