Westinghouse Electric Corporation Water Reactor Divisions Nuclear Tear Gogy Division

Box 355 Pittsburgh Pennsylvania 15230

July 30, 1979

NS-TMA-2109

Mr. John F. Stolz, Chief Light Water Reactors Branch Chief Division of Project Management Office of Nuclear Reactor Regulation U. S. Nuclear Regulatory Commission Washington, D.C. 20555

Dear Mr. Stoiz:

Enclosed please find sixty (60) copies of topical report, "Reference Core Report - 17 x 17 Optimized Fuel Assembly" (WCAP-9500 Mon-Proprietary).

This report contains that information normally provided in Chapters 4.0, 15.0, and 16.0 of a typical Final Safety Analysis Report utilizing the format and content specified by Revision 3 to Regulatory Guide 1.70. In addition, a section designated as Chapter 18.0 presents a description of the methodology applicable to the transition effects of reload cores using both standard and optimized fuel assemblies.

Information is provided for both Upper Head Injection (UHI) and non-UHI ECCS plants with either the Integrated Protection System (IPS) and conventional protection system. The non-UHI and IPS information is contained on white pages in the text whereas the UHI and conventional protection system information is distinguished by blue paper.

The purpose of this topical is to provide generic information for Staff review relative to the 17 x 17 optimized fue' design description, design bases, safety criteria, and operational requirements representative of a variety of plant applications. Upon completion of this generic review, individual plant dockets will be amended to provide the corresponding information specific to particular plant parameters for those plants utilizing this new fuel design for initial core load.

As of this time, these will include those Commonwealth Edison Carroll County and Byron/Braidwood Units and Duke Power Catawba Units with first core fuel load dates after December of 1981. These amendments are now scheduled for the third quarter of 1980. Other applications are also expected in the same time frame.

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-2-July 30, 1979 NS-TMA-2109 This submittal, in conjunction with WCAP-9401 (Proprietary) "Verification Testing and Analyses - 17 \times 17 Optimized Fuel Assembly," concludes the initial documentation of 17 \times 17 Optimized Fuel Design information as defined by and in accordance with the schedule specified in the Stolz to Anderson letter of March 21, 1979. Very truly yours, T. M. Anderson, Manager

Nuclear Safety Department

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Mr. John F. Stolz

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