1.0 INTRODUCTION AND GENERAL DESCRIPTION OF PLANT

1.1 INTRODUCTION

The Westinghouse Electric Corporation (hereinafter referred to as Westinghouse) has developed this Reference Safety Analysis Report (RESAR-SP/90) for the Westinghouse Advanced Pressurized Water Reactor (WAPWR) as part of its continuing efforts toward design and licensing standardization of nuclear power plants. RESAR-SP/90 is a standard safety analysis report submitted initially for Preliminary Design Approval (PDA) in accordance with Appendix O, "Standardization of Design; Staff Review of Standard Designs," to Part 50 of Title 10 of the Code of Federal Regulations (hereinafter referred to as 10CFR). The ultimate objective is to obtain a Final Design Approval (FDA) of RESAR-SP/90 followed by a rulemaking proceeding and design certification.

1.2 GENERAL PLANT DESCRIPTION

1.2.2 Principal Design Criteria

RESAR-SP/90 is designed to comply with 10 CFR Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants." The specific applications of General Design Criteria to RESAR-SP/90 are discussed in Section 3.1.

1.6 MATERIAL INCORPORATED BY REFERENCE

The WAPWR Structural/Equipment Design Module incorporates, by reference, certain topical reports. The topical reports, listed in Table 1.6-1, have been filed previously in support of other Westinghouse applications.

The legend for the review status code letter follows:

A - U.S. Nuclear Regulatory Commission review complete; USNRC acceptance letter issued.

AE - U.S. Nuclear Regulatory Commission accepted as part of the Westinghouse emergency core cooling system (ECCS) evaluation model only; does not constitute acceptance for any purpose other than for ECCS analyses.

B - Submitted to USNRC as background information; no undergoing formal USNRC review.

O - On file with USNRC: older generation report with current validity; not actively under formal USNRC review.

U - Actively under formal USNRC review.

TABLE 1.6-1
MATERIAL INCORPORATED BY REFERENCE

Westinghouse Topical Report No.	Title	Revision Number	SAR Section Reference	Submitted to the NRC	Review Status
WCAP-7427	Effective Structural Damping of the KEP L105 CRDM	Rev. 0	3.7	1/70	O
WCAP-7427	Effective Structural Damping of the KEP L105 CRDM	Addendum 1	3.7	12/70	O
WCAP-7558 (Non-Prop)	Seismic Vibration Testing with Sine Beats	Rev. 0	3.10	10/71	U
WCAP-8236(P) WCAP-8288	Safety Analysis of Eight-Grid 17x17 Fuel Assembly for Combined Seismic Loss-of-Coolant Accident	Addendum 1	3.7	4/74	A
WCAP-8252	Documentation of Selected Westinghouse Structural Analysis Computer Codes	Rev. 1	3.6	5/77	A
WCAP-8370	Westinghouse Water Reactor Divisions Quality Assurance Plan	Rev. 9A Amend. 1	17.1	2/81	A
WCAP-8587	Equipment Qualification Data Packages	Sup. 1 (Rev. 2)	3.10 3.11	2/79	U
WCAP-8587	Methodology for Qualifying Westinghouse WRD Supplied NSSS Safety-Related Electrical Equipment	Rev. 6	3.10 3.11	11/83	U
WCAP-8624(P) WCAP-8695	General Method of Developing Multifrequency-Biaxial Test Inputs for Bistables	Rev. 0	3/10	9/75 8/75	U
WCAP-8707-P-A (P), Vol I and II WCAP-8709-A, Vol I and II	MULTIFLEX-FORTRAN-IV Computer Program for Analyzing Thermal-Hydraulic Structure System Dynamics	Rev. 0	3.6	9/16/77	A
WCAP-8867	DEBLIN2 - A Computer Code to Synthesize Earthquake Acceleration Time Historics	Rev. 0	3/7	11/76	U
WCAP-10221	Simplified Pipe Whip Analysis and Restraint Design Procedures	Rev. 0	3.6	12/82	U

1.8 CONFORMANCE WITH THE STANDARD REVIEW PLAN

In accordance with 10CFR50.34(g), Table 1.8-1 of each PDA module identifies and evaluates deviations from the acceptance criteria of those sections of the NRC Standard Review Plan (NUREG-0800) pertinent to the subject module. Table 1.8-1 provides this list for the "Structural/Equipment Design".

TABLE 1.8-1

STANDARD REVIEW PLAN DEVIATIONS

SRP Acceptance Criteria	Deviation	Section
SRP 2.3.1 SRP 3.3.1 100-year return period "fastest mile of wind" including vertical velocity distribution and gust factor	RESAR-SP/90 is based on the 1982 Edition of ANSI A58.1, which was issued after the latest revision of the SRP. Wind loadings are therefore tabulated using the 50-year recurrence wind instead of the 100-year recurrence wind referenced in the Regulatory Guide. Structural Design for winds greater than the 50-year magnitude is specified by utilization of the Importance Factor (see Section 3.3.1.1).	3.3.1
SRP 3.3.2 SRP 3.5.1 Tornado specification is based on ANSI 58.1	The tornado specification is based on ANSI/ANS2.3 - 1983 which was issued after the latest revision of the Standard Review Plan and Regulatory Guide 1.76.	3.3.2 3.5.1
SRP 2.5.2: The minimum value of the acceleration level for the OBE is currently one-half the reference acceleration for seismic design corresponding to the SSE.	The OBE has been established as 1/3 of SSE	3.7.1