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NSD-NRC-96-4876
DCP/NRC0653
Docket No.: STN-52-003

November 1, 1996

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

ATTENTION: T. R. QUAY

SUBJECT: AP600 PASSIVE CONTAINMENT COOLING SYSTEM DESIGN BASIS
ANALYSIS REPORTS

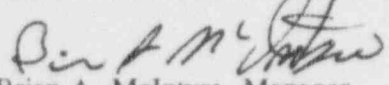
Dear Mr. Quay:

Attached to this letter are tables identifying the documents which form the licensing basis for the Passive Containment Cooling System (PCS) Design Basis Analysis (DBA) containment pressure and temperature transient calculations using the W Gothic computer code. The following tables are provided:

Table 1	AP600 PCS DBA Licensing Basis Reports
Table 2	Supporting documentation for PCS Containment DBA
Table 3	Reports which have been superceded by subsequent submittals

These tables are provided in response to an NRC request during an August 1, 1996 teleconference between Westinghouse and NRC Containment and Severe Accidents Branch.

Please contact John C. Butler on (412) 374-5268 if you have any questions concerning this transmittal.


Brian A. McIntyre, Manager
Advanced Plant Safety and Licensing

/nja

Attachment

cc: T. Kenyon, NRC (w/o Attachment)
D. Jackson, NRC
E. Throm, NRC
P. Boehnert, ACRS
N. J. Liparulo, Westinghouse (w/o Attachment)

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Table 1 AP600 PCS DBA Licensing Basis Reports

Report Number	Report Title	Date Issued	Comments
NSD-NRC-96-4643	Accident Specification and Phenomena Evaluation for AP600 Passive Containment Cooling System (PIRT)	February 12, 1996	Supersedes WCAP-14190.
NSD-NRC-96-4790	Scaling Analysis for AP600 Containment Pressure During Design Basis Accidents	August 8, 1996	Supersedes WCAP-14190
NTD-NRC-35-4489 (WCAP-14382)	WGOTHIC Code Description and Validation	June 20, 1995	Section 9 of the report is not applicable for AP600 licensing basis. This report supersedes WCAP-13246 (per NSD-NRC-96-4729).
NSD-NRC-96-4816 (WCAP-14407)	WGOTHIC Application to AP600	September 10, 1996	Supersedes preliminary draft chapters on water coverage, mixing/stratification, nodding convergence, model description (see Table 3) Section 9 Mixing and Stratification: Balance of 8/8/96 NRC questions are under discussion Section 12 Clime Noding Study to be provided later
NSD-NRC-96-4832	Transmittal of Missing Report Pages to WCAP-14407	October 3, 1996	
SSAR 6.2.1.1.3	Containment Structure Design Evaluation		
NTD-NRC-95-4504	Proposed Draft/Markups of SSAR Sections 6.2 and 6.4	July 10, 1995	Preliminary markups based on interim technical approach

Table 2 Background Documentation on PCS Containment DBA

Report Number	Report Title	Date Issued	Comments
NTD-NRC-94-4100, Enclosure 1	Radiation Heat Transfer Through Fog in the PCCS Air Gap	April 18, 1994	
NTD-NRC-94-4100, Enclosure 2	Liquid Film Model Validation	April 18, 1994	
NTD-NRC-94-4166	AP600 Containment Plume Investigation	June 10, 1994	
NTD-NRC-94-4174	AP600 PCS Design Basis Analysis (DBA) and Margin Assessment	June 30, 1994	(Note: Sensitivities and Margin Assessment Superseded by WCAP-14407, Section 10)
NTD-NRC-94-4271	WGOthic Lumped Parameter LST Input Definition and Input Deck	August 19, 1994	
NTD-NRC-95-4397	Supporting Information for the Use of Forced Convection in the AP600 PCS Annulus	February 16, 1995	
NTD-NSA-CRA-95-096	Blind Pre-test Prediction (NRC declined to receive this document to allow contractors to complete blind predictions.)	April 11, 1995	
NTD-NRC-95-4428 WCAP-14326	Experimental Basis for the AP600 Containment Vessel Heat and Mass Transfer Correlations	April 13, 1995	
NTD-NRC-95-4456	Revised Mass and Energy Tables for AP600 Large-Scale Containment Test 220.1	May 8, 1995	
NTD-NRC-95-4463	Large-Scale Test Data Evaluation	May 15, 1995	
NTD-NRC-95-4462	EPRI Report RA-93-10, GOTHIC Design Review, Final Report	May 15, 1995	
NTD-NRC-95-4467 (PCS-T2C-059)	Analysis of PCS Wind Tunnel Testing for PCS Heat Removal	June 2, 1995	
NTD-NRC-95-4558	Rationale for use of SATAN Computer Code for AP600	September 15, 1995	
NTD-NRC-95-4561	Scaling Role in AP600 PCS DBA Analysis	September 19, 1995	

Report Number	Report Title	Date Issued	Comments
NTD-NRC-95-4563	GOTHIC Version 4.0 Documentation Enclosure 1: Qualification Report Enclosure 2: Technical Manual Enclosure 3: User Manual	September 21, 1995	
NTD-NRC-95-4570	Bases for AP600 PCS DBA Mass Transfer Correlation Biases	September 28, 1995	
NTD-NRC-95-4577	Updated GOTHIC Documentation	October 12, 1995	
NTD-NRC-95-4595	AP600 WGOTHIC Comparison to GOTHIC	November 13, 1995	
NTD-NRC-95-4596	AP600 WGOTHIC Deck Flow Area Sensitivity	November 13, 1995	
NTD-NRC-95-4611	AP600 Containment Design Basis Analysis (Break Spectrum Analysis)	December 15, 1995	
NTD-NRC-96-4624	Key Elements of the AP600 WGOTHIC PCS DBA Approach	January 23, 1996	
NSD-NRC-96-4782	Presentation Material from June 6, 1996 Meeting	July 29, 1996	

Table 3 Superseded Reports for PCS DBA

Report Number	Report Title	Date Issued	Comments
NTD-NRC-94-4246	AP600 Integrated Structure for Technical Issue Resolution (ISTIR) for Passive Containment Cooling System	July 28, 1994	Superseded by WCAP-14190
NTD-NRC-94-4247	Method for Determining Film Flow Coverage for the AP600 Passive Containment Cooling System	July 28, 1994	Superseded by WCAP-14407, Section 7
NTD-NRC-94-4260	Enclosure 1: GOTHIC Containment Analysis Package, Version 3.4e, Volume 1: Technical Manual Enclosure 2: GOTHIC Containment Analysis Package, Version 3.4e, Volume 2: User's Manual (EPRI Proprietary) Enclosure 3: GOTHIC Containment Analysis Package, Version 3.4e, Volume 3: Qualification Report (EPRI Proprietary)	August 10, 1994	Superseded by NTD-NRC-95-4563
NTD-NRC-94-4286	Supplemental Information on AP600 PCS Film Flow Coverage Methodology	August 31, 1994	Superseded by WCAP-14407, Section 7
NTD-NRC-94-4287 (PCS-GSR-004)	Experimental Basis for the Convective Heat Transfer Correlations Selected for Modeling Heat Transfer from the AP600 Containment Vessel	August 31, 1994	Superseded by WCAP-14326
NTD-NRC-94-4327 (PCS-GSR-006)	Experimental Basis for the Mass Transfer Correlations Selected for Modeling Condensation and Evaporation on the AP600 Containment Vessel	October 21, 1994	Superseded by WCAP-14326
NTD-NRC-94-4318 WCAP-14190	Scaling Analysis for AP600 Passive Containment Cooling System	October 27, 1994	Superseded by NSD-NRC-96-4790
NTD-NRC-95-4459	Stratification and Mixing Effects on AP600 Passive Containment Cooling System DBA	May 1995	Superseded by WCAP-14407, Section 9
NTD-NRC-95-4545	AP600 PCS Design Basis Accident Road Maps	August 31, 1995	Superseded by WCAP-14407, Section 2, Tables 2-3 and 2-4
NTD-NRC-95-4589	AP600 Containment Analysis for LOCA Blowdown	November 7, 1995	Superseded by WCAP-14407, Section 8

Report Number	Report Title	Date Issued	Comments
NTD-NRC-96-4635	AP600 Containment DBA Evaluation Model (Water Coverage Model)	January 31, 1996	Superseded by WCAP-14407, Section 7
NTD-NRC-96-4634	WGOTHIC Noding Convergence Studies	January 31, 1996	Superseded by WCAP-14407, Section 10
NSD-NRC-96-4642	AP600 WGOTHIC Containment Model Information in Support of Response to RAI 480.276	February 12, 1996	Superseded by WCAP-14407, Section 4
NSD-NRC-96-4646	Conservatism in Modeling of the PCS Film in the DBA Evaluation Model and Comparison of the Range of Films Parameters in the PCS Test Data with AP600	February 15, 1996	Superseded by WCAP-14407, Section 7
NSD-NRC-96-4652	A Summary of the Method Used to Bound the Effect of Mixing and Stratification on Heat Sink Utilization Inside the AP600 Containment During a Design Basis Accident	February 26, 1996	Superseded by WCAP-14407, Section 9
NSD-NRC-96-4728	AP600 PCS Film Coverage Model	May 21, 1996	Superseded by WCAP-14407, Section 7
NSD-NRC-96-4733	AP600 PCS Scaling Pressure Change Equation	May 31, 1996	Superseded by NSD-NRC-96-4790
NSD-NRC-96-4762	Scaling Analysis for AP600 Containment Pressure During Design Basis Accidents	July 1, 1996	Superseded by NSD-NRC-96-4790
NSD-NRC-96-4763	Assessment of Mixing and Stratification Effects on AP600 Containment	July 1, 1996	Superseded by WCAP-14407, Section 9
NSD-NRC-96-4764	AP600 WGOTHIC Computer Code Model Input	July 1, 1996	Superseded by WCAP-14407, Section 4