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AP600

AP600 Design Certification Review

Draft Safety Evaluation Report
Open Item Status

May 31, 1995

Westinghouse Electric Corporation

AP600 DRAFT SAFETY EVALUATION REPORT: OPEN ITEM STATUS (MAY 31, 1995)

TAB	CHAPTER
1.	Introduction
2.	Site Envelope Characteristics
3.	Design of Structures, Components, Equipment, and Systems
4.	Reactor
5.	Reactor Coolant System and Connected Systems
6.	Engineered Safety Features
7.	Instrumentation and Control
8.	Electric Power Systems
9.	Auxiliary Systems
10.	Steam and Power Conversion System
11.	Radioactive Waste Management
12.	Radiation Protection
13.	Conduct of Operations
14.	Initial Test Program
15.	Accident Analyses
16.	Technical Specifications
17.	Quality Assurance
18.	Human Factors Engineering
19.	Severe Accidents
20.	Generic Issues
21.	Testing

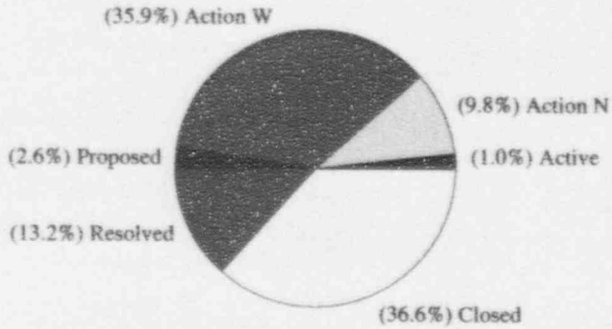
This report provides the Westinghouse status as of May 31, 1995 of open items from NUREG-1512, "Draft Safety Evaluation Report Related to the Certification of the AP600 Design". The report focuses on the DSER open items but acknowledges that there are a number of related "follow-on" items resulting from meetings and requests for additional information. The status fields show a "Westinghouse Status" and an "NRC Status". The "NRC Status" field contains the latest information available to Westinghouse and may not represent a current status.

Issue Closure Status Flags

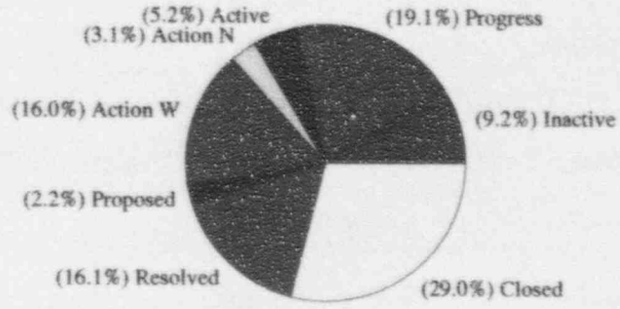
Inactive	-	**No current discussion of issue**
Progress	-	**Activities underway; awaiting discussions with NRC**
Active	-	**Discussions between NRC staff and Westinghouse are on-going**
Proposed	-	**A proposed resolution has been provided by Westinghouse for NRC staff consideration (subset of Action N)**
Action N	-	**Discussions have identified a need for clarification or additional information from NRC staff to support continued discussions**
Action W	-	**Discussions have identified a need for additional information or documentation for NRC staff review**
Resolved	-	**Discussions have resulted in technical resolution. Closure requires submittal of agreed upon documentation/SSAR revision**
Closed	-	**Issue is resolved with no additional action from Westinghouse or NRC staff needed**

Open Item Status - All Chapters

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)

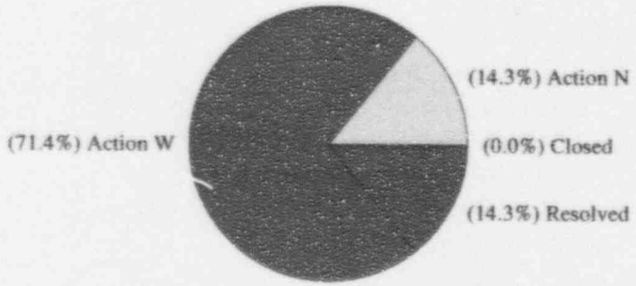


	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	3	8	14	132	450	33	131	377	1148
DSER-Confirmatory	0	0	0	1	8	1	36	17	63
DSER-COL	0	0	0	2	36	2	15	110	165
Subtotal	**3**	**8**	**14**	**135**	**494**	**36**	**182**	**504**	**1376**
Follow-on Items									
RAI-OI	69	113	15	0	4	6	3	47	257
Meeting-OI	18	65	33	29	147	15	149	225	681
Telecon-OI	0	2	1	0	0	0	0	1	4
Subtotal	**87**	**180**	**49**	**29**	**151**	**21**	**152**	**273**	**942**
Total	**90**	**188**	**63**	**164**	**645**	**57**	**334**	**777**	**2318**

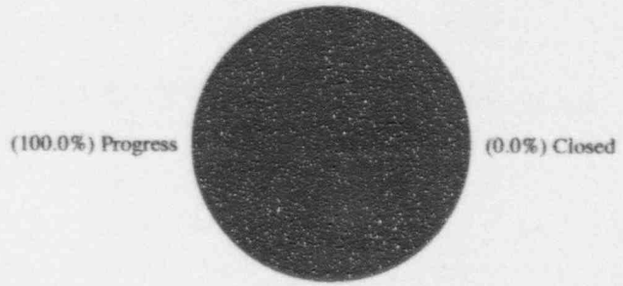
Westinghouse Status as of 29-May-95

Open Item Status - Chapter 1 (Introduction)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	0	1	5	0	1	0	7
DSER-Confirmatory	0	0	0	0	0	0	0	0	0
DSER-COL	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**0**	**0**	**1**	**5**	**0**	**1**	**0**	**7**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	0	0
Meeting-OI	0	1	0	0	0	0	0	0	1
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
Total	**0**	**1**	**0**	**1**	**5**	**0**	**1**	**0**	**8**

Westinghouse Status as of 29-May-95

AP600 Open Item Tracking System Database: Executive Summary

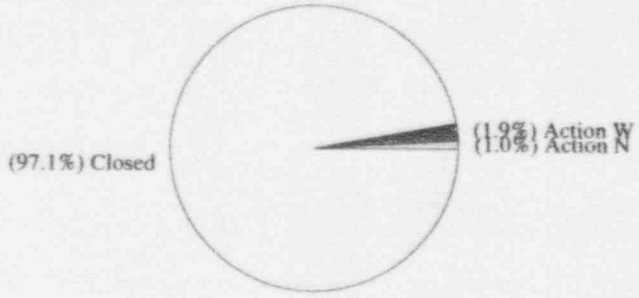
Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '1.*' Sorted by Item #

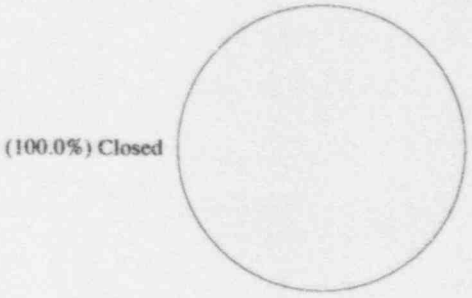
Item No.	Branch	DSER Section/ Question	Type	itle/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
501	NRR/PDST	1.1-1	DSER-OI		Resolved	Inactive		
				The staff has not yet determined the acceptability of Westinghouse's requests that certain information be withheld from public disclosure under 10 CFR Part 2.790.				
				Resolved - Westinghouse will reduce the amount of Proprietary information in the AP600 Design Certification submittals, such that the Design Control Document can be prepared.				
502	NRR/PDST	1.1-2	DSER-OI		Action W	Inactive		
				Westinghouse needs to identify and explain differences between the AP600 design and the EPRI ALWR URD.				
				Action W - Westinghouse is a principle participant in the development of the EPRI sponsored URD and continue to be involved with EPRI on changes to that document. Therefore, the AP600 design remains consistent with the EPRI URD. The SSAR will be revised to reflect consistency with the EPRI URD.				
503	NRR/PDST	1.2.2.7-1	DSER-OI		Action W	Inactive		
				Westinghouse must satisfactorily address the issue concerning the regulatory treatment of non-safety-related systems (RTNSS).				
				Action W - Westinghouse will review and summarize the responses that address this issue, prepared individually throughtout the DSER. This issue will then be addressed on an individual basis and appropriate revisions will be made for non-safety-related systems in the respective document.				
504	NRR/PDST	1.8-1	DSER-OI		Action W	Inactive		
				Westinghouse should identify exemptions to the regulations for the AP600 design.				
				Action W - Westinghouse will review the exeptions identified by the staff to date and discussed in Sections 3.1.1, 6.2.6, 9.3.3, 15.3, 19.1.2.3 and 19.2.3.3.8. Westinghouse will also identify any others that need to be addressed. These exemptions will then be provided in the Design Control Document.				
505	NRR/PDST	1.8-2	DSER-OI		Action W	Inactive		
				The staff and Westinghouse should identify applicable regulations for the AP600 design.				
				Action W - The applicable Regulations for the AP600 will be developed from the FSER input. This activity requires reaching agreement with the Staff on what these regulations must be. Westinghouse will develop a list a applicable regulations as part of the Design Control Document.				
506	NRR/PDST	1.9-1	DSER-OI		Action N	Inactive		
				The staff has not yet determined the acceptability of the proposed interface requirements for the AP600 design.				
				Action N - At the conclusion of the NRC evaluation of the interface requirements identified in Table 1.8-1 of the SSAR, The NRC staff will meet with Westinghouse to discuss and resolve any questions.				
1763	NRR/PDST	1.10-1	DSER-OI		Action W	Inactive		
				COL applicant and licensees who reference the ceritifed AP600 standard design in the future will be required to satisfy the requirements and commitments in the design control document (DCD). The staff has identified certain requirements and commitments in the DSER. These COL action items related to programs, procedures, and issues that are outside the scope of the certified design review. Westinghouse is expected to identify an acceptable list of COL action items in the SSAR and DCD.				
				Action W - A list of combined license information items will be established in Chapter 1 as part of Section 1.8. More detailed expectations for each item will be included in the appropriate section of the SSAR. Westinghouse will identify to NRC those items that because of the design of the AP600 are not applicable. Items are being included in their section of the SSAR as their revisions are issued. The overall list of items will be issued with a revision to Chapter 1 in late Summer 1995.				

Open Item Status - Chapter 2 (Site)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	0	1	1	0	0	52	54
DSER-Confirmatory	0	0	0	0	1	0	0	4	5
DSER-COL	0	0	0	0	0	0	0	44	44
Subtotal	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**100**	**103**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	0	0
Meeting-OI	0	0	0	0	0	0	0	0	0
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**100**	**103**

Westinghouse Status as of 29-May-95

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '2.*' Sorted by Item #

Item No.	Branch	DSER Section Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
507	NRR/ECGB	2.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.1-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Geography and Demography)				
				Closed - Combined License item included in SSAR Revision 2 section 2.1.1.1.				
508	NRR/ECGB	2.1.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.1.1-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Site Information)				
				Closed - Combined License item included in SSAR Revision 2 section 2.1.1.				
509	NRR/ECGB	2.1.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.1.2-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Exclusion Area)				
				Closed - Combined License item included in SSAR Revision 2, section 2.1.1.				
510	NRR/ECGB	2.1.3-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.1.3-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Population Distribution)				
				Closed - Combined License item included in SSAR Revision 2, section 2.1.1.				
511	NRR/ECGB	2.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.2-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Site-specific potential hazards)				
				Closed - Combined License item included in SSAR Revision 2, section 2.2.1.				
512	NRR/ECGB	2.2.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.2.1-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Aircraft hazards)				
				Closed - Combined License item included in SSAR Revision 2, section 2.2.1.				
513	NRR/ECGB	2.2.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.2.2-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Transportation hazards)				
				Closed - Combined License item included in SSAR Revision 2, section 2.2.1.1.				
514	NRR/ECGB	2.2.3-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.2.3-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Other hazards)				
				Closed - Combined License item included in SSAR Revision 2, section 2.2.1.				
515	NRR/SPLB	2.3.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.3.1-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Regional Climatology)				
				Closed - Combined License item included in SSAR Revision 2, section 2.3.6.1.				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '2.*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No /	Date
516	NRR/SPLB	2.3.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.3.2-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Local meteorology)				
				Closed - Combined License item included in SSAR Revision 2, section 2.3.6.2.				
517	NRR/ECGB	2.3.2.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should specify in the SSAR the probability of occurrence of a tornado that exceeds the DBT.				
				Closed - information included in SSAR Revision 2, section 3.3.2.1.				
518	NRR/TERB	2.3.3-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.3.3-1 to the SSAR for COL applicant to provide the onsite meteorological measurements program for staff review.				
				Closed - Combined License item included in SSAR Revision 2, Section 2.3.6.3.				
519	NRR/TERB	2.3.4-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should provide additional information in the SSAR related to X/Q values.				
				Closed - Information item included in SSAR Rev 2, section 2.3.4.				
520	NRR/TERB	2.3.5-1	DSER-OI		Action N	Inactive		
				Westinghouse should provide the methodology used to determine the average annual long-term relative concentration at the site boundary for evaluation of the AP600 radioactive waste treatment system design.				
				Action N - Clarification needed on this open item. There is nothing of this description in subsection 2.3.5. It appears that the open item is referring to subsection 11.3.3.4 which discusses annual average dose at the site boundary as a result of the anticipated releases of activity. Reference could not be found to "annual average annual long-term relative concentration at the site boundary."				
521	NRR/TERB	2.3.5-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.3.5-1 to the SSAR for COL applicant to provide the long-term diffusion estimates.				
				Closed - Combined License item included in SSAR Revision 2, section 2.3.6.5.				
522	NRR/TERB	2.3.6-1	DSER-OI		Closed	Inactive	ET-NRC-93-4027	12/9/93
				Westinghouse should provide the methodology used to determine the set of bounding control room relative concentrations, including considerations given to potential radioactive material release points and pathways to the main control room following a DBA.				
				Closed - Response provided in Revision 1 to RAI 470.3.				
523	NRR/ECGB	2.4.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.4.1-1 to the SSAR, requiring that the COL applicant provide a detailed description of major hydrologic features.				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.1.				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '2.*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
524	NRR/ECGB	2.4.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should justify the selection of plant grade as the maximum flood level, or state that the maximum flood level will be at least 0.3 m (1 ft) below grade.				
				Closed - Revision 2 of the SSAR provided additional information. As defined in SSAR Section 2.4, plant grade is established as plant elevation 100'. Actual grade will be a few inches lower to prevent surface water from entering doorways. The plant is designed for flooding to the 100' level and this is therefore specified as the interface.				
525	NRR/ECGB	2.4.2-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.4.2-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Floods)				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.2.				
526	NRR/ECGB	2.4.3-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.4.3-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Probable maximum flood on stream and rivers)				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.2.				
527	NRR/ECGB	2.4.4-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.4.4-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Dam failures)				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.2.				
528	NRR/ECGB	2.4.5-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.4.5-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Surge and Seiche flooding)				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.2.				
529	NRR/ECGB	2.4.6-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.4.6-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Tsunami loading)				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.2.				
530	NRR/ECGB	2.4.7-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.4.7-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Ice effects)				
				Closed - The AP600 does not have any safety-related external facilities or water supply for which to consider ice effects. This item is not applicable. Discussion included in SSAR flood writeup in section 2.4 (SSAR Revision 2).				
531	NRR/ECGB	2.4.8-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.4.8-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Cooling water canals and reservoirs)				
				Closed - The AP600 has no cooling water canals and reservoirs to provide for safety related functions. This item is not applicable. Discussion included in flood writeup in section 2.4 of SSAR (SSAR Revision 2).				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '2.*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No /	Date
532	NRR/ECGB	2.4.9-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.4.9-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Channel Diversions)				
				Closed - The AP600 does not rely on safety-related external water supplies. Channel diversions are not relevant to safe operation of the plant. This item is not applicable. Discussion included in SSAR section 2.4 (SSAR Revision 2).				
533	NRR/ECGB	2.4.10-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.4.10-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Flood protection requirements)				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.2				
534	NRR/ECGB	2.4.11-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.4.11-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Cooling water supply)				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.3.				
535	NRR/ECGB	2.4.12-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.4.12-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Groundwater)				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.4				
536	NRR/ECGB	2.4.13-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.4.13-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Accidental release of liquid effluents in ground and surface water)				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.5.				
537	NRR/ECGB	2.4.14-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.4.14-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Technical specification and emergency operation requirement for flood protection)				
				Closed - Combined License item included in SSAR Rev 2, 2.4.1.6.				
538	NRR/ECGB	2.5.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.1-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Geologic regional and site information)				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.1.1.				
539	NRR/ECGB	2.5.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.2-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Vibratory ground motions)				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.2.1.				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '2.*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
540	NRR/ECGB	2.5.2-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.2-2 to the SSAR, requiring that the COL applicant provide site-specific information. (Ground motions)				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.2.1.				
541	NRR/ECGB	2.5.3-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.3-1 to the SSAR, requiring that the COL applicant provide detailed surface and subsurface geological and geophysical information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.3.1.				
542	NRR/ECGB	2.5.4-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.4-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Stability of Subsurface material and foundations.)				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.2.				
543	NRR/ECGB	2.5.4.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.4.1-1 to the SSAR, requiring that the COL applicant provide site-specific information. (Underlying site conditions and geologic features and location of structures)				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.1.				
544	NRR/ECGB	2.5.4.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.4.2-1 to the SSAR, requiring that the COL applicant provide site-specific plot plans and profiles of site explorations.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.1.				
545	NRR/ECGB	2.5.4.2-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.4.2-2 to the SSAR, requiring that the COL applicant provide information about the number and type of laboratory tests and the location of samples, and discuss the results of laboratory tests on disturbed and undisturbed soil and rock samples obtained from field investigations.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.2.				
546	NRR/ECGB	2.5.4.3-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should provide the design details concerning the soil anchors in the SSAR.				
				Closed. See SSAR Section 2.5.4, Rev.2.				
547	NRR/ECGB	2.5.4.3-2	DSER-OI		Action W	Inactive		
				Westinghouse should consider, and document in the SSAR, the effects of differential settlement.				
				Action W - A discussion regarding the effects of differential settlement will be provided in the SSAR (section 2.5.4).				
548	NRR/ECGB	2.5.4.3-3	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.4.3-1 to the SSAR, requiring that the COL applicant provide data concerning the extent of all seismic Category I excavations, fills, and slopes.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.3.				

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Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '2.*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
549	NRR/ECGB	2.5.4.4-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should include in the SSAR, the procedure used in the SSI analyses, as well as the effects of using the dry soil densities for saturated soil conditions.				
				Closed - Information provided in SSAR Appendix 2B.				
550	NRR/ECGB	2.5.4.4-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.4.4-2 to the SSAR, requiring that the COL applicant discuss the critical cases of groundwater conditions relative to the foundation stability of safety-related structures, and confirm that the soil properties of the various layers under all possible groundwater conditions will fall within the range of values assumed in the SSAR.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.4.				
551	NRR/ECGB	2.5.4.5-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				SSI calculations should consider more recent soil degradation models that correspond to the lower-bound values presented in the Seed-Idriss model.				
				Closed - Information provided in SSAR Appendix 2B. Provides committment to 1991 Idriss soil degradation curves.				
552	NRR/ECGB	2.5.4.5-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.4.5-1 to the SSAR, requiring that the COL applicant demonstrate that the assumptions made in the standard design regarding the variation of shear wave velocity and material damping are applicable to the site-specific conditions.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.5.				
553	NRR/ECGB	2.5.4.6-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.4.6-1 to the SSAR, requiring that the COL applicant provide site-specific information on soil liquefaction.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.6.				
554	NRR/ECGB	2.5.4.6-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should discuss in the SSAR the need for margin in liquefaction potential beyond the SSE ground motion level, as well as the methods that the COL applicant could use to determine the seismic margins that exist against soil liquefaction at prospective sites.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.6.				
555	NRR/ECGB	2.5.4.7-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.4.7-1 to the SSAR, requiring that the COL applicant provide information on site-specific soil bearing capacity.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.7.				
556	NRR/ECGB	2.5.4.8-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.4.8-1 to the SSAR, requiring that the COL applicant discuss and evaluate site-specific static and dynamic lateral earth pressures and hydrostatic groundwater pressures acting on plant safety-related facilities.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.8.				

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Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '2.*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
557	NRR/ECGB	2.5.4.10-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.4.10-1 to the SSAR, requiring that the COL applicant perform stability analyses or evaluations of all safety-related facilities, and that these analyses or evaluations include foundation rebound, settlement, differential settlement, and bearing capacity.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.10.				
558	NRR/ECGB	2.5.4.11-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.4.11-1 to the SSAR, requiring that the COL applicant provide information pertaining to subsurface instrumentation.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.11.				
559	NRR/ECGB	2.5.5-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.5-1 to the SSAR, requiring that the COL applicant provide site-specific information about the static and dynamic stability of all soil and rock slopes, the failure of which could adversely affect the safety of the plant.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.5.1.				
560	NRR/ECGB	2.5.6-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add COL Action Item 2.5.6-1 to the SSAR, requiring that the COL applicant provide site-specific information about the static and dynamic stability of all embankments and dams that will impound water for safe operation and shutdown of the plant.				
				Closed - Information included in SSAR Rev 2 Section 2.5.6.1 requires reviews of dam or imbankment failures with an adverse impact on the plant. The AP600 does not require external safety-related water supply				
1768	NRR/ECGB	2.5.4.1-1	DSER-CN		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should document the results of the FF (free field) analyses in the SSAR.				
				Closed - The deconvolution analyses described in SSAR appendices 2A and 2B calculate the soil motion at each depth that result in the specified free field motion. Thus the analysis for the 240 foot depth also gives the motions at the 120 foot and 40 foot depths corresponding to the free field motion.				
1769	NRR/ECGB	2.5.4.1-2	DSER-CN		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				In Figure 2.5-1 of the August 8, 1994, response to Q231.1, the value of the shear wave velocity was erroneously printed as 100 fps. It should be corrected to be 1000 fps.				
				Closed - Figure 2.5-1 was corrected in Revision 2 of the SSAR transmitted via Westinghouse letter NTD-NRC-95-4433.				
1770	NRR/ECGB	2.5.4.5-1	DSER-CN		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should indicate in the SSAR that the impact of using soil degradation models appropriate for other soil types (such as silts, clays, gravels, and various combinations) on the SSI response of the NI is small.				
				Closed - This information is included in the SSAR Rev 3 Appendix 2B				
1771	NRR/ECGB	2.5.4.7-1	DSER-CN		Action W	Inactive		
				Westinghouse should add to the SSAR the discussion on bearing strength proposed in response to a staff question.				
				Action W - Discussion will be included in the SSAR in section 2.5.				

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Selection: [type] like 'dser*' And [DSER Section] like '2.*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1772	NRR/ECGB	2.5.4.9-1	DSER-CN		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should add information to the SSAR from the March 24, 1994, response to Q220.43, which stated that there are no safety-related underground pipes or tunnels in the AP600 design.				
				Closed - Requested information included in Revision 2 of SSAR transmitted via Westinghouse letter NTD-NRC-95-4433.				
1831	NRR/ECGB	2.1-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.1-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Revision 2 section 2.1.1.1.				
1832	NRR/ECGB	2.1.1-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.1.1-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Revision 2 section 2.1.1.				
1833	NRR/ECGB	2.1.2-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.1.2-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Revision 2, section 2.1.1.				
1834	NRR/ECGB	2.1.3-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.1.3-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Revision 2, section 2.1.1.				
1835	NRR/ECGB	2.2-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.2-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Revision 2, section 2.2.1.				
1836	NRR/ECGB	2.2.1-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.2.1-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Revision 2, section 2.2.1.				
1837	NRR/ECGB	2.2.2-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.2.2-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Revision 2, section 2.2.1.1.				
1838	NRR/ECGB	2.2.3-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.2.3-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Revision 2, section 2.2.1.				
1839	NRR/SPLB	2.3.1-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.3.1-1 The COL applicant should provide the identified site-specific regional meteorological information.				
				Closed - Combined License item included in SSAR Revision 2, section 2.3.6.1.				

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Selection: [type] like 'dser*' And [DSER Section] like '2.*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1840	NRR/SPLB	2.3.2-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.3.2-1 The COL applicant should provide the identified site-specific local meteorological information.				
				Closed - Combined License item included in SSAR Revision 2, section 2.3.6.2.				
1841	NRR/TERB	2.3.3-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.3.3-1 The COL applicant should provide the onsite meteorological measurements program for staff review.				
				Closed - Combined License item included in SSAR Revision 2, Section 2.3.6.3.				
1842	NRR/TERB	2.3.5-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.3.5-1 The COL applicant should provide the site-specific long-term diffusion estimates.				
				Closed - Combined License item included in SSAR Revision 2, section 2.3.6.5.				
1843	NRR/ECGB	2.4.1-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.4.1-1 The COL applicant should provide a detailed description of major hydrologic features.				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.1.				
1844	NRR/ECGB	2.4.2-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.4.2-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.2.				
1845	NRR/ECGB	2.4.3-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.4.3-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.2.				
1846	NRR/ECGB	2.4.4-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.4.4-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.2.				
1847	NRR/ECGB	2.4.5-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.4.5-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.2.				
1848	NRR/ECGB	2.4.6-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.4.6-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.2.				
1849	NRR/ECGB	2.4.7-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.4.7-1 The COL applicant should provide the identified site-specific information.				
				Closed - The AP600 does not have any safety-related external facilities or water supply for which to consider ice effects. This item is not applicable. Discussion included in SSAR flood writeup in section 2.4 (SSAR Revision 2).				

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Selection: [type] like 'dser*' And [DSER Section] like '2.*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1850	NRR/ECGB	2.4.8-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.4.8-1 The COL applicant should provide the identified site-specific information.				
				Closed - The AP600 has no cooling water canals and reservoirs to provide for safety related functions. This item is not applicable. Discussion included in flood writeup in section 2.4 of SSAR (SSAR Revision 2).				
1851	NRR/ECGB	2.4.9-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.4.9-1 The COL applicant should provide the identified site-specific information.				
				Closed - The AP600 does not rely on safety-related external water supplies. Channel diversions are not relevant to safe operation of the plant. This item is not applicable. Discussion included in SSAR section 2.4 (SSAR Revision 2).				
1852	NRR/ECGB	2.4.10-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.4.10-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.2.				
1853	NRR/ECGB	2.4.11-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.4.11-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.3.				
1854	NRR/ECGB	2.4.12-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.4.12-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.4.				
1855	NRR/ECGB	2.4.13-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.4.13-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.4.1.5.				
1856	NRR/ECGB	2.4.14-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.4.14-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, 2.4.1.6.				
1857	NRR/ECGB	2.5.1-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.1-1 The COL applicant should provide the identified regional site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.1.1.				
1858	NRR/ECGB	2.5.2-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.2-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.2.1.				
1859	NRR/ECGB	2.5.2-2	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.2-2 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.2.1.				

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Selection: [type] like 'dser*' And [DSER Section] like '2.*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No /	Date
1860	NRR/ECGB	2.5.3-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.3-1 The COL applicant should provide detailed surface and subsurface geological and geophysical information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.3.1.				
1861	NRR/ECGB	2.5.4-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.4-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.2.				
1862	NRR/ECGB	2.5.4.1-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.4.1-1 The COL applicant should provide the identified site-specific information.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.1.				
1863	NRR/ECGB	2.5.4.2-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.4.2-1 The COL applicant should provide site-specific plot plans and profiles of site explorations.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.1.				
1864	NRR/ECGB	2.5.4.2-2	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.4.2-2 The COL applicant should provide information about the number and type of laboratory tests and the location of samples, and to discuss the results of laboratory tests on disturbed and undisturbed soil and rock samples obtained from field investigations.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.2.				
1865	NRR/ECGB	2.5.4.3-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.4.3-1 The COL applicant should provide data concerning the extent of all seismic Category I excavations, fills, and slopes.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.3.				
1866	NRR/ECGB	2.5.4.4-2	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.4.4-2 The COL applicant should discuss the critical cases of groundwater conditions relative to the foundation stability of safety-related structures, and to confirm that the soil properties of the various layers under all possible groundwater conditions will fall within the range of values assumed in the SSAR.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.4.				
1867	NRR/ECGB	2.5.4.5-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.4.5-1 The COL applicant should demonstrate that the assumptions made in the standard design regarding the variation of shear wave velocity and material damping are applicable to the site-specific conditions.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.5.				
1868	NRR/ECGB	2.5.4.6-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.4.6-1 The COL applicant should provide site-specific information on soil liquefaction.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.6.				
1869	NRR/ECGB	2.5.4.7-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.4.7-1 The COL applicant should provide information on site-specific soil bearing capacity.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.7.				

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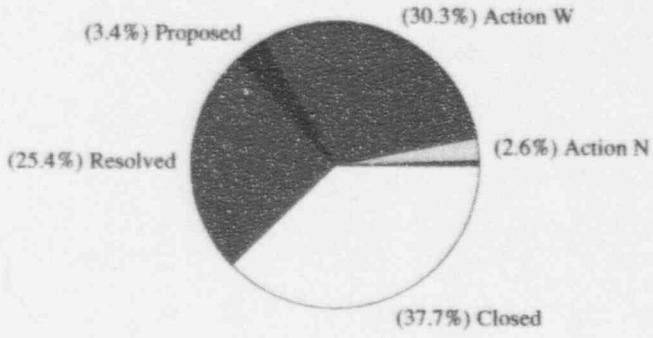
Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '2.*' Sorted by Item #

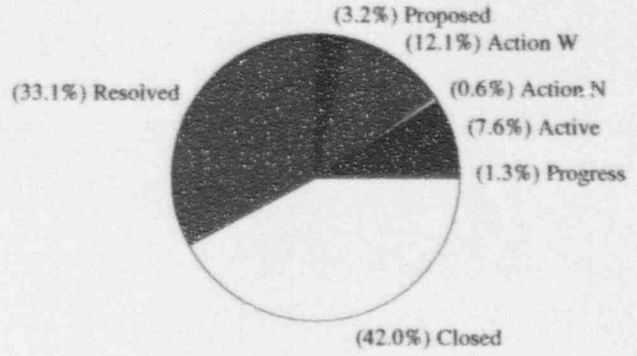
Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1870	NRR/ECGB	2.5.4.8-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.4.8-1 The COL applicant should provide a site-specific discussion and evaluation of static and dynamic lateral earth pressures and hydrostatic groundwater pressures acting on plant safety-related facilities.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.8.				
1871	NRR/ECGB	2.5.4.10-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.4.10-1 The COL applicant should perform stability analyses or evaluations of all safety-related facilities which include foundation rebound, settlement, differential settlement, and bearing capacity.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.10.				
1872	NRR/ECGB	2.5.4.11-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.4.11-1 The COL applicant should provide information pertaining to subsurface instrumentation.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.4.1.11.				
1873	NRR/ECGB	2.5.5-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				2.5.5-1 The COL applicant should provide site-specific information about the static and dynamic stability of all soil and rock slopes, the failure of which could adversely affect the safety of the plant.				
				Closed - Combined License item included in SSAR Rev 2, section 2.5.5.1.				
1874	NRR/ECGB	2.5.6-1	DSER-COL		Closed	Inactive		
				2.5.6-1 The COL applicant should provide site-specific information about the static and dynamic stability of all embankments and dams that will impound water for safe operation and shutdown of the plant.				
				Closed - Information included in SSAR Rev 2 Section 2.5.6.1 requires reviews of dam or imbenkment failures with an adverse impact on the plant. The AP600 does not require external safety-related water supply				

Open Item Status - Chapter 3 (Structures)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	1	1	8	95	11	53	119	288
DSER-Confirmatory	0	0	0	1	5	1	32	7	46
DSER-COL	0	0	0	0	6	0	4	6	16
Subtotal	**0**	**1**	**1**	**9**	**106**	**12**	**89**	**132**	**350**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	0	0
Meeting-OI	0	2	12	1	19	5	52	66	157
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**2**	**12**	**1**	**19**	**5**	**52**	**66**	**157**
Total	**0**	**3**	**13**	**10**	**125**	**17**	**141**	**198**	**507**

Westinghouse Status as of 29-May-95

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Selection: [type] like 'dser*' And [DSER Section] like '3*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
561	NRR/ECGB	3.1.1.4-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should clearly define the loads and corresponding allowable stress criteria that will be used in the design. (See the January 14, 1993 response to Q230.3)				
				Closed - This open item requests stress criteria for Ultimate Heat Sink and Radwaste Building now that OBE is deleted. Ultimate Heat Sink is air cooling of containment vessel in Passive Containment Cooling System, which is described in SSAR Section 6.2 and is safety related and seismic Category I. Radwaste equipment covered by RG 1.143 is located in nuclear island structures which are seismic Category I. Radwaste building is non-seismic and is designed to UBC Zone 2A, Importance Factor of 1.25. Description of radwaste building was updated in SSAR Rev 3.				
562	NRR/EMEB	3.2.1-1	DSER-OI		Action W	Inactive		
				Westinghouse should apply the pertinent quality assurance requirements of Appendix B to 10 CFR 50 to all Seismic Category II SSCs. A commitment to this effect should be added to Section 3.2.1.1.2 and Table 3.2-1 of the SSAR.				
				Action W - Develop an approach for Non-Appendix B QA for Seismic II, RTNSS, Fire protection, radwaste, and other selected nonsafety-related systems and compnents				
563	NRR/EMEB	3.2.1-2	DSER-OI		Resolved	Inactive		
				At a minimum, the new and spent fuel storage racks should meet the applicable quality assurance requirements of Appendix B to 10 CFR Part 50, in addition to being classified as Seismic Category I. Westinghouse should add a note to Sheet 19 of Table 3.2-3 of the SSAR to reflect this position.				
				Resolved - Add a note to the fuel rack classification that they are Seismic Category I				
564	NRR/EMEB	3.2.2-1	DSER-OI		Resolved	Inactive		
				Westinghouse should revise Table 3.2-3 and other applicable sections and P&IDs of the SSAR to reflect the staff's position on ECCS classification.				
				Resolved - AP600 Class C lines that provide an ECCS function will require spot radiograph of the welds. This requirement will be added to 3.2.2.5 Rev. 3				
565	NRR/EMEB	3.2.2-2	DSER-OI		Action W	Inactive		
				Westinghouse should delete the reference to ANS-58.14 in the response to Q210.29, since it has been neither reviewed nor endorsed by the staff.				
				Action W - Discuss this item with NRC staff. ANS-58.14 is referenced in the response to RAI 210.29 to aid in explaining the AP600 classification approach not as a justification.				
566	NRR/ECGB	3.3.1-1	DSER-OI		Action N	Inactive		
				Westinghouse should provide a commitment in the SSAR that non-safety related SSCs will be designed such that wind and tornado loads should not cause their failure or impact nearby seismic Category I SSCs.				
				Action N - Review the write-up in 3.3.2.3 of the SSAR. For evaluation of the wind and tornado effects on non safety related buildings, the acceptance criteria for the 100 year wind and for the tornado are the same. In both cases the acceptance criteria is that collapse of the structure should not jeopardize safety. Since the tornado wind loads are substantially larger than those for the 100 year wind, evaluation of nonsafety structures for tornado is sufficient. For tornado see OI 3.3.2.2-1 (Item 568)				
567	NRR/ECGB	3.3.1-2	DSER-OI		Closed	Inactive	WCAP-13856	
				Certain non-safety-related structures that house systems and components identified as important in the PRA (e.g., the diesel generator building and service water intake structures) should be designed with an importance factor higher than 1.0 to protect those non-safety-related systems and components identified as important in the RTNSS process.				
				Closed - The RTNSS process has included consideration of the effects of hurricanes greater than those considered in the design of the non-safety building structures. This process has not indicated any non-safety related sytems or components to require additional protection against severe winds.				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
568	NRR/ECGB	3.3.2.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should provide a commitment in Section 3.3.2.3 of the SSAR that the COL applicant should follow the identified criteria to ensure that the collapse of non-seismic Category I structures will not impair the functions of seismic Category I SSCs.				
				Closed - Additional criteria provided in SSAR Revision 2 Subsection 3.3.2.3.				
569	NRR/SPLB	3.4.1-1	DSER-OI		Resolved	Active	NTD-NRC-95-4464	
				Issues related to flooding require resolution. - incorporation of request for additional information (RAI) responses into the SSAR -provide information regarding flood protection for systems classified under RTNSS and DID systems -correction of RAI responses -COL applicant responsibilities -conformance with RGs -discrepancies in the SSAR -design requirements for instrumentation -locations and design requirements for certain isolation valves and structural walls -design requirements for drains -backflow protection from buildings not housing safety-related equipment to buildings housing safety-related equipment -interconnecting tunnels between buildings				
				Resolved - SSAR Rev. 3 Section 3.4 updated to include all meeting open item resolutions				
570	NRR/ECGB	3.4.2-1	DSER-OI		Resolved	Inactive		
				Westinghouse should add COL Action Item 3.4.2-1 to the SSAR. (Structure Elevations)				
				Resolved - Add COL item on elevaltions				
571	NRR/ECGB	3.4.2-2	DSER-OI		Resolved	Inactive		
				Westinghouse should add COL Action Item 3.4.2-2 to the SSAR. (Flood effects)				
				Resolved - Add COL information item to SSAR to verify that site meets interface requirement in 2.4.1				
572	NRR/SPLB	3.5.1.1-1	DSER-OI		Closed	Action W	NTD-NRC-95-4433	4/3/95
				Issues related to missile protection require resolution. - Incorporate RAI responses - RTNSS and defense in depth missile protection - Discrepancies between SSAR and RAI responses - Nonconservatisims in missile evaluation				
				Closed - SSAR Rev. 2 resolved these issues				
573	NRR/SPLB	3.5.1.2-1	DSER-OI		Closed	Action W	NTD-NRC-95-4433	4/3/95
				Issues related to missile protection require resolution. - Incorporate RAI responses - RTNSS and Defense in depth missile protection - Consideration of all postulated missiles				
				Closed - SSAR Rev. 2 resolved these issues				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
574	NRR/EMCB	3.5.1.3-1	DSER-OI		Action W	Inactive		
				(BUILDING STRUCTURES, TURBINE MISSILE BARRIERS) Westinghouse must demonstrate that the roofs of those building structures required for safe shutdown will be adequate barriers against high-trajectory, high-energy turbine missiles, and that those barriers will minimize the probability of unacceptable damage to the safety systems they protect.				
				Action W - Schedule meeting or phone call with NRC to discuss turbine missile issues.				
575	NRR/EMCB	3.5.1.3-2	DSER-OI		Action N	Inactive		
				(TURBINE MISSILE PROBABILITY REPORT)The staff will evaluate WSTG-4-P on the basis of the EPRI guidelines. Where there are differences from the EPRI requirements, the staff will request justification.				
				Action N - NRC complete review of report provided to staff in responce to RAI 410.211				
576	NRR/EMCB	3.5.1.3-3	DSER-OI		Action W	Inactive		
				(TURBINE MISSILE PROBABILITY) Westinghouse should discuss in the SSAR how they determined the value (in Section 10.2.3 of the SSAR) for the probability of destructive overspeed condition and missile generation, assuming the recommended inspection frequency.				
				Action W - Schedule meeting or phone call with NRC to discuss turbine missile issues.				
577	NRR/EMCB	3.5.1.3-4	DSER-OI		Action W	Inactive		
				(TURBINE ROTOR BRITTLE FRACTURE ANALYSIS) Westinghouse should supply analyses for several temperatures during transients to determine worst-case temperature-stress combinations.				
				Action W - Schedule meeting or phone call with NRC to discuss turbine missile issues.				
578	NRR/EMCB	3.5.1.3-5	DSER-OI		Action W	Inactive		
				(TURBINE ROTOR BRITTLE FRACTURE ANALYSIS) Westinghouse should add COL Action Item 3.5.1.3-1 to the SSAR. Brittle fracture analysis of installed turbine rotors.				
				Action W - Schedule meeting or phone call with NRC to discuss turbine missile issues.				
579	NRR/EMCB	3.5.1.3-6	DSER-OI		Action W	Inactive		
				(TURBINE GENERATOR FATIGUE ANALYSIS)Westinghouse should provide a fatigue analysis to address the identified technical aspects. Conformance with URD Para. 13.2.3.2.3. Transient cycles based on startups, daily load cycling, margin equal to ASME minimum.				
				Action W - Schedule meeting or phone call with NRC to discuss turbine missile issues.				
580	NRR/EMCB	3.5.1.3-7	DSER-OI		Action W	Inactive		
				(TURBINE GENERATOR & FOUNDATION FATIGUE ANALYSIS) Westinghouse should discuss the effects of the turbine-generator foundation system on the fatigue analysis, including a harmonic analysis of the combined spring-mounted support system, controller, and turbine-generator assembly.				
				Action W - Schedule meeting or phone call with NRC to discuss turbine missile issues.				
581	NRR/EMCB	3.5.1.3-8	DSER-OI		Action W	Inactive		
				(TURBINE GENERATOR FATIGUE ANALYSIS) Westinghouse should add COL Action Item 3.5.1.3-2 to the SSAR. Provide fatigue analysis of installed turbine.				
				Action W - Schedule meeting or phone call with NRC to discuss turbine missile issues.				

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582	NRR/EMCB	3.5.1.3-9	DSER-OI		Action W	Inactive		
				(TURBINE ROTOR FLAW GROWTH, BRITTLE FRACTURE ANALYSIS AT END OF LIFE)Westinghouse should provide the assumptions and values that are to be applied in the fatigue crack growth rate calculations, which will be used to justify the use of a rotor with flaws detected during manufacture.				
				Action W - Schedule meeting or phone call with NRC to discuss turbine missile issues.				
583	NRR/EMCB	3.5.1.3-10	DSER-OI		Action W	Inactive		
				(TURBINE ROTOR FLAW GROWTH ANALYSIS)Westinghouse should add COL Action Item 3.5.1.3-3 to the SSAR. Provide flaw growth analysis of NDE detected flaws in installed turbine rotors.				
				Action W - Schedule meeting or phone call with NRC to discuss turbine missile issues.				
584	NRR/EMCB	3.5.1.3-11	DSER-OI		Action W	Inactive		
				(TURBINE ROTOR BRITTLE FRACTURE ANALYSIS, KNOWN FLAWS) Westinghouse should add COL Action Item 3.5.1.3-4 to the SSAR Provide brittle fracture analysis for flaws detected by NDE during manufacture which are not removed.				
				Action W - Schedule meeting or phone call with NRC to discuss turbine missile issues.				
585	NRR/EMCB	3.5.1.3-12	DSER-OI		Action W	Inactive		
				(TURBINE ROTOR FATIGUE CRACK GROWTH, KNOWN FLAWS) Westinghouse should provide the assumptions and values that are to be applied in the fatigue crack growth rate calculations, which will be used to justify the use of a rotor with flaws detected during manufacture.				
				Action W - Schedule meeting or phone call with NRC to discuss turbine missile issues.				
586	NRR/EMCB	3.5.1.3-13	DSER-OI		Action W	Inactive		
				(TURBINE MAINTENANCE PROGRAM & MISSILE PROBABILITY CALCULATION)Westinghouse should add COL Action Item 3.5.1.3-5 to the SSAR. Provide turbine maintenence program including probability calculations of turbine missile generation.				
				Action W - Schedule meeting or phone call with NRC to discuss turbine missile issues.				
587	NRR/SPLB	3.5.1.4-1	DSER-OI		Closed	Action W	NTD-NRC-95-4433	4/3/95
				Issues related to missile protection require resolution. - Incorporate RAI responses into SSAR - RTNSS and Defence in depth missile protection				
				Closed - SSAR Rev. 2 resolved these issues				
588	NRR/ECGB	3.5.1.5-1	DSER-OI		Closed	Inactive	NTD-NRC-94-4433	4/3/95
				Westinghouse should provide in the SSAR, the site-specific (interface criteria) probability of severe accident consequences.				
				Closed - SSAR Chapter Rev. 2 addressed this issue				
589	NRR/ECGB	3.5.1.6-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should provide in the SSAR, the site-specific (interface criteria) probability of occurrence of aircraft accidents.				
				Closed - SSAR Chapter Rev. 2 addressed this issue				

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590	NRR/SPLB	3.5.2-1	DSER-OI		Closed	Action W	NTD-NRC-95-4433	4/3/95
				Issues related to missile protection require resolution. - incorporate RAI responses into the SSAR - RTNSS AND defense in depth missile protection - SSAR Discrepancies				
				Closed - SSAR Chapter Rev. 2 addressed these issues				
591	NRR/SPLB	3.6.1-1	DSER-OI		Resolved	Inactive		
				Issues related to pipe failure protection require resolution.				
				Resolved - This items related to Plant Systems Branch meeting open items that have been resolved.				
592	NRR/ECGB	3.6.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should determine a minimum subcompartment pressure for designing the subcompartment walls and floors. This pressure should bound the effects of a high-energy, intermediate pipe break, with consideration of LBB acceptance.				
				Closed - This information is included in a table in SSAR Section 3.8 Revision 3				
593	NRR/ECGB	3.6.2.1-1	DSER-OI		Resolved	Closed		
				Westinghouse should (1) delete the second of these Item A of Section 3.6.1.1 and Appendix 3E criteria (i.e., the one percent of plant operation time criterion) for fluid systems qualifying as high-energy or moderate-energy systems, (2) revise Table 3.6-1 of the SSAR, and the remainder of the information in Appendix 3E as necessary due to this change in moderate-energy systems criteria, and (3) delete the exception to Section B.2.e of Section 3.6.2 of the SRP, which is in WCAP-13054.				
				Resolved - NRC accepted ths criteria on Vogtle and Comanche Peak. Add Systems excluded by this criteria to SSAR.				
594	NRR/ECGB	3.6.2.2-1	DSER-OI		Resolved	Resolved		
				Westinghouse should design: 1) the east wall of the east MSIV compartment between the MCR and the compartment, and 2) the floor slab of the east MSIV compartment between the compartment and the safety related electrical equipment room, to accommodate the worst case MS&FW line break. This design should be included in the SSAR.				
				Resolved - The wall and floor will be designed for 1 square foot break for pressure and double ended break for jet impingement and pipe whip				
595	NRR/ECGB	3.6.2.3-1	DSER-OI		Resolved	Resolved		
				Westinghouse indicated it would complete the AP600 pipe break analyses "some time in the future", as a part of design certification, and that the sketches and data summaries will subsequently be available. Westinghouse should inform the staff as to when these analyses will be available for staff review, and should include the sketches and data in the SSAR.				
				Resolved - SSAR will be revised to add description of pipe rupture hazard report and a COL item for completion of the report.				
596	NRR/ECGB	3.6.2.3-2	DSER-OI		Closed	Inactive	NTD-NRC-94-4039	
				Westinghouse should clarify the discrepancy related to environmental qualification outside containment.				
				Closed - Figure 3D.5-9 is a combined envelop See Section 3D.5.5.1.5				
597	NRR/EMEB	3.6.2.3-3	DSER-OI		Resolved	Resolved		
				Westinghouse committed to revise the SSAR to include the BTP MEB 3-1 requirements.				
				Resolved - Add a COL item to perform an as-built piping recociliation for pipe break locations.				

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598	NRR/EMEB	3.6.2.3-4	DSER-OI		Resolved	Resolved	
				Westinghouse committed to revise Section 3.6.2.1.1.3 of the SSAR to include the guidelines of BTP MEB 3-1.			
				Resolved - Add this commitment to the SSAR.			
599	NRR/EMEB	3.6.2.3-5	DSER-OI		Resolved	Active	
				Westinghouse should modify the SSAR to incorporate the BTP MEB 3-1 criterion for structures separating high-energy lines from essential components outside the containment penetration area. Westinghouse should then delete the exception to this guideline in WCAP-13054.			
				Resolved - The only location where this breaks every where criteria is applied in to a break in the break exclusion zone of the piping in the steam tunnel adjacent to the main control room			
600	NRR/EMEB	3.6.2.3-6	DSER-OI		Resolved	Resolved	
				Westinghouse should clarify the first paragraph of Section 3.6.2.1.2.1 of the SSAR to identify "other high-energy piping" as non-ASME Code high-energy piping.			
				Resolved - Clarification to SSAR is editorial only.			
606	NRR/EMEB	3.6.2.3-7	DSER-OI		Resolved	Resolved	
				Westinghouse should revise Section 3.6.2.1.2.2 of the SSAR to indicate that the stress limits are applicable to the sum of Equations (9) and (10) of NC/ND-3653 of the ASME Code.			
				Resolved - Clarification to SSAR is editorial only.			
607	NRR/EMEB	3.6.2.3-8	DSER-OI		Closed	Active	
				Westinghouse should revise Section 3.6.2.1.2.2 of the SSAR to provide that in the absence of stress analysis, through-wall cracks in high- and moderate-energy piping designed to non-seismic standards are postulated at locations which give the worst effects for flooding and spraying.			
				Closed - NRC agreed that no change is needed.			
608	NRR/EMEB	3.6.3.4-1	DSER-OI		Action W	Action W	
				Westinghouse should perform and submit for staff review bounding LBB analyses for candidate piping systems including evaluations for susceptibility to degradation mechanisms for the projected 60-year AP600 design life.			
				Action W - Prepare bounding analysis			
609	NRR/EMEB	3.6.3.4-2	DSER-OI		Resolved	Resolved	
				Westinghouse should add COL Action Item 3.6.3.4-1 to the SSAR.			
				Resolved - A Combined License information item in the SSAR for the applicant to do a reconciliation of the LBB analysis will be included.			
610	NRR/EMEB	3.6.3.5-1	DSER-OI		Active	Active	
				In the January 8, 1993 response to Q252.8, Westinghouse revised the "Containment Sump Level Monitor" portion of Section 5.2.5.3.1 of the SSAR. Staff evaluation of this response is not complete at this time. However, similar demonstrations should also be provided for leakage detection methods inside containment, at least, for the MS and FW systems.			
				Resolved - SSAR Subsection 5.2.5 will be revised. NRC has agreed that the sump level monitor and fan cooler drain monitor is sufficient for secondary line leak detection.			

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
611	NRR/EMEB	3.6.3.5-2	DSER-OI		Resolved	Action N		
				Westinghouse should provide additional discussion concerning the differences in analysis, fabrication, and inspection between Class 1 and 2 systems. (See Q252.5)				
				Resolved - A fatique crack growth analysis will be performed on each Class 2 and 3 system on which LBB is to be demonstrated. This along with the preservice inspection and Section XI required inservice inspection will provide for the integrity of each system.				
612	NRR/EMEB	3.6.3.5-3	DSER-OI		Closed	Closed	NTD-NRC-94-4039	
				Westinghouse should clarify the location of the MS and FW piping anchors, as well as the extent of the MS and FW LBB candidate piping.				
				Closed - The SSAR (3.6.3 paragraph 7, and Appendix 3E) identifies the scope of the analysis.				
613	NRR/EMEB	3.6.3.5-4	DSER-OI		Closed	Closed	NTD-NRC-94-4039	
				Westinghouse should provide consistent definitions of the MS and FW LBB candidate piping throughout the SSAR.				
				Closed - The SSAR (3.6.3 paragraph 7, and Appendix 3E) identifies the scope of the analysis.				
614	NRR/EMEB	3.6.3.5-5	DSER-OI		Action W	Active		
				Westinghouse should provide in the SSAR, more detailed discussions with sufficient information to support the conclusion that the MS and FW piping systems do not fall within the limitations delineated in Section 5.1 of Volume 3 of NUREG-1061.				
				Action W - Additional discussion will be added to the SSAR to support the inclusion of the mainsteam and feedwater lines as LBB lines. See Follow on questions 210.202 through 210.212, (Items 2422 through 2432) for specific NRC requests.				
615	NRR/EMEB	3.6.3.6-1	DSER-OI		Action W	Active		
				For all LBB candidate piping systems, Westinghouse should use the worst condition of all potential sites within the scope of the AP600 applications.				
				Action W - Prepare bounding evaluations for LBB to resolve this issue.				
616	NRR/EMEB	3.6.3.6-2	DSER-OI		Closed	Action N		
				The sample analysis for the RCL piping was based on routed RCL piping supported by primary equipment supports, but interconnected piping (e.g., the pressurizer surge line) was not included in the model. This response may be acceptable, however, the staff intends to review these stresses in future piping audits.				
				Closed - Discussed at meeting with NRC on February 14 & 15, 1995. Any issues raised during audits will be treated as separate items.				
617	NRR/EMEB	3.6.3.6-3	DSER-OI		Action N	Active		
				Westinghouse should use a 1.0 gpm leakage rate and a margin of 2 on leakage flaw size in the bounding LBB analyses to be presented for staff review.				
				Action W - Evaluate the latest draft Staff position on LBB (adding a arbitrary square root of 2 factor on loads) in the AP600 policy letter to the Commission.				
618	NRR/EMEB	3.6.3.6-4	DSER-OI		Closed	Active		
				Westinghouse should benchmark its leak rate evaluation methodology against methods currently accepted by the staff, (such as using the PICEP computer code).				
				Closed - The NRC has previously benchmarked and accepted the methods used by Westionghouse for LBB evaluations.				

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619	NRR/EMEB	3.6.3.6-5	DSER-OI		Resolved	Resolved		
				Westinghouse should clarify the provision (in paragraph 4 of Section 3.6.3.3 of the SSAR) that where applied normal operating stress is low in comparison with faulted stress at critical locations, stability is established by analyzing part-through-wall flaws.				
				Resolved - The SSAR will be changed to reflect the NRC position.				
620	NRR/EMEB	3.6.3.6-6	DSER-OI		Action W	Inactive		
				Westinghouse should address whether the water hammer type loads from condensation events need to be considered in the LBB analyses; if not, Westinghouse should justify why these loads can be excluded.				
				Action W - Evaluations of plant loadings from condensation events are being performed, using in part data from the AP600 test facility at Oregon State University. Upon completion of the evaluation, loadings from condensation events will be included in the plant analysis as appropriate.				
621	NRR/ECGB	3.7-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Issues pertaining to building seismic classification require resolution.				
				Closed - Seismic classification of buildings adjacent to the nuclear island were revised in SSAR Revision 2.				
622	NRR/ECGB	3.7.1-1	DSER-OI		Closed	Resolved		
				Westinghouse should include the shallow soil site as one of the standard site conditions.				
				Closed - The shallow soil site (shear wave velocity < 1000 fps, depth to bedrock < 100 ft) is excluded by the requirement that the shear wave velocity be greater than 1000 fps. No change required to the SSAR.				
623	NRR/ECGB	3.7.1-2	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Westinghouse should revise the SSAR to use acceptable damping values for cable tray and HVAC systems.				
				Closed - Rev. 3 of the SSAR includes Appendices 3G and 3H giving methodology for the analysis and design of cable tray systems and HVAC ducts.				
624	NRR/ECGB	3.7.1-3	DSER-OI		Closed	Inactive		
				Westinghouse should provide the basis to justify the use of such a high damping value for fuel assemblies.				
				Closed - Hand out in meeting 5/10/95 provided basis for 20 % damping.				
625	NRR/ECGB	3.7.1-4	DSER-OI		Action W	Action W		
				Westinghouse should justify the adequacy of using a 6 ft thick foundation mat to support the nuclear island structures.				
				Issues on nuclear island baseamt were raised by NRC RAIs and independent review. Additional analyses are in progress and status is being reviewed in meetings with NRC. Next review is in mid June.				
626	NRR/ECGB	3.7.1-5	DSER-OI		Closed	Active	NTD-NRC-95-4464	
				Westinghouse should provide, in the SSAR, any key dimensions (such as size of foundation mat; radius of shield building; geometry of shield building roof, and thickness of the periphery walls, shield building wall and major structural walls.				
				Closed - Drawings showing the key dimensions of the N.I. structures are included in SSAR Subsection 3.7.2 (Revision 3).				
627	NRR/ECGB	3.7.1-6	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should demonstrate that the analysis results generated based on the three selected design site conditions will envelop the seismic responses at sites with different shear wave velocities.				
				Additional analyses have been documented in SSAR Appendix 2B.				

Selection: [type] like 'dser*' And [DSER Section] like '3*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
628	NRR/ECGB	3.7.1.1-1	DSER-OI		Closed	Inactive		
				Westinghouse should commit, in the SSAR, that the potential plant site needs to meet the identified bounding parameters.				
				Closed - The shallow soil site (shear wave velocity < 1000 fps, depth to bedrock < 100 ft.) is excluded by the requirement that the shear wave velocity be greater than 1000 fps. No change required to the SSAR.				
629	NRR/ECGB	3.7.2.1-1	DSER-OI		Action W	Action W		
				Westinghouse should demonstrate that the SASSI-computed moments and shears used for the design (see Step 1 procedure described above) are not sensitive to the "rigid" beam stiffness values used.				
				Evaluation of sensitivity to "rigid" beam assumptions are documented in design calculation which will be available for review in June meeting.				
630	NRR/ECGB	3.7.2.1-2	DSER-OI		Resolved	Action W		
				Westinghouse should provide the validation package of the SASSI code for staff review.				
				SASSI validation package will be available for NRC staff review during design audit meeting.				
631	NRR/ECGB	3.7.2.1-3	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should justify the adequacy of using the fixed- base analysis to replace the SSI analysis for the hard rock site.				
				Closed - Additional analyses have been documented in SSAR Appendix 2B.				
632	NRR/ECGB	3.7.2.1-4	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Westinghouse should add to the SSAR a description of the axisymmetrical model used to calculate containment shell stress. Westinghouse should also clarify the procedure in which member forces obtained from the stick model are used to establish the scaling factor that was applied to the in-plane forces of the finite element model for the design of walls and floors. In addition, Westinghouse should describe in detail and justify the perturbation made in Table 3.7.2-14 of the SSAR, to correct the SASSI member forces to account for errone- ous rigid beam stiffness.				
				Closed - Information for containment shell stress is in SSAR Rev 3 subsection 3.8.2.4.1.1. Information on SSI factor is in SSAR Subsection 3.7.2.1.1. See DSER Open Item 3.7.2.1-1 for response on SASSI member forces.				
633	NRR/ECGB	3.7.2.2-1	DSER-OI		Closed	Action W		
				If the modal time history analysis method is used for seismic analyses of the NI structures, Westinghouse should justify not including the high-frequency modes (or missing mass) in the analyses.				
				Additional comparisons were discussed in meeting with NRC on 3/2/95. NRC agreed that results presented in meeting provided adequate justification.				
634	NRR/ECGB	3.7.2.3-1	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should provide a list of dynamic properties (masses and fundamental frequencies) of major subsystems and equipment (such as steam generators, reactor vessel, etc.) from which conformance to the decoupling criteria guided in Section 3.7.2II.3.b of the SRP can be evaluated.				
				Closed - SSAR Subsection 3.7.2.3 (Revision 3) identifies major subsystems included in NI analyses and discusses mass of remaining subsystems and equipment.				
635	NRR/ECGB	3.7.2.3-2	DSER-OI		Resolved	Resolved		
				Westinghouse should update the seismic models used in the analyses, and should modify the models to reconcile with the latest version of the general arrangement drawings.				
				Seismic model was updated to Revision 7 of the general arrangement. Results of 3D reanalyses of the updated seismic model will be included in future SSAR revision.				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
636	NRR/ECGB	3.7.2.3-3	DSER-OI		Action W	Action W		
				Westinghouse should justify the adequacy of the equivalent seismic lumped-mass model, in which the second mode frequency is much higher than that of the detailed model.				
				Additional information on mode shapes of shell model are available for review and will be discussed in June meeting. Telecon 5/22/95 (Cheng/Orr) requested additional participation factors and/or modal effective mass.				
637	NRR/ECGB	3.7.2.3-4	DSER-OI		Closed	Resolved		
				Westinghouse should compare the calculated rigid member stress with the actual member capacity of the connections between the shield building and auxiliary building.				
				Model was reviewed during NRC meeting on March 1 and found to be acceptable.				
638	NRR/ECGB	3.7.2.3-5	DSER-OI		Closed	Resolved		
				Westinghouse should demonstrate, by comparing properties of uncracked and cracked sections, or by comparing floor spectra developed on the basis of these properties, that the effect of concrete cracking to the seismic response is negligible.				
				In the meeting in February 28, 1995, Westinghouse presented preliminary results which showed that cracking of concrete in the Auxiliary and Shield Buildings during an SSE is relatively small. Therefore the +/- 15% broadening of the response spectra is adequate and the seismic model based on uncracked concrete section properties is acceptable. Documented results can be reviewed during the structural audit. The SSAR will not be revised.				
639	NRR/ECGB	3.7.2.3-6	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should provide, in the SSAR, (1) figures showing the rigid link connectivity of the stick model to the basemat and wall elements below grade, and (2) criteria used to establish the relative displacement between the shield building and steel containment vessel for the design of the air baffle.				
				Closed - Additional information added in SSAR revision (Revision 3).				
640	NRR/ECGB	3.7.2.3-7	DSER-OI		Closed	Action W		
				Regarding the development of a 3D stick model for the containment vessel, Westinghouse should document the RAI responses in the SSAR and justify the deviation of the second vertical mode of vibration between the two models.				
				See Open Item 3.7.2.3.3.				
641	NRR/ECGB	3.7.2.3-8	DSER-OI		Closed	Resolved		
				Westinghouse should verify the significance of eccentricities due to major components to the seismic responses of the containment shell.				
				Stick models have been updated and include the eccentricities. These models were provided to NRC on 4/15/95.				
642	NRR/ECGB	3.7.2.3-9	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should finalize all of the dimensions of structural elements, and should document the dimensions in the SSAR.				
				Closed - Drawings showing the key dimensions of the N.I. structures is included in revision of the SSAR Subsection 3.7.2.				
643	NRR/ECGB	3.7.2.4-1	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should satisfy the requirements that the spectral amplitude of the acceleration response spectra at the foundation level in the free field not be less than 60 percent of the corresponding design response spectra at the finished grade in the free field.				
				Additional analyses have been documented in SSAR Appendix 2B.				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
644	NRR/ECGB	3.7.2.4-2	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should include the true lower bound soil shear wave velocity in its SSI analyses.				
				Additional analyses have been documented in SSAR Appendix 2B				
645	NRR/ECGB	3.7.2.4-3	DSER-OI		Closed	Resolved		
				Westinghouse should exclude the shallow soil sites for the AP600 design.				
				The shallow soil site (shear wave velocity < 1000 fps, depth to bedrock < 100 ft.) is excluded by the requirement that the shear wave velocity be greater than 1000 fps. No change required to the SSAR.				
646	NRR/ECGB	3.7.2.4-4	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should justify the adequacy of the analyses for not considering the dry soil condition in the SSI analyses.				
				Additional analyses have been documented in SSAR Appendix 2B				
647	NRR/ECGB	3.7.2.4-5	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should provide the rationale of using 1970 Seed- Idriss soil strain degradation model in the SSI analyses.				
				Additional analyses have been documented in SSAR Appendix 2B. Committed to 1991 Idriss soil degradation curves.				
648	NRR/ECGB	3.7.2.4-6	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should address the effects of using soil degradation models appropriate for soil types other than sand (such as clay, silt, gravel, and various combinations) on the SSI responses in the SSAR.				
				Additional analyses have been documented in SSAR Appendix 2B				
649	NRR/ECGB	3.7.2.4-7	DSER-OI		Action W	Inactive		
				Westinghouse should evaluate the localized through-soil SSI effect of non-seismic Category I structures on the design of embedded seismic Category I walls and the potential for pound- ing between structures.				
				Results of the 2D SASSI analyses to determine the loads on the exterior walls below grade will be discussed in the June meeting and will be presented in future revision of the SSAR.				
650	NRR/ECGB	3.7.2.4-8	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should use a realistic variation with depth of soil profile (such as a parabolic distribution) in SSI analyses.				
				Additional analyses have been documented in SSAR Appendix 2B. Committed to parabolic distribution for the Soft-to-Medium soil profile.				
651	NRR/ECGB	3.7.2.4-9	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should acceptably address two issues regarding Poisson ratio of soil foundation.				
				Closed - Additional analyses have been documented in SSAR Appendix 2B. Third paragraph of Section 3.7.2.4 is corrected in revision of SSAR (Revision 3).				
652	NRR/ECGB	3.7.2.4-10	DSER-OI		Proposed	Action W		
				Westinghouse should justify the adequacy of the results (member forces and moments) from the SASSI analysis.				
				Evaluation of sensitivity to "rigid" beam assumptions are documented in design calculation which will be available for review in June meeting.				

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653	NRR/ECGB	3.7.2.4-11	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should justify the validity of performing a fixed- base seismic analysis for the site conditions with shear wave velocity equal to or greater than 2438.4 m/sec (8000 ft/sec).				
				Additional analyses have been documented in SSAR Appendix 2B.				
654	NRR/ECGB	3.7.2.4-12	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should acceptably address the adequacy of the envelope of seismic responses obtained, based on the three selected site conditions.				
				Additional analyses have been documented in SSAR Appendix 2B.				
655	NRR/ECGB	3.7.2.5-1	DSER-OI		Closed	Action W		
				Westinghouse should evaluate the combined effect of missing mass, low cut-off frequency, non-conformance of the 60 percent requirement of ground motion at foundation level, and concrete cracking on the calculated floor response spectra.				
				See OIs 3.7.2.2-1, 3.7.2.1-3, 3.7.2.4-1.				
656	NRR/ECGB	3.7.2.6-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should revise the SSAR and provide a list of analysis cases showing how and where each of the three combination techniques was applied.				
				Closed - Additional information provided in SSAR Subsection 3.7.2.7 (Revision 3).				
657	NRR/ECGB	3.7.2.7-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should revise the SSAR and provide a list of analysis cases showing where each of the three combination techniques for closely spaced modes was applied.				
				Closed - Additional information provided in SSAR Subsection 3.7.2.7 (Revision 3).				
658	NRR/ECGB	3.7.2.8-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should apply the interaction requirements to systems and components as well as structures.				
				SSAR Subsection 3.7.2.8 is only applicable to structures. The corresponding requirements for systems and components are given in SSAR Subsection 3.7.3.13.				
659	NRR/ECGB	3.7.2.8-2	DSER-OI		Closed	Active	NTD-NRC-95-4433	
				Westinghouse should reclassify the non-seismic building structures as Seismic Category II.				
				Seismic classification of buildings adjacent to the nuclear island were revised in SSAR Revision 2.				
660	NRR/ECGB	3.7.2.8-3	DSER-OI		Closed	Active	NTD-NRC-95-4433	
				Westinghouse should provide the basis to classify the single-story portion of the Radwaste Building as non-seismic, and the high bay area of the Radwaste Building as seismic Category II.				
				Seismic classification of buildings adjacent to the nuclear island were revised in SSAR Revision 2.				
661	NRR/ECGB	3.7.2.8-4	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	
				Westinghouse should perform a design evaluation to show that the avoidance of collapse during an SSE or margins earthquake relies upon the available ductility reserve.				
				Closed: Seismic classification of buildings adjacent to the nuclear island were revised in SSAR Revision 2.				

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662	NRR/ECGB	3.7.2.8-5	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	
				Westinghouse should acceptably address two issues related to the design of bracing systems of structures adjacent to the NI structures.				
				Closed. Seismic classification of buildings adjacent to the nuclear island were revised in SSAR Revision 2. Design of bracing was also revised.				
663	NRR/ECGB	3.7.2.8-6	DSER-OI		Closed	Inactive		
				Westinghouse should demonstrate that Category II structures will not be excessively deformed and will not affect the function of any safety-related items during an SSE.				
				SSAR was revised to show that Category II structures are designed to the same methodology as seismic Category I structres. They will not be excessively deformed and will not affect the function of any safety-related items during an SSE.				
664	NRR/ECGB	3.7.2.8-7	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should demonstrate and document in the SSAR, for the evaluation of seismic margin, that both seismic Category II and non-seismic structures can withstand an earthquake up to 0.5g without collapse.				
				Seismic Category II and nonseismic structures are not directly included in the seismic margins assessment. The seismic design of these structures is described in Subsection 3.7.2.8 of the SSAR. Seismic Category II building structures are designed for the safe shutdown earthquake using the same methods as are used for seismic Category I structures. The seismic Category II structures are the annex building and the stair tower to the shield building roof. These would have seismic capability similar to the seismic Category I structures. Therefore, it is expected that they will withstand an earthquake greater than 0.50g as shown in the seismic margin assessment for the seismic Category I structures in Appendix H of the PRA report, revison 1. Nonseismic structures are generally analyzed and designed for seismic loads according to the Uniform Building Code requirements for Zone 2A with an Importance Factor of 1.25. The radwaste and turbine buildings are nonseismic structures. As described in Subsection 3.7.2.8, collapse of the radwaste building would not would impair the integrity of the reinforced concrete nuclear island. As described in Subsection 3.7.2.8, the major structure of the turbine building is separated from the nuclear island by approximately eighteen feet and the seismic design of the turbine building has been upgraded to UBC Zone 3 with an Importance Factor of 1.0 in order to provide margin against collapse during the safe shutdown earthquake. The turbine building may not withstand the 0.5g earthquake without potential local collapse. However, it is separated from the nuclear island, and the equipment essential to safe shutdown is well protected by the thick concrete walls, floors and roof slab of the nuclear island. Hence the failure of the turbine building is not considered in the seismic margins assessment since its collapse is unlikely to impair the integrity of equipment essential to safe shutdown.				
665	NRR/ECGB	3.7.2.9-1	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				SSI analyses performed for the two soil sites did not include the variation of soil shear moduli as recommended by the SRP.				
				Additional analyses have been documented in SSAR Appendix 2B.				
666	NRR/ECGB	3.7.2.11-1	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should include eccentricities due to major containment attachments in the seismic models.				
				Closed - See OI 3.7.2.3-8. Updated seismic model included eccentricities due to containment attachments (equipement hatches, personnel airlocks, and polar crane trolley). Included in SSAR revision.				
667	NRR/ECGB	3.7.2.11-2	DSER-OI		Closed	Resolved	NTD-NRC-95-4433	
				Westinghouse should include an additional eccentricity of +5 percent of the maximum building dimension at the level under consideration for each direction in the design.				
				Closed - Accidental torsion included in SSAR Section 3.7.2.11 Revision 2.				

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668	NRR/ECGB	3.7.2.12-1	DSER-OI		Action W	Inactive		
				Westinghouse should compare the results from the response spectrum analysis method to those of the modal time-history analysis method.				
				Comparison of results from the response spectrum analysis method vs. the modal time-history analysis will be presented in future revision of the SSAR.				
669	NRR/ECGB	3.7.2.13-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	
				Westinghouse should state in the SSAR that a COL applicant referencing the AP600 design will perform a seismic analysis to evaluate the safety of existing dams, and design the new dams based on the defined SSE.				
				COL applicant information listed in SSAR Rev 2, Subsection 3.7.5.1.				
670	NRR/ECGB	3.7.2.16-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	
				Westinghouse should commit in the SSAR that the COL applicant should perform an analysis and evaluation using the design basis earthquake ground motion and plant-specific site conditions to confirm the adequacy of the AP600 design.				
				SSAR Subsection 2.5.4 provides the information requirements for the COL applicant. Site-specific soil structure interaction analyses may be performed by the Combined License applicant to demonstrate acceptability by comparison of floor response spectra. These analyses would use the site specific soil conditions and safe shutdown earthquake.				
671	NRR/ECGB	3.7.3.2-1	DSER-OI		Closed	Inactive	NTD-NRC-94-4039	
				Westinghouse should identify the computer codes used and the validation method for those computer codes.				
				Computer programs used and their validation are addressed in SSAR section 3.9.1.2.				
672	NRR/ECGB	3.7.3.2-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should justify the adequacy of using the equivalent static analysis method for the analysis of subsystems. (steel platforms and frames)				
				Closed - SSAR Subsection 3.7.3.5 revised (Revision 3). Equivalent static analysis will not be used for complex non-rigid steel platforms and frames supporting seismic Category I components.				
673	NRR/ECGB	3.7.4-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	
				Westinghouse should modify the design so that the triaxial acceleration sensors have a dynamic range of 1000:1, and a frequency range (bandwidth) of at least 0.20 Hz to 50 Hz.				
				Additional information was included in SSAR Rev 2, subsection 3.7.4.2.				
674	NRR/ECGB	3.7.4-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	
				Westinghouse should revise the SSAR to state that the seismic monitoring system will be set to record at least 3 seconds of pre-event signal.				
				Additional information was included in SSAR Rev 2, subsection 3.7.4.2.				
675	NRR/ECGB	3.7.4-3	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	
				Westinghouse should revise the SSAR to include a statement that the COL applicant should include in its procedures the modifications to the EPRI reports specified by the NRC staff in a letter from James T. Wiggins of the NRC to John J. Taylor at EPRI, dated September 13, 1993.				
				Additional information was included in SSAR Rev 2, subsection 3.7.5.2.				
676	NRR/ECGB	3.8.2.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include the geometrical properties in the SSAR, because they are important in developing models for the seismic analysis and analyses against combined load conditions.				
				The geometrical properties are already indicated in SSAR Figure 3.8.2-1. The head shape and dimensions are repeated in the text in SSAR Rev. 3.				

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677	NRR/ECGB	3.8.2.2-1	DSER-OI		Closed	Inactive		

Westinghouse should identify the differences between the 1989 addenda and the 1989 edition of the ASME Code, and should submit an analysis of the differences for staff review and acceptance.

Detailed changes from the 1989 to the 1992 edition have been tabulated and transmitted informally to NRC staff to assist their review of the acceptability of the 1992 edtition. These changes do not affect the design of the vessel.

678	NRR/ECGB	3.8.2.3-1	DSER-OI		Proposed	Inactive		

Westinghouse should acceptably address concerns regarding loads and load combinations used for the containment vessel design.

Response

Design conditions

Design external pressure has been included as a design condition in the SSAR table.

Level A Service Limits

Multiple safety relief valve discharge is not a load case for a PWR. AP600 includes an automatic depressurization system (ADS) which discharges into the IRWST. The IRWST is independent of the containment and ADS does not apply load to the containment.

The external pressure case occurs in combination with a normal operating plant condition as defined by the T0 and R0 loads. The external pressure results from a loss of containment heating in extremely cold weather, as described in SSAR section 6.2.1.1.2. It is a separate event from the LOCA.

Level B Service Limits

There are no load combinations to be evaluated against these limits.

Level C Service Limits

See discussion under Service Level A limits

Operating pressure has been included with SSE in SSAR table

External pressure is not combined with SSE because the two events are independent. The safe shutdown earthquake is assumed to cause loss of all nonsafety systems. As described in SSAR section 6.2.1.1.2, the worst external pressure occurs due to loss of all AC in extreme cold weather. This event leads to a reduction in the internal containment heat loads from the reactor coolant system and other active components, thus resulting in a temperature reduction within the containment and an accompanying pressure reduction. The pressure reduction occurs slowly and the reduction is not significant during the 30 second duration of the seismic event.

There is no requirement to combine the effects of two extreme environmental conditions, such as SSE and cold weather. In addition, even if the SSE were to occur during very cold weather, the pressure reduction would not occur until after the earthquake has finished. Thus, the loads do not occur concurrently and are not combined.

Level D Service Limits

See discussion under Service Level A limits

679	NRR/ECGB	3.8.2.4-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	

Westinghouse should provide the final containment vessel models (static and dynamic) and analysis methods used in the analyses and design of containment vessel, and analysis results in the SSAR.

SSAR subsection 3.8.2.4-1 has been expanded in Rev 3 to describe the analyses and evaluations. The results are documented in the containment vessel design report which will be available for staff review in July, 1995.

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680	NRR/ECGB	3.8.2.4-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4464
				Westinghouse should perform dynamic analysis of the vessel to show that the stresses based on the equivalent static analysis envelop the dynamic stresses.			
				The dynamic analysis of the containment vessel is performed on a stick model as described in SSAR Subsection 3.7.2. This analysis gives the dynamic response of the overall vessel. Shell stresses are obtained by applying equivalent static accelerations to the shell model. This is consistent with normal practice for building structures. The results are appropriate for the stresses at locations away from concentrated masses such as the equipment hatches and personnel airlocks. Local analyses are performed for the responses of these local masses using as input the floor response spectra at the appropriate elevation of the containment vessel. These local analyses have been added in SSAR Rev. 3.			
681	NRR/ECGB	3.8.2.4-3	DSER-OI		Closed	Inactive	NTD-NRC-95-4464
				Westinghouse should demonstrate that calculated stresses in the vicinity of the concentrated masses based on an equivalent static analysis bound the local stresses computed by the dynamic analysis.			
				Local dynamic analyses are performed for the responses of the local masses using as input the floor response spectra at the appropriate elevation of the containment vessel. The local analyses have been added in SSAR Rev. 3.			
682	NRR/ECGB	3.8.2.4-4	DSER-OI		Closed	Active	NTD-NRC-95-4464
				Westinghouse should consider the effect of eccentric masses attached to the containment shell and the crane eccentricity in the seismic stress and buckling analyses.			
				SSAR Rev 3 Subsection 3.8.2.4-1 has been expanded to describe how the analyses consider the eccentricity of the concentrated masses.			
683	NRR/ECGB	3.8.2.4-5	DSER-OI		Closed	Inactive	NTD-NRC-95-4464
				Westinghouse should provide for staff review the design calculation for the analyses of thermal stress and buckling near the base of the containment shell.			
				This information was provided in the revised response to RAI 220.93. It has been included in SSAR Rev.3. The analyses are documented in the containment vessel design report which will be available for staff review in July, 1995.			
684	NRR/ECGB	3.8.2.4-6	DSER-OI		Closed	Inactive	
				Westinghouse should demonstrate the adequacy of the thermal load distribution due to passive containment cooling.			
				The thermal load distribution due to passive containment cooling was described in the response to the request for information dated 4/2/93.			
685	NRR/ECGB	3.8.2.4-7	DSER-OI		Closed	Inactive	NTD-NRC-95-4433
				Westinghouse should define the wind and tornado pressure loads for the containment vessel design.			
				This information was provided in the response to RAI 220.63. This has been included in SSAR Subsection 3.3 in SSAR Rev 2.			
686	NRR/ECGB	3.8.2.4-8	DSER-OI		Closed	Inactive	
				Westinghouse should provide the validation package for the CB&I computer code for staff review.			
				The validation package for the CB&I computer codes are available for staff review. This review can be performed during the containment vessel structural audit.			
687	NRR/ECGB	3.8.2.4-9	DSER-OI		Proposed	Inactive	
				Westinghouse should demonstrate that the area-replacement rules apply in the region of concentrated masses (such as the lower equipment hatch and the two personnel airlocks) for buckling as a result of compression.			
				An additional finite element analysis is in progress to confirm the adequacy of the design as described in SSAR Rev 3. The results will be available for the structural review in mid year.			

Selection: [type] like 'dser*' And [DSER Section] like '3*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
688	NRR/ECGB	3.8.2.4-10	DSER-OI		Proposed	Inactive		
				Westinghouse should perform analyses to show that sufficient compressive strength is provided in the equipment hatch and personnel airlock region				
				An additional finite element analysis is in progress to confirm the adequacy of the design as described in SSAR Rev 3. The results will be available for the structural review in mid year.				
689	NRR/ECGB	3.8.2.4-11	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should provide for staff review the analysis results concerning stress associated with thermal loads.				
				The analysis results concerning stress associated with thermal loads are documented in the design report, which will be available for staff review in July, 1995. Buckling evaluation for thermal loads was provided in RAI 220.93. Results are summarized in SSAR Rev 3.				
690	NRR/ECGB	3.8.2.4-12	DSER-OI		Proposed	Inactive		
				Westinghouse should provide for staff review the stress analysis reports for all combined load conditions.				
				Containment vessel design report is being prepared and will be available for staff review in mid year. This review can be performed during the containment vessel structural audit.				
691	NRR/ECGB	3.8.2.4-13	DSER-OI		Closed	Inactive		
				Westinghouse should provide for staff review the calculation and magnitude of the relative displacements between the containment shell and the shield building.				
				The calculation of the relative displacements between the containment shell and the shield building is available. Review can be performed during the containment vessel structural audit.				
692	NRR/ECGB	3.8.2.4-14	DSER-OI		Proposed	Inactive		
				Westinghouse should demonstrate the adequacy of using area re- placement rules to satisfy buckling requirements and evaluate the buckling potential in the vicinity of the base and the large penetrations under various load conditions.				
				An additional finite element analysis is in progress to confirm the adequacy of the design as described in SSAR Rev 3. The results will be available for the structural review in mid year.				
693	NRR/ECGB	3.8.2.4-15	DSER-OI		Closed	Inactive		
				Westinghouse should verify the temperature distribution, and should define suitable boundary conditions to allow the staff to determine the adequacy of the buckling analysis.				
				The thermal load distribution due to passive containment cooling was described in the response to the request for information dated 4/2/93.				
694	NRR/ECGB	3.8.2.4-16	DSER-OI		Action W	Inactive		
				Westinghouse should provide for staff review the buckling analysis calculations for the various combined load conditions.				
				Containment vessel design report is being prepared and will be available for staff review in mid year.				
695	NRR/ECGB	3.8.2.4-17	DSER-OI		Closed	Inactive		
				Westinghouse should discuss the basis for not considering the effect of initial imperfections and residual stresses in the determination of the buckling pressure.				
				The effect of initial imperfections and residual stresses in the determination of the buckling pressure was addressed in the response to RAI 220.8 Rev. 1.				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
696	NRR/ECGB	3.8.2.4-18	DSER-OI		Closed	Inactive	
				Westinghouse should discuss the technical basis for the apparent difference in pressure-stress relationship between the meridional and hoop stresses.			
				At the knuckle region of the dome elastic analyses show that the meridional stress is tension and the hoop stress is compression. The compressive hoop stress occurs over a short length of the knuckle region. Once the material yields the geometry changes as the shell deflects inward and the yield zone extends along the meridian. The extension of the yield zone increases the total hoop compressive force even though the hoop stress remains approximately constant. The meridional stress is uniform around the circumference of the vessel and continues to increase to maintain equilibrium.			
697	NRR/ECGB	3.8.2.4-19	DSER-OI		Closed	Inactive	
				Westinghouse should use a 15 percent increase (not a 32 percent increase) to determine the best estimate failure pressure, which in turn should be used as the median pressure for determination of the fragility curve.			
				As described in the DSER text, the purpose of the evaluation is to provide "best estimate failure pressure", which is also used as the median pressure for the determination of the fragility curve. Such an estimate should be based on best estimate material properties, rather than minimum specified material. Use of minimum specified material properties would provide a "lower bound" failure pressure. The reference letter in the text of the DSER (Bagchi and Cheng to Stolz) is the basis for allowable stresses for design loads and not to the "best estimate failure analysis". Note that the System 80+ best estimate failure pressure also used an increase above the minimum specified value (FSER page 19-84) and not the minimum specified value inferred in the AP600 DSER text.			
698	NRR/ECGB	3.8.2.4-20	DSER-OI		Closed	Inactive	
				Westinghouse should provide the leakage estimate through penetrations such as equipment hatches and personnel airlocks.			
				The treatment and the description of the leakage modeling in the severe accident fission product source term analysis is found in chapter 45 of the PRA report, rev. 3. The leakage area in the severe accident is equal to that corresponding to the specified containment leakage of 0.12% at design basis conditions. There is no increase in leakage area caused by containment pressurization. The ultimate pressure capacity for containment function is calculated to occur once the general membrane stresses in the shell reach yield. Thus the general membrane shell remains elastic for pressures up to this ultimate capacity and increased leakage area is not expected due to pressure. See also the response to RAI 220.14 for the equipment hatches.			
699	NRR/ECGB	3.8.2.4-21	DSER-OI		Action W	Inactive	
				Westinghouse should consider the modeling uncertainties and realistic material uncertainties in the calculation of the containment failure probability distribution.			
				PRA report Chapter 42 is being revised to discuss modeling uncertainties and realistic material uncertainties in the calculation of the containment failure probability distribution.			
700	NRR/ECGB	3.8.2.4-22	DSER-OI		Action W	Inactive	
				Westinghouse should justify the adequacy of the Weibull distribution used in conjunction with the material and modeling uncertainties.			
				PRA report Chapter 42 is being revised.			
701	NRR/ECGB	3.8.2.4-23	DSER-OI		Closed	Inactive	NTD-NRC-95-4464
				Westinghouse should clarify the discrepancy in the SSAR, which indicates the mean failure pressures are calculated at a temperature of 37.8øC (100øF), and later indicates (in Section 3.8.2.4.7 of the SSAR), that 37.8øC (100øF) is the ambient temperature.			
				In SSAR Rev 3, Subsections 3.8.2.4.1 and 3.8.2.4.7 have been revised to the same terminology of "ambient temperature of 100 degrees"			

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
702	NRR/ECGB	3.8.2.4-24	DSER-OI		Closed	Inactive		
				Westinghouse should use a best estimate yield pressure of 1094.2 kPa (144 psig) for the mean failure pressure of the containment cylindrical shell.				
				The material properties to be used in the best estimate yield pressure for the mean failure pressure of the containment cylindrical shell are addressed in the response to open item 3.8.2.4-19.				
703	NRR/ECGB	3.8.2.4-25	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should use a pressure of 1108 kPa (146 psig) for the mean failure pressure of ellipsoidal top head because the top head will yield before buckling could occur.				
				As shown in SSAR section 3.8.2.4.2 the ellipsoidal top head is predicted to yield before it buckles. Material yield does not constitute failure for the top head. The analyses are based on representative material properties and show that the pressure can increase to 174 psig before buckling. Therefore the use of an estimated failure pressure of 174 psig is appropriate.				
704	NRR/ECGB	3.8.2.4-26	DSER-OI		Closed	Inactive		
				Westinghouse should clarify in the SSAR whether the 50-percent increment of the critical buckling pressure for the equipment hatches best estimate failure pressures is based on the lower bound or the mean value of test data, and should justify the applicability of the test data to the AP600 equipment hatches.				
				The test data was shown in the response to RAI 220.32 and was compared with the AP600 equipment hatches. The 50 percent increment in the critical buckling pressure is intended to represent the mean value of the critical buckling. It accounts for the scatter in the test data as shown in the response to the RAI. Much of this scatter is due to the magnitude of imperfection and is therefore related to the construction tolerance. The head will be constructed to be less than or equal to the code specified tolerance whereas the ASME critical pressure is based on the maximum deviation permitted in the code.				
705	NRR/ECGB	3.8.2.4-27	DSER-OI		Action W	Inactive		
				Westinghouse should describe in the SSAR the mathematical construction of the overall cumulative failure probability curve, and should provide a tabulation of cumulative failure probability versus pressure. The temperature should be specified in Figure Q-1 of the SSAR. Also, mean containment failure internal pressure should be defined in the SSAR.				
				PRA report Chapter 42 is being revised.				
706	NRR/ECGB	3.8.2.4-28	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should provide in the SSAR an assessment of the pressure capability of the main steamline and main feedwater line bellows, a corresponding failure probability distribution curve, and the impact on the overall cumulative failure probability curve.				
				The effect of containment pressure on the bellows was addressed in the response to RAI 720.206. This response has been incorporated in SSAR Subsection 3.8.2.4.2.6, Rev 3. The bellows remain intact when the containment shell remains elastic and imposed deflections remain close to the design conditions. Failure of the bellows is assumed to occur once the containment cylinder yields. This mechanism is already included in the failure probability curve for the cylinder.				
707	NRR/ECGB	3.8.2.4-29	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should perform a buckling analysis of the containment shell under the severe accident temperature loading, and should discuss the results in the SSAR.				
				This information was provided in the revised response to RAI 220.93 and is discussed in SSAR Subsection 3.8.2.4.1.1 (Revision 3).				

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708	NRR/ECGB	3.8.2.4-30	DSER-OI		Proposed	Inactive		
				Westinghouse should increase the thickness or use stiffeners (as in the ABB-CE System 80+ design) to meet the ASME Service Level C limits at the ambient temperature of 908 kPa (117 psig) for a 6.7 m (22-ft) diameter hatch, and 763.2 kPa (96 psig) for a 4.9-m (16- ft) diameter hatch.				
				ASME have confirmed that the method used for the AP600 complies with ASME Code Case N 284. Copy of ASME confirmation of AP600 interpretation is being sent to NRC. Westinghouse position is that use of code case N284 satisfies the deterministic Service Level C criteria approved by the commissioners.				
709	NRR/ECGB	3.8.2.4-31	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should provide a commitment in Section 3.8.2.4.2.5 of the SSAR that the COL applicant should demonstrate that EPAs to be used shall be at least as strong as the AP600 SCV.				
				The response to RAI 220.33, Rev 1 has been incorporated in SSAR Subsection 3.8.2.4.5, Rev 3.				
710	NRR/ECGB	3.8.3.1-1	DSER-OI		Action W	Action W		
				Westinghouse should provide in the SSAR the connection details between "M" modules, and between "M" modules and other types of modules.				
				Module behavior study is in progress. Design calculations for modules will be updated following completion of the behavior study to include any changes in methodology defined by the study. Additional connection details will be developed during this update and will be included in CIS design data to be audited in November, 1995. Typical connection details will be described in SSAR.				
711	NRR/ECGB	3.8.3.1-2	DSER-OI		Action W	Inactive		
				Westinghouse should demonstrate that the structure will not lift up during an SSE.				
				Liftoff of the CIS basemat from the containment vessel and NI basemat was included in the nuclear island basemat analyses. Additional analyses of the CIS and NI basemat response to seismic loads is in progress. These analyses will demonstrate that liftoff of one side of the CIS basemat is not significant. Result will be available at structural audit.				
712	NRR/ECGB	3.8.3.2-1	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should revise the SSAR to reflect the staff's technical position regarding the use of the ANSI/AISC N690 Standard.				
				SSAR Revision 3 incorporates the response to RAI 220.84 reflecting the staff's technical position regarding the use of the ANSI/AISC N690 Standard.				
713	NRR/ECGB	3.8.3.2-2	DSER-OI		Closed	Closed		
				Westinghouse should identify the differences between the 1980 version of the ACI-349 Code and the 1990 revision of the ACI-349-85 Code, and should submit an analysis of the differences for staff review and acceptance.				
				The differences between the 1980 and 1990 edition were published in ACI Journals prior to publication of the 1985 edition and the 1990 supplement. The revisions incorporated in the 1985 edition were primarily to make 349 consistent with revisions incorporated in the ACI 318-83 Building Code. The revisions in the 1990 supplement were primarily in Appendix B, which is addressed separately in Open Item 3.8.4.2-4. ACI 349-85 was endorsed for use in the CESSAR application.				
714	NRR/ECGB	3.8.3.2-3	DSER-OI		Closed	Resolved		
				Westinghouse should justify the use of the ACI Code and ANSI/AISC N690 Standard for the design of modular structural elements.				
				The use of ANSI/AISC N690 for the design of structure associated with equipment and piping modules was discussed in the response to RAI 210.9. The use of the codes for the concrete filled structural modules is covered under Open Item 3.8.3.2-5.				

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715	NRR/ECGB	3.8.3.2-4	DSER-OI		Resolved	Resolved		
				Westinghouse should revise Section 3A.1 of Appendix 3A of the SSAR to correct an error stating that the codes and standards applicable to the design of the structural modules are those previously given in Section 3.8.2.2.1 of the SSAR, since that section does not exist.				
				Resolved - Reference has been changed to Subsection 3.8.3.2.				
716	NRR/ECGB	3.8.3.2-5	DSER-OI		Action W	Action W		
				Westinghouse should justify the use of the ANSI/AISC N690 Standard and the ACI 349 Code for concrete-filled steel M modules.				
				This is being addressed in the module behavior study				
717	NRR/ECGB	3.8.3.3-1	DSER-OI		Action W	Action W		
				Westinghouse should address in the SSAR the entire construction process, from off-site fabrication to final on-site placement.				
				Additional information to be added to SSAR 3.8 as discussed in December, 1994 meeting.				
718	NRR/ECGB	3.8.3.3-2	DSER-OI		Action W	Action W		
				Westinghouse should address the construction-induced stress following the curing of the concrete.				
				SSAR to be revised to address stress in module due to concrete placement. As discussed in December, 1994 meeting, these stresses are secondary and are not combined with those due to primary loads. Based on meeting on 4/27/95 additional justification must be developed.				
719	NRR/ECGB	3.8.3.3-3	DSER-OI		Proposed	Action W		
				Westinghouse should consider, in the design of the IRWST, the combination of the load from ADS actuation and the SSE load. In addition, the thermal loading should be considered in the internal structural steel frame design.				
				Proposed -The safe shutdown earthquake is assumed to cause loss of all nonsafety systems. The plant response is similar to the loss of all AC power event where the passive safety systems maintain core cooling. Shortly before 24 hours after the initiating seismic event, the automatic depressurization system actuates. ADS is actuated automatically substantially after the seismic initiating event. Thus, the dynamic loads do not occur concurrently and are not combined. Inadvertant operation of the ADS is specified as a low probability design transient. This event is independent of the safe shutdown earthquake and the combined probability of two unrelated initiating events occuring concurrently is negligible. The safe shutdown earthquake does not cause a pipe rupture since the safety related piping is designed for the safe shutdown earthquake. In addition most of the piping is designed to the mechanistic leak before break criteria. Safety analyses are performed for emergency core cooling for double ended pipe ruptures. These analyses show that the time of actuation of ADS is dependent on the size of the break, but is significantly longer than the 30 second duration postulated for the safe shutdown earthquake. Hence even if the safe shutdown earthquake were to lead to a pipe break, the dynamic effects of the safe shutdown earthquake and ADS operation would not occur concurrently. Internal structural steel frames are designed for thermal loading. This issue was resolved in 4/26/95 meeting.				
720	NRR/ECGB	3.8.3.4-1	DSER-OI		Closed	Action N	NTD-NRC-95-4433	
				Westinghouse should correct the inconsistency between the SSAR and RAI responses regarding seismic analysis methods.				
				A table was included in SSAR Rev. 2 clarifying the seismic analysis methods.				

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721	NRR/ECGB	3.8.3.4-2	DSER-OI		Closed	Closed	
				Westinghouse should acceptably address concerns related to shear stiffness of module equation and the application of the ratio of Young's Modulus and shear modulus for the design of modules.			
				This issue was discussed with NRC in meeting in December 1994 and in telecon on 2/21/95. Model used in seismic FEM uses gross concrete plus transformed steel properties as documented in SSAR Appendix 3A. Item is closed based on comparison of properties provided in December meeting.			
722	NRR/ECGB	3.8.3.4-3	DSER-OI		Action W	Action W	
				Westinghouse should demonstrate the adequacy of the design based on the assumption of a composite section.			
				Action W - This issue was discussed with NRC in telecon on 2/21/95. Model used in seismic FEM uses gross concrete plus transformed steel properties as documented in SSAR Appendix 3A. This assumption is being addressed in the module behavior study.			
723	NRR/ECGB	3.8.3.4-4	DSER-OI		Closed	Resolved	
				Westinghouse should consider the thickness of the steel plates in calculating the moment of inertia for the design of modules located in the auxiliary building.			
				Closed - The assumption that the steel plate is thin relative to the concrete is acceptable for the wall thicknesses of the auxiliary building module (greater than or equal to 30").			
724	NRR/ECGB	3.8.3.4-5	DSER-OI		Action W	Action W	
				Westinghouse should use a local 3D solid model of the module geometry and materials as the basis for developing equivalent isotropic shell properties, or for justifying the equations currently used.			
				Action W - This is being addressed in the module behavior study			
725	NRR/ECGB	3.8.3.4-6	DSER-OI		Action W	Action W	
				Westinghouse should acceptably address issues relating to the seismic modeling of the containment internal structures.			
				Action W - This is being addressed in the module behavior study			
726	NRR/ECGB	3.8.3.4-7	DSER-OI		Closed	Closed	NTD-NRC-95-4433
				Westinghouse should reevaluate the damping ratio value identified in the SSAR.			
				Closed - Damping for structural modules was revised in SSAR Rev 2 from 7% to 5%.			
727	NRR/ECGB	3.8.3.4-8	DSER-OI		Action W	Action W	
				Westinghouse should demonstrate the integrity of concrete used in the wall systems after buckling of steel plates.			
				Action W - This is being addressed in the module behavior study.			
728	NRR/ECGB	3.8.3.4-9	DSER-OI		Action W	Action W	
				Westinghouse should address the interaction effect of the vertical compressive stresses with the other perpendicular in- plane horizontal stresses and shear stresses.			
				Action W - This is being addressed in the module behavior study			
729	NRR/ECGB	3.8.3.4-10	DSER-OI		Action W	Action W	
				Westinghouse should revise the combined stress equations in Section 3A.3.1.3 of the SSAR to reflect realistic action of the walls if biaxial bending is required.			
				Action W - This is being addressed in the module behavior study			

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730	NRR/ECGB	3.8.3.4-11	DSER-OI		Action W	Action W		
				Westinghouse should complete the design of the connection details and provide the design for staff review.				
				See OI 3.8.3.1-1				
731	NRR/ECGB	3.8.3.4-12	DSER-OI		Action W	Action W		
				Westinghouse should compile design summary reports using the format and attributes described in Appendix C to Section 3.8.4 of the SRP, and should submit the reports for staff review.				
				Design report will be available for review in November, 1995.				
732	NRR/ECGB	3.8.3.4-13	DSER-OI		Action W	Action W		
				The staff will perform a structural design audit of the containment internal structures.				
				Action W - Subject was discussed in meeting on 4/26/95. Further review will be performed in future meetings once module study is completed.				
733	NRR/ECGB	3.8.3.5-1	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				The May 17, 1994 response to Q220.84 provides supplemental acceptance criteria for inclusion in Section 3.8.4 of the SSAR based on the staff's position (see Section 3.8.3.2). Westinghouse should include or reference this supplemental acceptance in Section 3.8.3.5 of the SSAR.				
				Closed - SSAR Revision 3 incorporates the response to RAI 220.84 reflecting the staff's technical position regarding the use of the ANSI/AISC N690 Standard.				
734	NRR/ECGB	3.8.3.5-2	DSER-OI		Action W	Action W		
				Westinghouse should describe in the SSAR the additional acceptance criteria that are needed to address the loads and deformations during the fabrication, shipping, and construction/erection of the modules.				
				Action W - Additional information to be added to SSAR as discussed in December, 1994 meeting.				
735	NRR/ECGB	3.8.3.6-1	DSER-OI		Action W	Action W		
				Westinghouse should provide a detailed description of modular construction techniques in the SSAR.				
				Action W - Additional information to be added to SSAR as discussed in December, 1994 meeting.				
736	NRR/ECGB	3.8.3.6-2	DSER-OI		Action W	Action W		
				Westinghouse should, in the SSAR, provide the process of construction to ensure th[illegible]oids will not occur.				
				Action W - Additional information to be added to SSAR as discussed in December, 19[illegible] meeting.				
737	NRR/ECGB	3.8.4-1	DSER-OI		Resolved	Inactive		
				The shield building and auxiliary building dimensions should be provided in the SSAR.				
				Resolved - Drawings showing the key dimensions of the N.I. structures are included in draft revison of the SSAR Subsection 3.7.2.				
738	NRR/ECGB	3.8.4.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should clarify the inconsistency regarding the classification of the seal.				
				Closed - The seal between the upper and middle annuli is not required to perform an accident mitigation funcion and can be non-safety and non-seismic. The response to RAI 220.61 has been incorporated in SSAR Rev 3.				

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739	NRR/ECGB	3.8.4.1-2	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Westinghouse should compare the calculated displacement with the manufacturer-specified safe capacity of the flexible connection against stretching, crimping, and fatigue life; this comparison is essential for evaluation of air baffle seal integrity.				
				Closed - Alternate concept for flexible connection was presented during meeting on April 26. This information is incorporated in SSAR Rev. 3, Subsection 3.8.4.				
740	NRR/ECGB	3.8.4.1-3	DSER-OI		Action W	Action W		
				Westinghouse should provide in the SSAR a description and design details of modules located in the auxiliary building, and should indicate the difference between these modules and those located inside the containment.				
				Additional information as provided in RAI response has been incorporated in SSAR Rev 3 for the structural modules in the fuel handling area and for the finned floors. Further discussion will be added in SSAR Revision once module behavior study is completed (see DSER OIs on section 3.8.3).				
741	NRR/ECGB	3.8.4.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR a complete list of codes and standards used in the AP600 design. In addition, the SSAR should indicate codes or standards used in designing the various parts of each structure.				
				Rev. 3 of Subsections 3.8.3 and 3.8.4 of the SSAR includes all codes and standards used in the AP600 N.I. structures design. (Added ACI 318). Clarification provided where code applicablilty to various parts of structure were not clear (e.g. air baffle panel design to AISI).				
742	NRR/ECGB	3.8.4.2-2	DSER-OI		Closed	Inactive		
				If the 1990 revision of the ACI-349-85 Code is used, Westinghouse should identify the differences between the 1980 and 1990 versions of the ACI-349 Code, and should submit an analysis of the differences for staff review and acceptance.				
				See response to Open Item 3.8.3.2-2.				
743	NRR/ECGB	3.8.4.2-3	DSER-OI		Proposed	Inactive		
				Westinghouse should describe in the SSAR how the ductility criteria of the ACI-318 Code was considered in the design of reinforced concrete structures.				
				SSAR Rev. 3, Subsections 3.8.3.4 and 3.8.4.4.1 references ductility criteria of the ACI-318 Code.				
744	NRR/ECGB	3.8.4.2-4	DSER-OI		Progress	Inactive		
				Westinghouse's use of Appendix B to the ACI-349 Code may lead to unconservative results for the design of steel embedments.				
				AP600 position on design of anchors is being developed.				
745	NRR/ECGB	3.8.4.3-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should acceptably address the issues regarding the consideration of live load in the seismic model.				
				SSAR subsection 3.8.4.3.2.3 has been added and 3.7.2.3.1 has been revised.				
746	NRR/ECGB	3.8.4.3-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include cross references for loads (such as earthquake loads, pressure loads, etc.) in Section 3.8.4.3 of the SSAR.				
				SSAR Subsection 3.8.4.3.1 has been revised in Rev 3.				

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747	NRR/ECGB	3.8.4.3-3	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should delete Footnote 3 in Tables 3.8.4-1 and 3.8.4-2 of the SSAR, since it is misleading.				
				Combinations of seismic loads with pipe rupture are addressed in SSAR Subsection 3.9.3.1.1. The footnote has been removed from Tables 3.8.4-1 and 3.8.4-2.				
748	NRR/ECGB	3.8.4.3-4	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should commit to design all subcompartments located in the auxiliary building for global pressure and temperature effects from pipe rupture, and should indicate that the actual pressure and temperature loads are to be used for the design.				
				Design pressure of 5 psi has been included in SSAR Rev 3 for the MSIV and SGB valve compartments. These are the only compartments containing high energy hot piping.				
749	NRR/ECGB	3.8.4.4-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should describe in the SSAR which specific combined design load conditions were considered in the design calculation.				
				SSAR Rev 3 Subsection 3.8.4.4.1 includes additonal information on methods of analysis used for each type of load.				
750	NRR/ECGB	3.8.4.4-2	DSER-OI		Closed	Active		
				Westinghouse should provide for staff review the final design calculation for the shield building and the passive containment cooling water storage tank.				
				Methodology was presented to NRC in meeting on March 2. The final design calculation for the shield building and the passive containment cooling water storage tank will be available for staff review during the meeting scheduled for mid June 1995.				
751	NRR/ECGB	3.8.4.4-3	DSER-OI		Action W	Inactive		
				Westinghouse should add COL Action Item 3.8.4.4-1 to the SSAR.				
				Design calculations for shield building roof are being reviewed to see if monitoring of tank deflections or visual examination of concrete structures would be appropriate.				
752	NRR/ECGB	3.8.4.4-4	DSER-OI		Action W	Inactive		
				Westinghouse should acceptably address issues pertaining to the soil pressure used for embedded exterior wall design.				
				See Open Item 3.7.2.4-7. Results of the 2D SASSI analyses to determine the loads on the exterior walls below grade will be presented during meeting scheduled for June and will be documented in SSAR revision in August 1995.				
753	NRR/ECGB	3.8.4.4-5	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Westinghouse should commit, in the SSAR, that because of degradation and aging concerns, the containment air baffle seal material will be periodically replaced during the life of the plant.				
				Closed - Alternate detail eliminating non-metallic seals was discussed with NRC week of 4/24/95. This revised configuaration is described in SSAR Rev 3.				
754	NRR/ECGB	3.8.4.4-6	DSER-OI		Closed	Inactive		
				Westinghouse should provide analysis procedures and design details of the spent fuel pool, including fuel racks, the fuel transfer canal, and the new fuel storage area.				
				The spent fuel pool and transfer canal are part of module M20/M21. Additional details will be provided in response to OI 3.8.4.5-1. Analysis and design details of the fuel racks are covered in SSAR Chapter 9.				

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755	NRR/ECGB	3.8.4.4-7	DSER-OI		Action W	Inactive		
				Westinghouse's list of components provided in the June 30, 1994 response to Q220.83 should include both the IRWST (as part of containment internal structures), and the air baffle (as part of the shield building).				
				Design reports for the nuclear island basemat, auxiliary building, containment internal structure and the shield building are scheduled as the design work is updated.				
756	NRR/ECGB	3.8.4.4-8	DSER-OI		Closed	Inactive		
				For the design of embedded exterior reinforced concrete walls, Westinghouse should commit in the SSAR to use coated reinforcing bars in order to prevent the potential of rebar corrosion.				
				The seismic Category I structures below grade are protected against flooding by waterstops and a waterproofing system. The waterproofing system is provided by the introduction of a cementitious crystalline waterproofing additive to the nailed soil retention wall shotcrete or to the shotcrete applied to the rock surface. This waterproofing system plus concrete cover to the reinforcement is considered to provide adequate protection.				
757	NRR/ECGB	3.8.4.5-1	DSER-OI		Action W	Action W		
				Westinghouse should include in Appendix 3A of the SSAR, a description of criteria used for the different configurations and applications if there are differences in the details of these modules.				
				See OI 3.8.4.1-3.				
758	NRR/ECGB	3.8.4.5-2	DSER-OI		Action W	Action W		
				Westinghouse should provide requirements in the SSAR for modular construction in the auxiliary building.				
				Additional information to be added to SSAR as discussed in December 1994 meeting.				
759	NRR/ECGB	3.8.5-1	DSER-OI		Resolved	Inactive		
				Westinghouse should provide in the SSAR the exact dimensions of the foundation.				
				Drawings showing the key dimensions of the N.I. structures are included in draft revision of SSAR Subsection 3.7.2.				
760	NRR/ECGB	3.8.5-2	DSER-OI		Closed	Inactive		
				If Revision 1990 of the ACI-349-85 Code is used, Westinghouse should identify the differences between the 1980 and 1990 versions of ACI-349 Code, and should submit an analysis of the differences for staff review and acceptance.				
				The differences between the 1980 and 1990 edition were published in ACI Journals prior to publication of the 1985 edition and the 1990 supplement. The revisions incorporated in the 1985 edition were primarily to make 349 consistent with revisions incorporated in the ACI 318-83 Building Code. The revisions in the 1990 supplement were primarily in Appendix B, which is addressed separately in Open Item 3.8.4.2-4. ACI 349-85 was endorsed for use in the CESSAR application.				
761	NRR/ECGB	3.8.5-3	DSER-OI		Action W	Active		
				Westinghouse should combine the effect of accident pressure with other design loads when designing the foundation mat.				
				Issues on nuclear island basemat were raised by NRC RAIs and independent review. Additional analyses are in progress and status is being reviewed in meetings with NRC. Next review is in mid June.				
762	NRR/ECGB	3.8.5-4	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should acceptably address the issues pertaining to potential overturning and sliding of NI structures due to an SSE.				
				Information requested was provided in response to RAI 220.50 Revision 1. It is incorporated into SSAR Revision 3.				

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763	NRR/ECGB	3.8.5-5	DSER-OI		Action W	Inactive		
				The consideration of only horizontal springs (without including the vertical soil springs) to represent the flexibility of the soil foundation is not acceptable to the staff.				
				Issues on nuclear island basemat were raised by NRC RAIs and independent review. Additional analyses are in progress and status is being reviewed in meetings with NRC. Next review is in mid June.				
764	NRR/ECGB	3.8.5-6	DSER-OI		Action W	Inactive		
				Westinghouse should provide the basis for using only two load combination cases for the basemat lift-up analysis.				
				Issues on nuclear island basemat were raised by NRC RAIs and independent review. Additional analyses are in progress and status is being reviewed in meetings with NRC. Next review is in mid June.				
765	NRR/ECGB	3.8.5-7	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should provide in the SSAR the factor of safety against NI structures sliding and overturning due to tornado and wind loads, and the rationale for the buoyancy force criterion for the submerged structures.				
				Information requested was provided in response to RAI 220.50 Revision 1. It is incorporated into SSAR Revision 3.				
766	NRR/ECGB	3.8.5-8	DSER-OI		Proposed	Inactive		
				Westinghouse should provide the validation package of INITEC's in-house computer codes for review and should verify the adequacy of the post-processed results obtained from these codes.				
				Issues on nuclear island basemat were raised by NRC RAIs and independent review. Additional analyses are in progress and status is being reviewed in meetings with NRC. Next review is in mid June. In the final design of the basemat, the required reinforcing will be determined by hand calculations without the use of in-house postprocess computer programs. Therefore, the previously postprocess program will not be verified				
767	NRR/ECGB	3.8.5-9	DSER-OI		Action W	Inactive		
				Westinghouse should perform additional review of the basemat analysis, and should use simplified analysis (based on ACI 336 procedures) to verify the design adequacy.				
				Issues on nuclear island basemat were raised by NRC RAIs and independent review. Additional analyses are in progress and status is being reviewed in meetings with NRC. Next review is in mid June.				
768	NRR/ECGB	3.8.5-10	DSER-OI		Action W	Inactive		
				Westinghouse should perform additional analyses for construction loads.				
				Issues on nuclear island basemat were raised by NRC RAIs and independent review. Additional analyses are in progress and status is being reviewed in meetings with NRC. Next review is in mid June.				
769	NRR/ECGB	3.8.5-11	DSER-OI		Action W	Inactive		
				Westinghouse should perform additional analyses to evaluate the effects of (1) local soft spots of soil foundation, (2) soil springs to the foundation mat design with non-uniform stiffnesses, and (3) soil stiffness corresponding to other soil conditions used in the design.				
				Issues on nuclear island basemat were raised by NRC RAIs and independent review. Additional analyses are in progress and status is being reviewed in meetings with NRC. Next review is in mid June.				
770	NRR/ECGB	3.8.5-12	DSER-OI		Action W	Inactive		
				Westinghouse should perform additional analyses and design for the seismic shears and moments due to out-of-phase vibration between the shield building, containment shell, and internal structures.				
				Issues on nuclear island basemat were raised by NRC RAIs and independent review. Additional analyses are in progress and status is being reviewed in meetings with NRC. Next review is in mid June.				

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771	NRR/ECGB	3.8.5-13	DSER-OI		Closed	Resolved		
				Westinghouse should provide, in Section 3.8.5.5.4 of the SSAR, the formulas for calculating the energy component due to buoyancy ("Wb") for the dynamic stability evaluation.				
				See response to OI 3.8.5-4. Dynamic stability evaluation of the nuclear island is performed using the moment balance method instead of the energy balance method.				
772	NRR/ECGB	3.8.5-14	DSER-OI		Closed	Inactive		
				Westinghouse should commit in the SSAR to use coated reinforcing bars for the design of the NI foundation.				
				The seismic Category I structures below grade are protected against flooding by waterstops and a waterproofing system. The waterproofing system is provided by the introduction of a cementitious crystalline waterproofing additive to the nailed soil retention wall shotcrete or to the shotcrete applied to the rock surface. This waterproofing system plus concrete cover to the reinforcement is considered to provide adequate protection.				
773	NRR/ECGB	3.8.5-15	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should correct the identified inconsistences in figures in the SSAR.				
				General Arrangement drawings have been revised in SSAR Rev 3.				
774	NRR/ECGB	3.8.5-16	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should correct the identified errors in figures in the SSAR.				
				General Arrangement drawings have been revised in SSAR Rev 3.				
775	NRR/ECGB	3.8.5-17	DSER-OI		Action W	Inactive		
				Westinghouse should include the construction loads and the sequence of these loads in the design of the NI foundation mat.				
				Issues on nuclear island basemat were raised by NRC RAIs and independent review. Additional analyses are in progress and status is being reviewed in meetings with NRC. Next review is in mid June.				
776	NRR/ECGB	3.8.5-18	DSER-OI		Action W	Inactive		
				Westinghouse should provide overhangs at the end of the NI foundation mat (to ensure adequate rebar development length), or should use special end plates for rebar anchorage, to resist the bending moments from the soil pressure (static and dynamic) against peripheral walls.				
				Overhangs are not required at the end of the NI foundation mat (to ensure adequate rebar development length). Typical details will be developed for the wall to mat connection. These will be discussed during the structural meeting in June and will be included in the design summary report.				
777	NRR/ECGB	3.8.5-19	DSER-OI		Action W	Inactive		
				Westinghouse should consider in the design the effect of the impact between the foundation mat and the rock, and the load concentration at edges and corners.				
				Issues on nuclear island basemat were raised by NRC RAIs and independent review. Additional analyses are in progress and status is being reviewed in meetings with NRC. Next review is in mid June.				
778	NRR/ECGB	3.8.5-20	DSER-OI		Action W	Inactive		
				Westinghouse should validate by an independent U.S. reference the references used for the foundation design.				
				Final documentation will include an independent reference.				

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779	NRR/ECGB	3.8.5-21	DSER-OI		Closed	Resolved		
				Westinghouse should perform an independent review of the existing design calculations, and should verify the adequacy of INITEC's in-house post-process computer programs used for the foundation mat design. In addition, Westinghouse should perform simplified analyses to confirm the adequacy of the existing design results, and should provide the independent review results for staff review.				
				An independent review of the existing design has been performed. Conclusions have been presented to the NRC in a number of meetings. A report has been written and is available. In the final design of the basemat, the required reinforcing will be determined by hand calculations without the use of in-house postprocess computer programs. Therefore, the previously postprocess program will not be verified. No SSAR revision.				
780	NRR/EMEB	3.9.2.1-1	DSER-OI		Action W	Inactive		
				Westinghouse should revise the SSAR to state that the identified piping systems will be included in the AP600 preoperational piping vibration, thermal expansion, and dynamic test programs.				
				Action W - Revise SSAR 3.9.2.1 and 14.2.8 to state that ASME Code Class 1, 2, and 3 and non-ASME Code high energy piping systems will be included in the AP600 preoperational piping vibration, thermal expantion and dynamic test programs.				
781	NRR/EMEB	3.9.2.1-2	DSER-OI		Resolved	Inactive		
				Westinghouse should revise the June 27, 1994, and December 22, 1992 responses to Q210.54 and Q100.13 respectively, as well as Sections 3.9.2.1.1 and 3.9.8 of the SSAR, to change the date of ANSI/ASME OM from 1987 to 1990.				
				Resolved - Revise SSAR to change the date of the referenced Code to 1990.				
782	NRR/EMEB	3.9.2.3-1	DSER-OI		Resolved	Inactive	NTD-NRC-95-4405	2/7/95
				Westinghouse should either re-classify the first AP600 as the "prototype" plant, or provide for staff review additional information relative to the identified concerns review.				
				Resolved - The reactor internals for the first plant will be considered to be a prototype for the purposes of the pre-operational test program. Supplemental testing (component vibration tests, flow tests, or scale modle test) are not required. Revise SSAR 3.9.2.4 to state this				
783	NRR/EMEB	3.9.2.3-2	DSER-OI		Action W	Inactive		
				Westinghouse should provide documentation of vibration prediction analysis for the AP600 internals, including anticipated responses at each transducer location, their allowable response level, and the basis for the acceptance criteria. In addition, the document should also be referenced in the SSAR.				
				Action W - Meeting 5/10/95 Add a summary table of expected vibration to the vibration assessment report. Add COL item to SSAR for calculation of transducer responses				
784	NRR/EMEB	3.9.2.3-3	DSER-OI		Resolved	Inactive		
				Westinghouse should provide an additional measurement of guide tube response at the location experiencing the most severe cross-flow excitation (i.e., near the reactor outlet nozzle).				
				Resolved - strain gauges added in RAI response are acceptable. Include in SSAR Rev. 3 Table 3.9-4				
785	NRR/ECGB	3.9.2.4-1	DSER-OI		Action W	Inactive		
				Westinghouse should verify whether the Japanese test input meets the seismic qualification level of the AP600 design.				
				Action W - Fix the response in RAI 210.94 to clarify that rod drop during a seismic event is not a functional requirement.				
786	NRR/ECGB	3.9.3.1-1	DSER-OI		Resolved	Inactive		
				Westinghouse should add the loading combination of SSE plus LOCA to Tables 3.9-6, 3.9-7, and 3.9-11 of the SSAR if DBPB does not include LOCA loads.				
				Resolved - Meeting with NRC on April 10, and 11 make the notes consistent among Tables 3.9-6, -7, and -11				

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787	NRR/EMEB	3.9.3.1-2	DSER-OI		Closed	Inactive	
				Westinghouse should identify in the SSAR all ASME Code Class 2 and 3 SSCs that are subjected to loadings that could result in thermal or dynamic fatigue so severe that the 60-year design life cannot be assured by required Code calculations, and should describe the evaluations proposed for such items.			
				Closed - The steam generator is constructed as a Class 1 component. No other Class 2 and 3 systems need to consider fatigue. Discussed with NRC			
788	NRR/EMEB	3.9.3.1-3	DSER-OI		Action N	Inactive	
				Westinghouse should provide the information relative to Design Specifications that was requested in Q210.73 and also should revise the June 16, 1994 response to Q210.91 to be consistent with the revised response to Q210.73.			
				Action N - procedure provided to Everret Rodabaugh (NRC); NRC provide results of review			
789	NRR/EMEB	3.9.3.1-4	DSER-OI		Resolved	Inactive	
				Westinghouse should add COL Action Item 3.9.3.1-1 to the SSAR.			
				Resolved - Add COL item to SSAR			
790	NRR/EMEB	3.9.3.1-5	DSER-OI		Resolved	Inactive	
				Westinghouse should revise the response to Q210.61 to include the identified item as a part of the SSAR revision.			
				Resolved Revise 5.4.7.2.2 and 1.9.5.1			
791	NRR/EMEB	3.9.3.1-6	DSER-OI		Action W	Inactive	
				Westinghouse should describe the methodology used for the seismic analyses of ductwork, as well as the methodology used to calculate the ductwork section properties and masses to be used in the seismic analyses.			
				Action W - Discussed in meeting April 10 & 11. Rev. 3 of the SSAR will include methodology for the analysis and design of HVAC ducts and duct supports.			
792	NRR/EMEB	3.9.3.3-1	DSER-OI		Action W	Inactive	
				Westinghouse should redefine large bore snubbers as 50 kips or greater. If any size snubber is used as a support for an active component, Westinghouse should include a commitment in Section 3.9.3.4 and Tables 3.9-9 and 3.9-10 of the SSAR that these snubbers are included in the Level C allowable stress limitation.			
				Action W - Finalize AP600 position and discuss with NRC			
793	NRR/EMEB	3.9.3.3-2	DSER-OI		Action W	Inactive	
				The safety factors in Appendix B to ACI 349 are unacceptable. Westinghouse should use the factors in IE Bulletin 79-02 unless an acceptable basis can be demonstrated for lower factors.			
				Action W - Prepare AP600 position on design of anchors.			
794	NRR/ECGB	3.9.5-1	DSER-OI		Closed	Inactive	
				Westinghouse will provide the staff with more detailed analyses to finalize the design when available. (Staff Audit of analyses to finalize RV internals design)			
				Closed - 5/10/95 meeting NRC reviewed AP600 Reactor Vessel Internals Detailed Analysis MI01-S3A-001. This and the AP600 Reactor Vessel Scoping Analysis - MI01-M2C-001 provide the basis for the expectation that the AP600 design will meet functional requirements with only minor changes.			

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795	NRR/ECGB	3.9.5-2	DSER-OI		Resolved	Inactive	NTD-NRC-94-4181	6/27/94
				Westinghouse should revise Figures 3.9-5 and 3.9-6 of the SSAR to include the identified information.				
				Resolved - The responses to RAIs 210.99 and 210.101 add the key dimensions for the lower internals and upper core support structure.				
796	NRR/ECGB	3.9.5-3	DSER-OI		Resolved	Inactive		
				Westinghouse should add a side view to Figure 5.3.4-1 of the SSAR to incorporate the reactor vessel height and thickness of the vessel wall.				
				Resolved - RAI 210.101 provides the section view. SSAR Revision 3 will add a side view.				
797	NRR/EMEB	3.9.6.1-1	DSER-OI		Resolved	Active		
				The specific staff position on the testing requirements for important non-safety-related pumps will be determined as a part of the staff's review of Westinghouse's implementation of the RTNSS.				
				Resolved - The following positon is to be included in SSAR 3.9.6.1. During operation use installed instrumentation for flow rate, differential pressure, and vibration measurement to confirm availability of pumps with RTNSS important mission. Not part of formal IST program.				
798	NRR/EMEB	3.9.6.2-1	DSER-OI		Action W	Inactive		
				Westinghouse should specifically address the method used to assess the loads, size the actuators, and set the torque and limit switches. (Westinghouse should provide specific requirements for design and qualification testing, pre-operational testing, and IST of safety-related MOVs to demonstrate their design basis capability before installation, prior to startup, and throughout plant life.)				
				Action W - Develop a description in the SSAR of valve qualification testing.				
799	NRR/EMEB	3.9.6.2-2	DSER-OI		Action W	Active		
				Westinghouse should provide a commitment that provisions will be incorporated in the design, to the extent practical, to ensure that MOVs in safety-related systems are capable of recovering from mispositioning.				
				Action W - Develop additional discussion in the SSAR on valve mispositioning.				
800	NRR/EMEB	3.9.6.2-3	DSER-OI		Action W	Action W		
				Westinghouse should provide specific requirements for design and qualification testing, pre-operational testing, and IST for these safety-related POVs (other than MOVs) to demonstrate their design basis capability before installation, and startup, as well as throughout plant life.				
				Action W - Develop qualification requirements to be included in SSAR.				
801	NRR/EMEB	3.9.6.2-4	DSER-OI		Action W	Action W		
				Westinghouse should revise the applicable SSAR sections and the IST program to comply with the staff positions in Section 3.9.6.2 of this report on the testing requirements for check valves.				
				Action W - Draft a description of check valve testing method for inclusion in Subsection 3.9.6 of the SSAR.				
802	NRR/EMEB	3.9.6.2-5	DSER-OI		Action W	Resolved		
				Westinghouse should revise the applicable SSAR section to comply with the staff's position as stated in SECY-90-016.				
				Action W - Include COL item in SSAR.				
803	NRR/EMEB	3.9.6.2-6	DSER-OI		Resolved	Resolved		
				Westinghouse should revise the applicable SSAR section to comply with the Code. (OM Part 10, all fail-safe valves including those that rely on safety-related systems for actuation power to be fail s[illegible] 4.)				
				Resolved - Turning the valve off as in an excercise test is sufficient as a failsafe test. Include this in SSAR.				

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804	NRR/EMEB	3.9.6.2-7	DSER-OI		Action W	Action W		
				Westinghouse should provide additional information on how a flow test satisfies the requir :ments of OM Part 10 Section 4.2.2, "Valve Seat Leakage Test".				
				Action W - change in tech spec section is required.				
805	NRR/EMEB	3.9.6.2-8	DSER-OI		Resolved	Active		
				Westinghouse should provide in the SSAR a list of all pressure isolation valves if the Technical Specifications do not require a list.				
				Resolved - Chapter 16 of the SSAR (Tech Specs) will be revised to reflect the revised inservice testing plan.				
806	NRR/EMEB	3.9.6.2-9	DSER-OI		Resolved	Resolved		
				Westinghouse should revise the applicable SSAR section to comply with the Code (i.e., OM Part 10, Sections 4.2.1.5 and 4.3.2.3).				
				Resolved - Revise section 3.9.6 in SSAR.				
807	NRR/EMEB	3.9.6.3-1	DSER-OI		Action W	Action W		
				Westinghouse should provide the bases for deferring valve testing to cold shutdowns or refueling outages.				
				Action W - Rewrite SSAR and add to SSAR table to provide justification for deferral to shutdown for reasons of impracticability				
808	NRR/EMEB	3.9.6.4-1	DSER-OI		Action W	Active		
				With the assistance of Brookhaven National Laboratory, the staff is currently reviewing the IST program.				
				Action W - Close out of 3.9.6 DSER open items and follow on questions (1713 - 1761) will close this item.				
809	NRR/EMEB	3.9.6.4-2	DSER-OI		Action N	Active		
				Specific positions on the IST requirements for the identified components will be determined as a part of the staff's review of Westinghouse's implementation of the RTNSS process.				
				Action N - NRC Complete review				
810	NRR/EMEB	3.9.6.5-1	DSER-OI		Action W	Inactive		
				When available, the staff will review the qualification test or analysis program related to the safety-related check valves. (RAI 952.99 is related)				
				Action W - Develop a description in SSAR on valve qualification testing.				
811	NRR/EMEB	3.9.6.5-2	DSER-OI		Action W	Inactive		
				Westinghouse should acceptably address issues pertaining to valve qualification testing. (ADS valve qualification)				
				Action W - Develop a description in SSAR on valve qualification testing.				
812	NRR/ECGB	3.9.7-1	DSER-OI		Action W	Inactive		
				Westinghouse should provide in the SSAR a description of the analysis and/or test data that was used to establish this deflection limit. This should include a description of the design-basis loads. (Deflection of CRDM rod travel housing)				
				Action W - Provide a basis for the deflection limit similar to the basis for the internal deflection limits provided in the response to RAI 210.97				
813	NRR/ECGB	3.10-1	DSER-OI		Action W	Inactive		
				Westinghouse should revise the SSAR and WCAP-13054 to state that the COL applicant will submit all seismic experience data information to the staff for review and approval before including it in the equipment qualification file.				
				Action W - Westinghouse add statements to Section 3.10.1.1 and Appendix 3D of the SSAR and to WCAP 13054 that the COL applicant will submit all seismic experience data information to the staff for review and approval.				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
814	NRR/ECGB	3.10-2	DSER-OI		Action W	Inactive		
				In addition to revising WCAP-13054, Westinghouse should revise Section 3.9.3 or 3.10 of the SSAR to describe the methodology used in the AP600 design to analyze the feedwater line valve disks when they are subjected to dynamic loads from a LOCA. (RAI210.85)				
				Action W- add a statement as follows to SSAR. "Valve discs are evaluated for maximum design line pressure and maximum differential pressure resulting from plant operating, transient, and accident conditions. Valve operating conditions are included as part of the valve design specification and are used to evaluate the valve disc.				
815	NRR/ECGB	3.10-3	DSER-OI		Action W	Inactive		
				Westinghouse should revise Section 3.9.3 or 3.10.2.2 of the SSAR to provide the identified commitment. (RAI210.87)				
				Action W - Westinghouse will add a statement as follows to SSAR and WCAP-13054 "The qualification program for valves that are part of the reactor coolant pressure boundary shall include testing or analysis that demonstate that these valves will not experience leakage beyond the criteria when subjected to design loading." This statement will be added to Section 3.10.2.2 in paragraph 2 and comments to Section 3.10 in WCAP-13054				
816	NRR/ECGB	3.10-4	DSER-OI		Action W	Inactive		
				Westinghouse should acceptably address issues raised in Q210. 93. (IEEE-323-1983, DSER text states that response to 210.93 is not acceptable.)				
				Action W - Discuss with NRC the Westinghouse position				
817	NRR/ECGB	3.10-5	DSER-OI		Action W	Inactive		
				Westinghouse should revise Section 3.10 and Attachment E of Appendix 3D of the SSAR to include the identified commitments, if they have not yet been provided in the SSAR.				
				Action W - Westinghouse will revise the SSAR to include the information requested by the NRC				
818	NRR/SPLB	3.11.3.1-1	DSER-OI		Action N	Action W		
				Table 3.11-1 of the SSAR, provides a list of safety-related electrical and active mechanical equipment that is essential to emergency reactor shutdown, containment isolation, reactor core cooling, or containment and reactor heat removal, or that is otherwise essential in preventing a significant release of radioactive material to the environment. Additional discussions with Westinghouse are necessary before a final conclusion concerning this table.				
				Action N - Complete review of the list in Table 3.11-1				
819	NRR/SPLB	3.11.3.2-1	DSER-OI		Action W	Resolved		
				The methodology used by Westinghouse for the AP600 relies primarily on IEEE 323-1983. To date, the NRC staff has not endorsed IEEE 323-1983; therefore, references to this standard (in its entirety or in part) are not acceptable.				
				Action W - Revise SSAR to reference 1974 version				
820	NRR/SPLB	3.11.3.2-2	DSER-OI		Resolved	Resolved		
				Westinghouse should acceptably address issues pertaining to qualification of electronic equipment.				
				Resolved - Revise the SSAR to include to include information pertaining to qualification of electronic equipment.				
821	NRR/SPLB	3.11.3.2-3	DSER-OI		Action W	Inactive		
				Westinghouse should clearly identify which equipment is classified as electrical, and should separate such items from those that are classified as mechanical equipment.				
				Action W - Discuss Table 3.11-1 with NRC.				

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. / Date
822	NRR/EMEB	3.12.3-1	DSER-OI		Resolved	Inactive	
				Westinghouse should provide additional descriptions in the SSAR to include some guidance on procedures, the range of applicability, the criteria for selecting significant parameters, and any limitations on the use of the piping analysis methods.			
				Resolved - Will add to the SSAR a description of the dynamic analysis methods used. Approximately one paragraph each.			
823	NRR/EMEB	3.12.3.5-1	DSER-OI		Resolved	Inactive	
				If Westinghouse plans to use inelastic analysis methods in the design of piping systems, it should identify the specific systems, provide a detailed description of the methodology, and either provide additional justification for the proposed acceptance criteria or provide acceptance criteria consistent with the guide- lines of Section 3.9.1 of the SRP. This information should be submitted for staff review and approval and should be included in the SSAR.			
				Resolved - Discussed in meeting April 10 and 11. AP600 will not use inelastic analysis. Include this in the SSAR.			
824	NRR/EMEB	3.12.3.7-1	DSER-OI		Resolved	Inactive	
				Westinghouse should commit to the guidelines of Section 3.9.2 of the SRP, which require evaluation of the non-seismic piping up to the first anchor beyond the interface. Open item in text reads as follows: Westinghouse was requested to provide justification to demonstrate that a length of pipe extending to two seismic restraints beyond the interface (versus an anchor) is sufficient to characterize the dynamic behavior of the system and to explain how the loads on the seismic restraints from the non-seismic piping beyond the analyzed region will be accounted for. As an alternative, Westinghouse should commit to the guidelines of Section 3.9.2 of the SRP, which require evaluation of the non-seismic piping up to the first anchor beyond the interface.			
				Resolved - Discussed in meeting APRIL 10 and 11. Westinghouse will incorporate criteria from meeting material into SSAR.			
825	NRR/EMEB	3.12.4.1-1	DSER-OI		Action N	Active	
				The staff is currently performing independent confirmatory piping stress analyses of representative piping systems in the AP600 design. Asessment of the Westinghouse computer program will be provided in the FSER.			
				Action N - Brookhaven will review reduced size models for the confirmatory analysis. Westinghouse transmitted this information in Letter NTD-NRC-95-4443 Dated April 21, 1995			
826	NRR/EMEB	3.12.4.1-2	DSER-OI		Closed	Closed	
				Westinghouse should provide for staff review information on the third piping sample problems.			
				Closed - Westinghouse provided this information. Subsequently Brookhaven requested sample problems of reduced scope. See open item 825.			
827	NRR/EMEB	3.12.4.2-1	DSER-OI		Action W	Inactive	
				Westinghouse should provide in the SSAR a detailed description of piping system analysis, modeling methodology, criteria, and guidelines.			
				Action W - Additional information will be provided in the SSAR.			
828	NRR/EMEB	3.12.4.3-1	DSER-OI		Resolved	Inactive	
				Westinghouse should include in the SSAR a commitment that the COL applicant will comply with the requirements of the benchmark program.			
				Resolved - Discussed in meeting with NRC on April 10 and 11. COL item will require benchmarking of codes different than those used for design certification.			
829	NRR/EMEB	3.12.4.4-1	DSER-OI		Resolved	Inactive	
				Westinghouse should include in the SSAR detailed criteria and procedures to account for branch line mass and flexibility effects in the main line analysis, when decoupling.			
				Resolved - Discussed in NRC meeting April 10 and 11			

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Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No / Date
830	NRR/EMEB	3.12.4.4-2	DSER-OI		Action W	Inactive	
				Westinghouse should include in the SSAR criteria for the definition of spectra at the intersection point of the run pipe and branch pipe analytical model of the branch piping, acceptable to the staff.			
				Action W - The response to RAI 210.49 will be revised. NRC will review method.			
831	NRR/EMEB	3.12.5.1-1	DSER-OI		Resolved	Inactive	
				Westinghouse should include in the SSAR a description of the peak shifting method.			
				Resolved -Westinghouse will include this information in pipe analysis guidelines			

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Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No / Date
832	NRR/EMEB	3.12.5.3-1	DSER-OI		Proposed	Inactive	

Westinghouse should revise the SSAR to further justify all of the issues discussed in Section 3.12.5.3 of this report.

Proposed - Remove alternate criteria for safety-related piping. Add a table for seismic II over I criteria. Loads may exclude short duration valve opening - revise table with specific dynamic loadings,
SSE + other transient conditions

Load combinations including seismic loads are discussed in Subsection 3.9.3.1.1. Any dynamic loads that are expected to result from an initiating SSE event are considered in combination with the SSE. The combination depends on the time phasing of the consequential event and initiating SSE event. Loads resulting from dynamic events will only be combined with SSE loads if the loads can mechanistically and realistically occur simultaneously. The duration of the SSE event is 30 seconds. The sequence of events that lead to a consequential dynamic event is assumed to initiate at the beginning of the SSE event. The evaluation considers the limiting single failure of a non-safety(non-seismic) system that may occur during the SSE event. The maximum seismic response is assumed to occur any time during the 30-second SSE duration, this is conservative since the duration of strong motion is closer to six seconds.

The following is an example of how an event (opening of a pressurizer safety valve) is considered for combination with SSE. A safety valve could open as a result of a design basis loss of heat sink event such as a double ended main feed water pipe break (MFPB). The SSE can cause a pressure boundary failure in any single non-seismically analyzed piping system near the time of the start of the SSE. Therefore the SSE will be concurrent with consequential events that occur before the time of the end of the SSE. That is up to 30 seconds after the assumed pressure boundary failure. Therefore, if the safety valves actuate within 30 seconds of the MFPB, then the dynamic loads that result from the actuation of the safety valves would be considered in combination with the SSE. If the safety valves are shown to actuate after 30 seconds elapsed from the time of the MFPB, the dynamic loads would not be combined with the SSE. For the AP600, evaluation of the reactor coolant system design transients shows that the pressurizer safety valves would be actuated no sooner than 50 seconds after the MFPB. Since this is larger than 30 seconds, the loads due to SSE are not combined with the loads due to pressurizer safety valve actuation. The safety valves have a short opening time such that the dynamic structural response will last for about 0.5 seconds. Since these valves discharge to an open system (containment atmosphere), there will be a steady state thrust force until the valve closes because of decreasing pressure in the reactor coolant system. The valves can then cycle open and closed over a period of several hours.

Another example is the main steam isolation valve (MSIV) response to the SSE. The system design is reviewed to find out which events will lead to MSIV valve closure. An evaluation is then performed to decide if the SSE can cause these events. The SSE is 30 seconds long and is assumed to occur at 100% normal power operation. The SSE can cause a pressure boundary failure in any single non-seismically analyzed piping system near the time of the start of the SSE. Therefore the SSE will be concurrent with consequential events that occur before the time of the end of the SSE, which is up to 30 seconds after the assumed pressure boundary failure. The MSIV will close on a low steam line pressure signal. The event that will lead to the quickest closure of the MSIV is a double ended main steam pipe break (MSPB) in the turbine building. A conservative lower bound response time is obtained by considering a double ended MSPB inside containment. It is found that the low steam line pressure signal can initiate 0.79 seconds after the MSPB. There is at most an additional 2-second delay for signal processing before the MSIV begins to close. The minimum valve closure time is 3 seconds. Thus, the valve will be closed approximately 5.79 seconds after the start of the SSE. Since this is less than the 30-second duration of the SSE, the dynamic loads due to MSPB in the turbine building and MSIV closure are combined by the square-root-sum-of-the-squares method with the SSE loads.

The table below provides a partial listing of dynamic events that are evaluated to decide if they should be combined with the SSE loading.

Plant Service Level	Dynamic Event	Combine with SSE
D	Main steam line break with closure of main steam isolation valve	YES
C	Main feed water line break with opening of pressurizer safety valve	NO

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				D Core damage accident followed by remote manual opening of reactor vessel head vent valve	NO			
				B Cold overpressure event at shutdown with opening of normal residual heat removal relief valve	NO			
				C Extended loss of AC power with opening of automatic depressurization valves on pressurizer - stages 1, 2, 3, and 4	NO			
833	NRR/EMEB	3.12.5.4-1	DSER-OI		Resolved	Inactive		
				Westinghouse should amend the SSAR by committing to all of the limitations specified in RG 1.84 for Code Case N-411 with regard to 5-percent damping, or should provide additional justification.				
				Resolved - Use 5% damping with response spectra analysis				
834	NRR/EMEB	3.12.5.6-1	DSER-OI		Resolved	Inactive		
				Westinghouse should provide in the SSAR a description of all analysis options used to calculate the modal response of the high- frequency modes.				
				Resolved - The SSAR will describe the methods used				
835	NRR/EMEB	3.12.5.6-2	DSER-OI		Resolved	Inactive		
				Westinghouse should include in the SSAR a description of all the calculational option used for AP600 piping design.				
				Resolved - The SSAR will describe the methods used.				
836	NRR/EMEB	3.12.5.9-1	DSER-OI		Action W	Inactive		
				Westinghouse should include in the SSAR, an identification of systems susceptible to thermal cycling, or a description of the method used to make that identification, and a description of the analysis methods used to assess the integrity of these systems.				
				Action W - Add to the SSAR a description of the method used to identify the systems and list the systems known to be evaluated				
837	NRR/EMEB	3.12.5.10-1	DSER-OI		Action W	Inactive		
				Westinghouse should include in the SSAR an identification of piping systems susceptible to thermal stratification, and a description of the methods used to ensure their structural integrity. NRC Meeting - The impact of thermal stratification on leak-before-break evaluations should be addressed				
				Action W - Add specific write-up in SSAR on stratification and identifiy systems.				
838	NRR/EMEB	3.12.5.12-1	DSER-OI		Action W	Inactive		
				Westinghouse should revise the SSAR to address the identified issues; such revision should be consistent with the staff position described in NUREG-1367.				
				Action W - Revise Table 3.9-11 AP600 will not use the alternate piping criteria for design certification.				
839	NRR/EMEB	3.12.5.16-1	DSER-OI		Action N	Inactive		
				Westinghouse should provide a reactor coolant loop analysis, including the use of composite modal damping, for each mode and mode shape. The staff will review the sample analysis when it becomes available.				
				Action N - Schedule audit at Westinghouse offices.				

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840	NRR/EMEB	3.12.5.17-1	DSER-OI		Resolved	Inactive		
				Westinghouse should specify in the SSAR the minimum temperature used in the thermal analysis methods.				
				Resolved - Westinghouse will include the minimum temperature in the piping analysis guidelines.				
841	NRR/EMEB	3.12.5.19-1	DSER-OI		Resolved	Inactive		
				Westinghouse should demonstrate that when using the proposed alternate piping design criteria, an acceptable level of quality or safety exists, or that compliance with the current ASME specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.				
				Resolved - AP600 will not use alternate piping criteria for safety-related piping in design certification.				
842	NRR/EMEB	3.12.5.19-2	DSER-OI		Action W	Inactive		
				Westinghouse should revise its functional capability stress limits in Table 3.9-11 of the SSAR to be consistent with the staff's recommendation for Code Class 2 and 3 piping (i.e., use Sh instead of Sm).				
				Action W - Separate Class 2and 3 out of the table.				
843	NRR/EMEB	3.12.5.19-3	DSER-OI		Resolved	Inactive		
				For the non-essential piping systems, Westinghouse should demonstrate that an adequate margin to failure exists in the use of stress limits higher than those in the current revision of Section III of the ASME Code (e.g., 1989 Edition).				
				Resolved - AP600 will not use alternate piping criteria for safety-related piping in design certification.				
844	NRR/EMEB	3.12.5.19-4	DSER-OI		Resolved	Inactive		
				Using the results of the initial piping analyses, Westinghouse should demonstrate that an acceptable level of quality and safety exists for non-essential piping systems using the increased stress limits.				
				Resolved - AP600 will not use alternate piping criteria for safety-related piping in design certification.				
845	NRR/EMEB	3.12.5.19-5	DSER-OI		Action W	Inactive		
				Westinghouse should include in Table 3.9-16 of the SSAR relief/safety valve, open system, sustained load (RVOS) in its dynamic transient events associated with Level B (DU).				
				Action W - Revise Table 3.9-11				
846	NRR/EMEB	3.12.5.19-6	DSER-OI		Action W	Inactive		
				Westinghouse should clearly indicate in its load definition table (Table 3.9-16 of the SSAR) those specific loads that are to be categorized as "reversing" and those that are to be categorized as "non-reversing."				
				Action W - Revise table. AP600 will not use alternate piping criteria for safety-related piping in design certification.				
847	NRR/EMEB	3.12.5.19-7	DSER-OI		Resolved	Inactive		
				For its piping design, Westinghouse should adopt in the SSAR the latest ASME Code that has been referenced in 10 CFR 50.55a (i.e., the 1989 Edition), combined with the staff positions established for ALWRs.				
				Resolved - AP600 will use 1989 Edition 1989 Addenda				
848	NRR/EMEB	3.12.6-1	DSER-OI		Action W	Inactive		
				Westinghouse should include in the SSAR, sufficient information to arrive at a final safety determination with regard to the adequacy of the pipe support design analysis methods, design procedures, and acceptance criteria.				
				Action W - include information in the SSAR.				

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849	NRR/EMEB	3.12.6.1-1	DSER-OI		Resolved	Inactive	
				If ASMT A500 Grade B tube steel members will be used, Westinghouse should revise the SSAR to include the supplemental requirements of AWS D1.1, "Structural Welding Code," for tube steel welded connec- tions.			
				Resolved - Include the edition in the SSAR.			
850	NRR/EMEB	3.12.6.3-1	DSER-OI		Action W	Inactive	
				In accordance with NUREG-0484, Revision 1, Westinghouse should combine earthquake loads with other dynamic loads by SRSS. In addition, the SSAR should be revised accordingly, or further justification should be provided to support the identified position.			
				Action W - Add a table defining loads for supports See open item 832.			
851	NRR/EMEB	3.12.6.5-1	DSER-OI		Resolved	Inactive	
				Westinghouse should revise the SSAR to adequately describe design and analysis methods and modeling assumptions for special engineered supports to be used with separate sample analysis problems.			
				Resolved - Include a summary paragraph in the SSAR including the restrictions.			
852	NRR/EMEB	3.12.6.7-1	DSER-OI		Resolved	Inactive	
				Westinghouse should revise the SSAR to require that the deflection limit be based on the maximum Level D load combination.			
				Resolved - indicate in the SSAR that the limit applies to faulted load combination.			
853	NRR/EMEB	3.12.6.11-	DSER-OI		Resolved	Inactive	
				Westinghouse should state in the SSAR that the gaps should be small enough to ensure the validity of a linear analysis (which assumes a gap of zero).			
				Resolved - Discussed in meeting April 10 and 11			
1773	NRR/EMEB	3.2.1-1	DSER-CN		Resolved	Resolved	
				3.2.1-1 In the June 27, 1994 response to Q210.34, Westinghouse agreed to revise Section 3.2.4 of the SSAR to state that supports for piping and components have the same seismic and safety classifications as the supported component or piping.			
				Resolved - This information has been included in Revision 3 of the SSAR			
1774	NRR/EMEB	3.2.2-1	DSER-CN		Resolved	Resolved	
				3.2.2-1 In the June 16, 1994 response to Q210.37, Westinghouse agreed to revise Sections 5.4.7.1.1 and 5.4.7.1.2 of the SSAR to state more explicitly that the portion of the RNS outside containment (between the outside containment isolation valves) is classified as AP600 Class C.			
				Resolved - Revise Section 5.4.7 of the SSAR.			
1775	NRR/EMEB	3.2.2-2	DSER-CN		Resolved	Resolved	
				3.2.2-2 In the June 27, 1994 response to Q210.38, Westinghouse agreed to revise Section 5.4.14.1 of the SSAR to reclassify the supports for the PRHRHX from AP600 Class C to AP600 Class A.			
				Resolved - Revise SSAR as indicated in RAI			

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1776	NRR/EMEB	3.2.2-3	DSER-CN		Closed	Resolved	NTD-NRC-95-4433	4/3/95
				3.2.2-3 In the June 27, 1994 response to Q210.39, Westinghouse agreed to revise Section 6.3.2.2.5 of the SSAR and add Figure 6.3-5, "Passive Heat Removal Heat Exchanger ASME Code Classification and Boundary" to the SSAR. These modifications would more clearly identify the safety classification interface between the AP600 Class A PRHRHX and the AP600 Class C IRWST. In addition, the modifications would briefly describe the heat exchanger inlet and outlet designs.				
				Closed - This information is included in Revison 2 of the SSAR Section 6.3				
1777	NRR/EMEB	3.2.2-4	DSER-CN		Resolved	Resolved		
				3.2.2-4 In the June 16, 1994 response to Q210.71, Westinghouse agreed to revise Table 3.2-3 of the SSAR, to add the core barrel to Sheet 53, "Reactor System."				
				Resolved - Revise SSAR as indicated in RAI				
1778	NRR/ECGB	3.6.2.2-1	DSER-CN		Resolved	Resolved		
				3.6.2.2-1 In the June 27, 1994 response to Q210.40, Westinghouse stated that it will revise Subsection 3.6.2.1.1.4 of the SSAR to state that there are no circumferential or longitudinal welds in the piping enclosed within the guard pipe, thereby obviating the need for augmented inservice inspections in this area.				
				Resolved - Revise SSAR as indicated in RAI				
1779	NRR/ECGB	3.6.2.2-2	DSER-CN		Resolved	Resolved		
				3.6.2.2-2 In the July 8, 1994 responses to Q210.44 and Q210.45, Westinghouse agreed to revise Sections 3.6.2.4 and 3.6.2.4.2 of the SSAR to clarify the difference between guard pipes in piping break exclusion zones and auxiliary guard pipes. Guard pipes in the break exclusion zones will be designed to the criteria in Section 3.6.2.1.1.4 of the SSAR, while auxiliary guard pipes will be designed and constructed to the same ASME rules as the enclosed pipe.				
				Resolved - Revise SSAR as indicated in RAI				
1780	NRR/ECGB	3.6.2.3-1	DSER-CN		Resolved	Resolved		
				3.6.2.3-1 Westinghouse committed to revise the pipe break criteria in Sections 3.6.1 and 3.6.2 of the SSAR to be consistent with the criteria in Revision 1.				
				Resolved - Revise SSAR as indicated in RAI				
1781	NRR/ECGB	3.6.2.3-2	DSER-CN		Resolved	Resolved		
				3.6.2.3-2 In the June 30, 1994 response to Q210.77, Westinghouse committed to revise Section 3.6.2.1.3.2 of the SSAR to include the guidelines of Section B.3.c(4) of BTP MEB 3-1 of Section 3.6.2 of the SRP.				
				Resolved - Revise SSAR as indicated in RAI				
1782	NRR/ECGB	3.6.2.3-3	DSER-CN		Resolved	Resolved		
				3.6.2.3-3 In the July 8, 1994 response to Q210.41, Westinghouse committed to revise Section 3.6.2.3.1 of the SSAR. This revision will specify the ANSI/ANS 58.2-1988 criterion that, for an equivalent static analysis of the target structure, the jet impingement force is multiplied by a DLF of 1.2 to 2.0, depending on the time variance of the jet load and the elastic plastic behavior of the target. This factor assumes that the target can be represented as essentially a one-degree of freedom system.				
				Resolved - Revise SSAR as indicated in RAI				
1783	NRR/ECGB	3.6.2.3-4	DSER-CN		Resolved	Resolved		
				3.6.2.3-4 Westinghouse committed to revise Section 3.6.2.3.4.2 of the SSAR in accordance with the position in Section 3.6.2 of the SRP.				
				Resolved - Revise SSAR as indicated in RAI				

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Selection: [type] like 'dser*' And [DSER Section] like '3*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1784	NRR/ECGB	3.7.3.2-1	DSER-CN		Closed	Inactive		
				3.7.3.2-1 Westinghouse should revise Section 3.7.3 of the SSAR to remove the "design by rule" method option for the AP600 subsystems.				
				Closed - This revision is included in SSAR Subsection 3.7.3 (Revision 3).				
1785	NRR/ECGB	3.7.3.3-1	DSER-CN		Closed	Action W		
				3.7.3.3-1 Westinghouse should incorporate its response to Q230.49 into Section 3.7.3.3 of the SSAR.				
				Closed - Response to Q230.49 has been incorporated into Subsection 3.7.3.3 of the SSAR (Revision 3).				
1786	NRR/ECGB	3.7.3.5-1	DSER-CN		Proposed	Inactive		
				3.7.3.5-1 Westinghouse should indicate in the SSAR that there are no safety related flexible wall tanks (field erected or building supported) other than the three tanks identified in the AP600 design.				
				SSAR subsection 3.7.3.16 is being revised to confirm that the three tanks are the only three safety related flexible tanks. The SSAR subsection is also being revised to incorporate finite element analysis methods for some of the tanks.				
1787	NRR/ECGB	3.8.4.2-1	DSER-CN		Closed	Inactive		
				3.8.4.2-1 In the May 17, 1994 response to Q220.84, Westinghouse proposed to revise the SSAR to conform with the staff's position on the application of the AISC N-690 standard.				
				RAI response incorporated in SSAR Rev 3, subsection 3.8.4.5				
1788	NRR/ECGB	3.9.1.2-1	DSER-CN		Resolved	Resolved	NTD-NRC-95-4464	
				3.9.1.2-1 Westinghouse should resolve Open Item 3.12.4.1-1 and revise the SSAR accordingly. (Incorporate SSAR revision from RAI 210.33, Table 3.9-15 - Computer programs)				
				Resolved - Revise SSAR as indicated in RAI response				
1789	NRR/EMEB	3.9.2.1-1	DSER-CN		Resolved	Resolved	NTD-NRC-95-4464	
				3.9.2.1-1 Westinghouse should revise the SSAR as noted in Section 3.9.2.1 of this report. (Incorporate SSAR revision from RAI 210.53, testing of first plant)				
				Resolved - Revise SSAR as indicated in RAI response				
1790	NRR/EMEB	3.9.2.1-2	DSER-CN		Resolved	Resolved	NTD-NRC-95-4464	
				3.9.2.1-2 Westinghouse should revise the SSAR as noted in Section 3.9.2.1 of this report. (Incorporate SSAR revision from RAI 210.56, testing of safety-related sensing lines.)				
				Resolved - Revise SSAR as indicated in RAI response				
1791	NRR/EMEB	3.9.2.1-3	DSER-CN		Resolved	Resolved	NTD-NRC-95-4464	
				3.9.2.1-3 Westinghouse should revise the SSAR as noted in Section 3.9.2.1 of this report. (Incorporate SSAR revision from RAI 210.55, testing in accordance with ASME OM Standard Part 7.)				
				Resolved - Revise SSAR as indicated in RAI response				
1792	NRR/EMEB	3.9.2.1-4	DSER-CN		Resolved	Resolved		
				3.9.2.1-4 Westinghouse should revise the SSAR as noted in Section 3.9.2.1 of this report. (Incorporate SSAR revision from RAI 210.57, acceptance standard for alternating stress intensity.)				
				Resolved - Revise SSAR as indicated in RAI. SSAR Revision is for Chapter 14				

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Selection: [type] like 'dser*' And [DSER Section] like '3*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1793	NRR/EMEB	3.9.2.3-1	DSER-CN		Resolved	Resolved	NTD-NRC-95-4464	
				3.9.2.3-1 Westinghouse should revise the SSAR as noted in Section 3.9.2.3 of this report. (Incorporate SSAR revision from RAI 210.58, testing program after first plant.)				
				Resolved - Revise SSAR as indicated in RAI response				
1794	NRR/ECGB	3.9.2.4-1	DSER-CN		Resolved	Resolved	NTD-NRC-95-4464	
				3.9.2.4-1 Westinghouse should revise the SSAR as noted in Section 3.9.2.4 of this report. (Incorporate SSAR revision from RAI 210.95, LOCA loads for sizing reactor internals.)				
				Resolved - Revise SSAR as indicated in RAI response				
1795	NRR/ECGB	3.9.2.4-2	DSER-CN		Resolved	Resolved	NTD-NRC-95-4464	
				3.9.2.4-2 Westinghouse should revise the SSAR as noted in Section 3.9.2.4 of this report. (Incorporate SSAR revision from RAI 210.97, Bases for deflection limit.)				
				Resolved - Revise SSAR as indicated in RAI response				
1796	NRR/ECGB	3.9.2.4-3	DSER-CN		Resolved	Resolved	NTD-NRC-95-4464	
				3.9.2.4-3 Westinghouse should revise the SSAR as noted in Section 3.9.2.4 of this report. (Incorporate SSAR revison from RAI 210.70, clarify design requirements for internals structures.)				
				Resolved - Revise SSAR as indicated in RAI response				
1797	NRR/ECGB	3.9.2.4-4	DSER-CN		Resolved	Resolved	NTD-NRC-95-4464	
				3.9.2.4-4 Westinghouse shculd revise the SSAR as noted in Section 3.9.2.4 of this report. (Incorporate SSAR revision from RAI 210.94, additional description for CRDM tests.)				
				Resolved - Revise SSAR as indicated in RAI response				
1798	NRR/ECGB	3.9.3.1-1	DSER-CN		Resolved	Resolved	NTD-NRC-95-4464	
				3.9.3.1-1 Westinghouse should revise the SSAR as noted in Section 3.9.3.1 of this report. (Incorporate SSAR response from RAI 210.66, loadings for operable valves)				
				Resolved - Revise SSAR as indicated in RAI response				
1799	NRR/EMEB	3.9.3.2-1	DSER-CN		Resolved	Resolved	NTD-NRC-95-4464	
				3.9.3.2-1 Westinghouse should revise the SSAR as noted in Section 3.9.3.2-1 of this report. (Incorporate SSAR revision from RAI 210.67, design of pressure relieving devices.)				
				Resolved - Revise SSAR as indicated in RAI response				
1800	NRR/EMEB	3.9.3.3-1	DSER-CN		Resolved	Resolved	NTD-NRC-95-4464	
				3.9.3.3-1 Westinghouse should revise the SSAR as noted in Section 3.9.3.3 of this report. (Incorporate SSAR revisions from RAIs 210.42 and 210.68, revise piping analysis methodology.)				
				Resolved - Revise SSAR as indicated in RAI response				
1801	NRR/EMEB	3.9.3.3-2	DSER-CN		Closed	Resolved	NTD-NRC-95-4464	
				3.9.3.3-2 Westinghouse should revise the SSAR as noted in Section 3.9.3.3 of this report. (Incorporate SSAR revision from RAI 210.68, allowable stress for supports for active components.)				
				Resolved - Revise SSAR indicated in RAI response				

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Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. / Date
1802	NRR/EMEB	3.9.3.3-3	DSER-CN		Resolved	Resolved	
				3.9.3.3-3 Westinghouse should revise the SSAR and WCAP 10354 as noted in Section 3.9.3.3 of this report. (Incorporate SSAR revision from RAI 210.74, correct reference to ASME Code, Appendix F.)			
				Resolved - Revise SSAR as indicated in RAI SSAR Revision is for Appendix 1A			
1803	NRR/EMEB	3.9.3.3-4	DSER-CN		Resolved	Resolved	
				3.9.3.3-4 Westinghouse should revise the SSAR and WCAP 10354 as noted in Section 3.9.3.3 of this report. (Incorporate SSAR revision from RAI 210.74, delete reference to equation.)			
				Resolved - Revise SSAR as indicated in RAI SSAR revision is for Appendix 1A			
1804	NRR/ECGB	3.9.5-1	DSER-CN		Resolved	Resolved	NTD-NRC-95-4464
				3.9.5-1 Westinghouse should revise the SSAR as noted in Section 3.9.5 of this report. (Incorporate SSAR response from RAI 210.99, Description of reactor internals interface.)			
				Resolved - Revise SSAR as indicated in RAI response			
1805	NRR/ECGB	3.9.5-2	DSER-CN		Resolved	Resolved	
				3.9.5-2 Westinghouse should revise the SSAR as noted in Section 3.9.5 of this report. (Incorporate SSAR revision from RAI 210.98, thermal stratification considerations.)			
				Resolved - Revise SSAR as indicated in RAI. Revision is for subsection 5.3.4.1			
1806	NRR/EMEB	3.9.6.4-1	DSER-CN		Resolved	Resolved	
				3.9.6.4-1 Westinghouse should revise the SSAR to require that the COL applicant submit a complete plant-specific IST program. (Incorporate SSAR revision from RAI 210.24R1, Include COL information item.)			
				Resolved - Revise SSAR as indicated in RAI			
1807	NRR/ECGB	3.9.7-1	DSER-CN		Resolved	Resolved	
				3.9.7-1 Westinghouse should revise the SSAR as noted in Section 3.9.7 of this report. (Incorporate SSAR revision from RAI 210.72, classification of integrated head package components.)			
				Resolved -Revise SSAR as indicated in RAI response			
1808	NRR/ECGB	3.10-1	DSER-CN		Resolved	Inactive	
				3.10-1 In the January 14, 1993 response to Q210.7, Westinghouse proposed to revise Sections 3D.4.1.2, E.4.4, E.5.1, and E.5.2.4 in Appendix 3D of the SSAR to agree with staff positions related to seismic qualification of equipment.			
				Resolved - Westinghouse will incorporate the SSAR revision from the response to RAI 210.7			
1809	NRR/ECGB	3.10-2	DSER-CN		Action W	Inactive	
				3.10-2 Westinghouse should revise WCAP-13054 to remove the exception.			
				Action W - Westinghouse will revise WCAP-13054 to remove the exception as stated in response to RAI 210.82.			
1810	NRR/ECGB	3.10-3	DSER-CN		Action W	Inactive	
				3.10-3 Westinghouse should revise WCAP-13054 to remove the exception.			
				Action W - Westinghouse will revise WCAP-13054 to remove the exception as promised in RAI 210.82.			

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1811	NRR/ECGB	3.10-4	DSER-CN		Action W	Inactive		
				3.10-4 Westinghouse should revise the SSAR and WCAP-13054 as noted in Section 3.10 of this report.				
				Action W - Westinghouse will revise WCAP-13054 to remove the exception as promised in RAI 210.88. Westinghouse will incorporate the SSAR revision from the response to RAI 210.86				
1812	NRR/EMEB	3.12.3.6-1	DSER-CN		Action W	Inactive		
				3.12.3.6-1 Westinghouse should revise the SSAR as noted in Section 3.12.3.6 of this report. (Incorporate SSAR revision from RAI 210.48, application of equivalent static load method to small bore piping)				
				Action W - Rewrite to include 1.5 factor				
1813	NRR/EMEB	3.12.3.6-2	DSER-CN		Closed	Inactive		
				3.12.3.6-2 Westinghouse should revise the SSAR as noted in Section 3.12.3.6 of this report. (Incorporate SSAR revision from RAIs 210.30 and 210.46, delete reference to NCIG-14, EPRI-6628)				
				Closed - Revision include in SSAR Revison 2. of Section 3.7.				
1814	NRR/EMEB	3.12.5.5-1	DSER-CN		Action N	Inactive		
				3.12.5.5-1 The options specified in Section 3.7.3.7.2 of the SSAR, to combine closely spaced modes, are acceptable contingent on a positive finding in the confirmatory evaluations.				
				Action N - NRC (Brookhaven) complete comfirmatory evaluations				
1815	NRR/EMEB	3.12.5.13-1	DSER-CN		Action W	Inactive		
				3.12.5.13-1 Westinghouse should revise the SSAR and WCAP 13054 as noted in Section 3.12.5.13 of this report. (Incorporate SSAR revision from RAIs 210.32 and 210.79, combination of modal spectra analysis results with seismic anchor motion.)				
				Action W - Revise the write-up in paragraph 3 of 3.7.3.1 to include source.				
1816	NRR/EMEB	3.12.5.14-1	DSER-CN		Resolved	Inactive		
				3.12.5.14-1 Westinghouse should revise the SSAR as noted in Section 3.12.5.14 of this report. (Incorporate SSAR revision from RAI 210.79, incorporate staff position on single earth quake design.)				
				Resolved - RAI to be incorporated into SSAR Revision				
1817	NRR/EMEB	3.12.5.15-1	DSER-CN		Closed	Inactive		
				3.12.5.15-1 Westinghouse should revise the SSAR as noted in Section 3.12.5.15 of this report. (Resolution of DSER Open Item 5.2.1.1-1, ASME Code Cases.)				
				Closed - NRC has aproved use of Code Cases				
1818	NRR/EMEB	3.12.6.4-1	DSER-CN		Resolved	Inactive		
				3.12.6.4-1 Westinghouse should revise the SSAR as noted in Section 3.12.6.4 of this report. (Incorporate SSAR revision from RAI 210.107, baseplate flexibility requirements of IE Bulletin 79-02.)				
				Resolved - Incorporate RAI into SSAR.				
1875	NRR/ECGB	3.3.2.2-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				3.3.2.2-1 The COL applicant should follow the identified criteria to ensure that the collapse of non-seismic Category I structures will not impair the functions of seismic Category I structures, systems, and components.				
				Closed - Information included in SSAR Rev 2				

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1876	NRR/ECGB	3.4.2-1	DSER-COL		Resolved	Inactive		
				3.4.2-1 The COL applicant should provide a specific description of the site and the elevation for all safety-related structures, exterior accesses, equipment, and systems, from the standpoint of hydrology considerations and flood history.				
				Resolved - Add COL item on elevaltions				
1877	NRR/ECGB	3.4.2-2	DSER-COL		Resolved	Inactive		
				3.4.2-2 The COL applicant should ensure and demonstrate in the site-specific application that all seismic Category I structures are either protected against flood damage or are not subject to such damage.				
				Resolved - Add COL information item to SSAR to verify that site meets interface requirement in 2.4.1				
1878	NRR/EMCB	3.5.1.3-1	DSER-COL		Action W	Inactive		
				(TURBINE ROTOR BRITTLE FRACTURE ANALYSIS) The COL applicant should provide the brittle fracture analyses of installed turbine rotors to the staff for review.				
				Action W - Setup meeting or phone call with NRC				
1879	NRR/EMCB	3.5.1.3-2	DSER-COL		Action W	Inactive		
				3.5.1.3-2 The COL applicant should provide the fatigue analyses of installed turbine rotors to the staff for review.				
				Action W - Setup meeting or phone call with NRC				
1880	NRR/EMCB	3.5.1.3-3	DSER-COL		Action W	Inactive		
				3.5.1.3-3 The COL applicant should provide the flaw growth analyses of NDE detected flaws in installed turbine rotors to the staff for review.				
				Action W - Setup meeting or phone call with NRC				
1881	NRR/EMCB	3.5.1.3-4	DSER-COL		Action W	Inactive		
				3.5.1.3-4 The COL applicant should provide the brittle fracture analyses of flaws detected by NDE during manufacture which are not removed in installed turbine rotors to the staff for review.				
				Action W - Setup meeting or phone call with NRC				
1882	NRR/EMCB	3.5.1.3-5	DSER-COL		Action W	Inactive		
				3.5.1.3-5 The COL applicant should submit, within 3 years of obtaining a COL, a turbine system maintenance program including probability calculations of turbine missile generation based on the methodology approved by the NRC, or commit to volumetrically inspect all low-pressure turbine rotors at the second refueling outage and every other (alternate) refueling outage thereafter until a maintenance program is approved by the staff.				
				Action W - Setup meeting or phone call with NRC				
1883	NRR/EMEB	3.6.3.4-1	DSER-COL		Resolved	Inactive		
				3.6.3.4-1 The COL applicant should verify that the actual material properties and final as-built piping analyses meet the acceptance parameters established in the bounding LBB analyses.				
				Resolved - Add COL item				
1884	NRR/ECGB	3.7.2.13-1	DSER-COL		Closed	Inactive		
				3.7.2.13-1 The COL applicant should perform seismic analysis for evaluating the safety of existing dams and design the new dams based on the defined SSE.				
				This has been added in Subsection 3.7.5.1 (Revision 3).				

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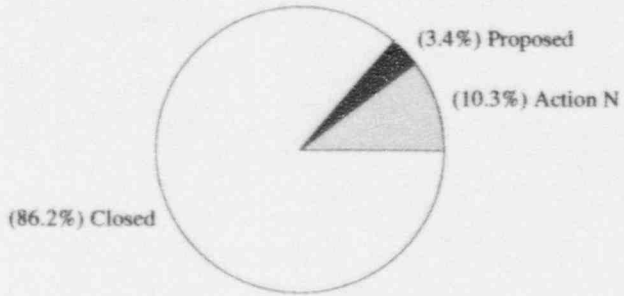
Date: 5/27/95

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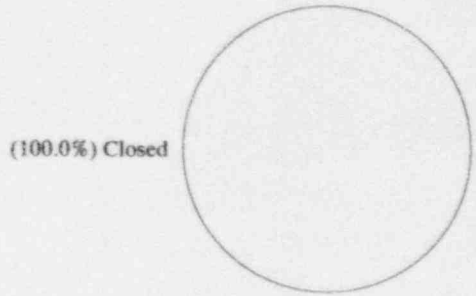
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1885	NRR/ECGB	3.7.2.16-1	DSER-COL		Closed	Inactive		
				3.7.2.16-1 The COL applicant should perform an analysis and evaluation using the design basis earthquake ground motion and plant specific site conditions to confirm the design adequacy of the AP600 design.				
				SSAR Subsection 2.5 provides the information requirements for the COL applicant. Site-specific soil structure interaction analyses may be performed by the Combined License applicant to demonstrate acceptability by comparison of floor response spectra. These analyses would use the site specific soil conditions and safe shutdown earthquake.				
1886	NRR/ECGB	3.7.4-1	DSER-COL		Closed	Inactive		
				3.7.4-1 The COL applicant should set the seismic instrumentation system to record at least 3 seconds of pre-event signal.				
				A minimum of 3 seconds was added to the description of the instrumentation in SSAR Rev 2.				
1887	NRR/ECGB	3.7.4-2	DSER-COL		Closed	Inactive		
				3.7.4-2 The COL applicant should specify plant procedures following an earthquake and that the plant procedures following an earthquake are contained in the EPRI reports NP-5930, NP-6695, and TR-100082.				
				SSAR subsection 3.7.5.2 includes this COL item.				
1888	NRR/ECGB	3.8.2.4-1	DSER-COL		Closed	Inactive		
				3.8.2.4-1 The COL applicant should demonstrate that EPAs to be used shall be at least as strong as the AP600 SCV.				
				The response to RAI 220.33, Rev 1 has been incorporated in SSAR Subsection 3.8.2.4.5, Rev 3.				
1889	NRR/ECGB	3.8.4.4-1	DSER-COL		Action W	Inactive		
				3.8.4.4-1 The COL applicant should monitor the deformation (vertical and radial) of the tank during initial tank filling and compare with the tank deformation predicted by calculation.				
				Action W - Design calculations for shield building roof are being reviewed to see if monitoring of tank deflections or visual examination of concrete structures would be appropriate. See OI 3.8.4.4-3				
1890	NRR/ECGB	3.9.3.1-1	DSER-COL		Resolved	Inactive	NTD-NRC-95-4464	
				3.9.3.1-1 The COL applicant will complete the AP600 Design Specifications and Design Reports and make them available for staff audit.				
				Resolved - SSAR revised as indicated in RAI response				

Open Item Status - Chapter 4 (Reactor)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	0	3	0	1	0	24	28
DSER-Confirmatory	0	0	0	0	0	0	0	0	0
DSER-COL	0	0	0	0	0	0	0	1	1
Subtotal	**0**	**0**	**0**	**3**	**0**	**1**	**0**	**25**	**29**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	0	0
Meeting-OI	0	0	0	0	0	0	0	0	0
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	**0**	**0**	**0**	**3**	**0**	**1**	**0**	**25**	**29**

Westinghouse Status as of 29-May-95

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854	NRR/SRXB	4.2.8-1	DSER-OI		Closed	Inactive		
				The staff and Westinghouse should resolve the VANTAGE-5H flow- induced vibration problem, without an imposed thermal margin penalty.				
				Closed - The grid to be used in the AP600 core is in the process of being redesigned. The grid design will preclude any flow induced vibration problems. The DNB design basis for the AP600 core will be met with the use of this grid. The current DNB analysis for the SSAR at full flow conditions assumes that the WRB-2 correlation (WCAP-10444-P-A) is applicable. A modifications to the WRB-2 correlation is used for the analysis of the low flow DNB transients, i.e. loss of flow and locked rotor. This modified correlation is based on a grid design that has no flow induced vibration problems and uses DNB test data applicable to the low flows associated with these transients. The DNB report (WCAP- 14371, AP600 Low Flow Critical Heat Flux (CHF) Test Data Analysis) has been submitted. The DNB design basis is met for the current AP600 SSAR analysis.				
855	NRR/SRXB	4.2.8-2	DSER-OI		Closed	Proposed	NTD-NRC-95-4464	
				Westinghouse should revise the SSAR to include COL Action Item 4.2.8-1, which requires the identification of changes to the initial reference design of the fuel.				
				Closed - Information included in draft SSAR revision, Section 4.2.5. - The updated information is provided in Rev. 3 of the SSAR.				
856	NRR/SRXB	4.4-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4470	
				The staff's review of Section 4.4 "Thermal-Hydraulic Design," and corresponding subsections of the SSAR, will remain open until results from the DNB and flow-induced vibration tests have been submitted to the for staff review.				
				Closed: The grid to be used in the AP600 core is in the process of being redesigned. The grid design will preclude any flow induced vibration problems. The DNB design basis for the AP600 core will be met with the use of this grid. The current DNB analysis for the SSAR at full flow conditions assumes that the WRB-2 correlation (WCAP-10444-P-A) is applicable. A modifications to the WRB-2 correlation is used for the analysis of the low flow DNB transients, i.e. loss of flow and locked rotor. This modified correlation is based on a grid design that has no flow induced vibration problems and uses DNB test data applicable to the low flows associated with these transients. The DNB report, WCAP-14371 was submitted on May 31, 1995. The DNB design basis is met for the current AP600 SSAR analysis.				
857	NRR/EMCB	4.5.1-1	DSER-OI		Closed	Action N	NTD-NRC-95-4464	
				Westinghouse should provide information to confirm that the materials selected for the control rod drive mechanism components, which will be exposed to reactor coolant, conform to Section III of the ASME Code.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
858	NRR/EMCB	4.5.1-2	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should revise the SSAR to identify the materials used by specification, type, grade, and heat treatment, and the applicable ASME Code Cases used for control rod drive mechanism (CRDM) components.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
859	NRR/EMCB	4.5.1-3	DSER-OI		Proposed	Proposed	NTD-NRC-95-4464	
				Westinghouse should provide cutaway sketches of the CRD in the SSAR, so that components and materials used in the CRD can be identified.				
				Proposed - Staff will review CRDM sketch and Table 5.2-1 - The updated information is provided in Rev. 3 of the SSAR.				

n: [type] like 'dser*' And [DSER Sc Sorted by Item #

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860	NRR/EMCB	4.5.1-4	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				The SSAR does not address weld materials or their specifications (other than austenitic stainless steel in a generic sense). Westinghouse should identify in the SSAR the specific weld metals used in the fabrication of the CRD.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
861	NRR/EMCB	4.5.1-5	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should identify in the SSAR the nickel alloy(s) to be used and identify them by specification, type, grade, and heat treatment.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
862	NRR/EMCB	4.5.1-6	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should justify each application of nickel-based alloys, and their weld metals, except the reactor coolant pump flywheel enclosure. Justifications should address the reason for the choice of one nickel-based alloy over other nickel- based alloys.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
863	NRR/EMCB	4.5.1-7	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should indicate, in the SSAR, the base materials and/or surfacing (materials and processes) that are to be used in lieu of cobalt-based alloys. Westinghouse should indicate the test programs, as well as the results of such programs, and should present data ensuring a 60-year design life.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95. - The updated information is provided in Rev. 3 of the SSAR.				
864	NRR/EMCB	4.5.1-8	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should revise the SSAR to refer to the "tempering" of martensitic stainless steel, rather than "annealing." Westinghouse should also specify a temperature range for the tempering process. In addition, hardness controls should be discussed.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
865	NRR/EMCB	4.5.1-9	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should indicate in the SSAR its plans to control the use of tools for power brushing and grinding of austenitic stainless steels.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
866	NRR/EMCB	4.5.1-10	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse has not identified that the fabrication and processing of austenitic stainless steels is an area in which it differs from the EPRI URD. Westinghouse should address those aspects that are not currently addressed in the SSAR, and should identify those positions which differ from the EPRI URD.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '4*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
867	NRR/EMCB	4.5.1-11	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should provide information to confirm that the control rod drive materials are compatible with the reactor coolant, as described in Articles NB-2160 and NB-3120 of the ASME Code. Westinghouse's discussion should consider wear (especially replacement materials, processes and surface treatments for cobalt containing materials), pitting corrosion, and stress corrosion cracking over a 60-year plant life.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
868	NRR/EMCB	4.5.1-12	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should discuss in the SSAR its chemical content controls for non-metallic materials to protect reactor coolant pressure boundary components. In addition, Westinghouse should identify those positions related to chemical content control that differ from the EPRI URD.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
869	NRR/EMCB	4.5.1-13	DSER-OI		Action N	Proposed		
				Because of the past history of failures with Inconel X-750, the staff requests that Westinghouse submit a copy of the specification to be used for this material in the control rod drive mechanisms (CRDMs). The differences between Westinghouse's specifications and the recommendations in EPRI NP-7032 should be identified and discussed.				
				Action N - Staff will review URD Rev. 5 and information included in draft revision of SSAR as discussed in phone call 4/27/95				
870	NRR/EMCB	4.5.1-14	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				In Chapter 4 of the SSAR, Westinghouse makes the statement that pressure boundary parts and components made of stainless steel do not have yield strengths greater than 620.5 MPa (90000 psi), but no means of controlling this requirement are presented.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3.				
871	NRR/EMCB	4.5.1-15	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should address how the amount of cold work will be controlled.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
872	NRR/EMCB	4.5.1-16	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				In Chapter 4 of the SSAR, Westinghouse states that materials used in the CRD system are to be selected for their compatibility with the reactor coolant, based upon past successful experience. However, no data were presented for new materials being substituted for cobalt-containing alloys.				
				Closed - Information included in daft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
873	NRR/EMCB	4.5.1-17	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse has not identified the materials selected for the (CRDMs) by specification and properties. Accordingly, the staff cannot assess their equivalency to those given in Section III of the ASME Code; Parts A, B, and C of Section II of the ASME Code; or RG 1.85, "Materials Code Case Acceptability - ASME Section III, Division 1."				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '4*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
874	NRR/EMCB	4.5.1-18	DSER-OI		Action N	Proposed		
				The staff cannot, at this time, conclude that the control rod drive structural materials are acceptable and meet the applicable requirements of GDCs 1, 14, and 26 and 10 CFR 50.55a.				
				Action N - Staff will review infomation provided in draft SSAR Section 4.5.1				
875	NRR/EMCB	4.5.2-1	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse's response to Q252.44 did not provide sufficient information to confirm that the materials (including surfacing procedures and processes selected for all of the reactor internals exposed to the reactor coolant) conform to Section III of the ASME Code, and in particular, Subarticles NG-2160 and NG-3120.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
876	NRR/EMCB	4.5.2-2	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should revise the SSAR to identify the materials used by specification, type, grade, and heat treatment. Further, Westinghouse should provide sketches of the reactor internals so that components and materials used can be identified.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
877	NRR/EMCB	4.5.2-3	DSER-OI		Closed	Progress	NTD-NRC-95-4464	
				The SSAR does not address weld materials or their specifications. Westinghouse should identify the specific weld metals used in the fabrication of the reactor internals.				
				Closed - As discussed in a phone conversation 4/27/95, wording added to Section 4.5.2.1 of the SSAR - The updated information is provided in Rev. 3 of the SSAR.				
878	NRR/EMCB	4.5.2-4	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should indicate in the SSAR the base materials and/or surfacing (materials and processes) to be used in lieu of cobalt alloys. In addition, Westinghouse should describe the test programs, and the results of such programs, and the extent to which radiation will be reduced by eliminating cobalt in the reactor vessel and its contents.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
879	NRR/EMCB	4.5.2-5	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Because the materials, surfacing processes, and procedures specified for the AP600 have not been used in previous designs, Westinghouse should revise the SSAR to demonstrate the adequacy of these materials, surfacing process and procedures for the 60-year life of the design.				
				Closed - Information included in draft SSAR revision and discussed in phone call 4/27/95 - The updated information is provided in Rev. 3 of the SSAR.				
880	NRR/EMCB	4.5.2-6	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should describe the extent of inspectability of all shell welds in the SSAR. Where core support and reactor internal structures inhibit volumetric examination of the shell welds, such restrictions should be justified.				
				Closed - As discussed in a phone conversation 4/27/95, wording added to Section 5.2.4.2 of the SSAR - The updated information is provided in Rev. 3 of the SSAR.				

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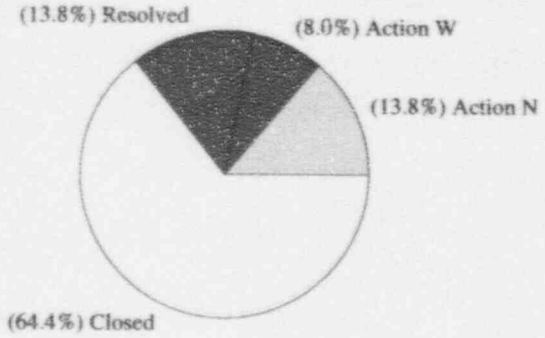
Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '4*' Sorted by Item #

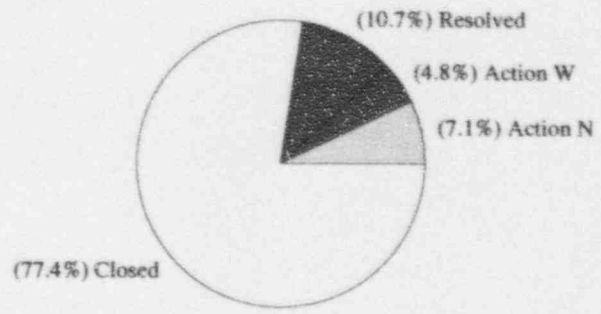
Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
881	NRR/EMCB	4.5.2-7	DSER-OI		Action N	Proposed		
				The staff cannot, at this time, conclude that the design, fabrication, and testing of the materials used in the reactor internal and core support structure are acceptable and meet the applicable requirements of GDC 1 and 10 CFR 50.55a.				
				Action N - Staff will review information provided in draft SSAR Section 4.5.2				
1891	NRR/SRXB	4.2.8-1	DSER-COL		Closed	Proposed		
				4.2.8-1 The COL applicant (or holder), requesting any change to the initial reference design of the fuel, should submit a detailed description of the proposed change for prior NRC review and approval.				
				Closed - Information included in draft SSAR revision, Section 4.2.5. - The updated information is provided in Rev. 3 of the SSAR.				

Open Item Status - Chapter 5 (RCS)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	0	11	6	0	11	50	78
DSER-Confirmatory	0	0	0	0	0	0	0	0	0
DSER-COL	0	0	0	1	1	0	1	6	9
Subtotal	**0**	**0**	**0**	**12**	**7**	**0**	**12**	**56**	**87**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	29	29
Meeting-OI	0	0	0	6	4	0	9	36	55
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**0**	**0**	**6**	**4**	**0**	**9**	**65**	**84**
Total	**0**	**0**	**0**	**18**	**11**	**0**	**21**	**121**	**171**

Westinghouse Status as of 29-May-95

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '5*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
882	NRR/EMCB	5.2.1.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				In Q210.112, the staff requested that Westinghouse identify in the AP600 SSAR the specific portions of the ASME Code, Section III, 1989 Edition, 1989 addenda that are being used in the AP600 design and analysis. The staff has not yet received a response to this RAI.				
				Closed - RAI response has been transmitted. SSAR revision is incorporated in Rev 3				
883	NRR/EMCB	5.2.1.1-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR COL Action Item 5.2.1.1-1, related to the Code edition and addenda currently in effect.				
				Closed - A COL item is included in the SSAR Rev. 3 for this issue				
884	NRR/EMCB	5.2.1.1-3	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR COL Action Item 5.2.1.1-2, related to the identification of later Code editions and addenda.				
				Closed - A COL item is included in the SSAR Rev. 3				
885	NRR/EMCB	5.2.1.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include the revised Table 5.2-3 to the AP600 SSAR.				
				Closed - This table is included in SSAR (Revision 3) with N-201-3 deleted and N-319 changed to Rev 1 as discussed with Jim Brammer. NRC accepted use of the Code cases in a letter Dated May 10.				
886	NRR/SRXB	5.2.2.1-1	DSER-OI		Action N	Inactive		
				The application of LOFTRAN to the AP600 design is still under staff review. Therefore, the acceptability of the overpressure protection design is also still under review.				
				Action N - Complete Review				
887	NRR/SRXB	5.2.2.2-1	DSER-OI		Action N	Inactive	NTD-NRC-4249	7/29/94
				Chapter 15 of the SSAR does not provide low-temperature overpressure (LTOP) analyses. The staff requested this additional information in Q440.78, but has not yet received a response.				
				Action N - Complete review of RAI 440.78 submitted July 29, 1994				
888	NRR/EMCB	5.2.3-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should identify in the SSAR all of the specific weld metals by specification, class, type, grade, and any special requirements or relaxations used in the fabrication of the reactor coolant pressure boundary (RCPB).				
				Closed - Information included in SSAR revision 3 and discussed in phone call 4/27/95				
889	NRR/EMCB	5.2.3-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				All materials used in the reactor coolant pressure boundary must be listed in the revised Table 5.2-1 in the SSAR.				
				Closed - Information included in SSAR revision 3 and discussed in phone call 4/27/95				
890	NRR/EMCB	5.2.3-3	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should identify in the SSAR the nickel alloy(s) and weld metals to be used in the RCPB (by specification, type, grade and heat treatment).				
				Closed - Information included in SSAR revision 3 and discussed in phone call 4/27/95				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '5*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
891	NRR/EMCB	5.2.3-4	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Table 5.2-1 of the SSAR should be revised to reflect the choice of a given material for particular components if one material is not used for all similar components. The justification for the choice of one material over another should be defined.				
				Closed - Information included in SSAR revision 3 and discussed in phone call 4/27/95				
892	NRR/EMCB	5.2.3-5	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should identify the use of nickel based alloys and provide information concerning their use. Each application of nickel-based alloys, and their weld metals, except the reactor coolant pump flywheel enclosure, should be justified. Justifications should address the reason for the choice of one nickel- based alloy over other nickel-based alloys.				
				Closed - Information included in SSAR revision 3 and discussed in phone call 4/27/95				
893	NRR/EMCB	5.2.3-6	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should indicate in the SSAR the base materials and/or surfacing (materials and processes) to be used in lieu of cobalt alloys, as well as the test programs and the results of such programs, and present data ensuring a 60-year design life for the AP600.				
				Closed - Information included in SSAR revision 3 and discussed in phone call 4/27/95 Add the word nuclear in front of industry in 5.2.3.2.2				
894	NRR/EMCB	5.2.3-7	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should address the effect of thermal embrittlement for the 60-year plant design life.				
				Closed - Ferrite limits on cast stainless steel are included in SSAR Revison 3.				
895	NRR/EMCB	5.2.3-8	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should modify the SSAR to specify where the AP600, design will not meet the requirements of the ASME Code, Section XI (1989 Edition) with Appendix VIII to the 1989 Addenda.				
				Closed - Information included in SSAR revision 3 and discussed in phone call 4/27/95 This information is discussed in 5.2.4				
896	NRR/EMCB	5.2.3-9	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should discuss in the SSAR its chemical content controls for non-metallic materials to protect reactor coolant pressure boundary (RCPB) components and justify its position when different from that of the EPRI URD.				
				Closed - Information included in SSAR Rev. 3				
897	NRR/EMCB	5.2.3-10	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should address the cold work of austenitic stainless steel in the SSAR, and discuss its position when different from the EPRI URD guidelines.				
				Closed - Information on cold work included in SSAR revision 3 and discussed in phone call 4/27/95				
898	NRR/EMCB	5.2.3-11	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should address welding of austenitic stainless steels in the SSAR, and discuss its position when different from the EPRI URD guidelines.				
				Closed - Upper limit on delta ferrite in welds included in SSAR Revision 3				
899	NRR/EMCB	5.2.3-12	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				The materials and processes for replacing cobalt-containing materials do not satisfy the requirements of GDC 4 as they relate to the compatibility of components with environmental conditions.				
				Closed - Information included in SSAR revision 3 and discussed in phone call 4/27/95				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '5*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
900	NRR/EMCB	5.2.4-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should revise the SSAR to commit to ASME Ultrasonic Examination (UT) standards in Appendix VIII, "Performance Demonstration for Ultrasonic Examination Systems."				
				Closed - Revison 3 of the SSAR commits the design to this standard.				
901	NRR/EMCB	5.2.4-2	DSER-OI		Closed	Inactive		
				Westinghouse should revise the SSAR to include a specific commitment that the AP600 plant will be designed to meet the requirements of Section XI of the ASME Code, 1989 Edition.				
				Closed - The SSAR commits the design to Section XI. The baseline Code for AP600 is 1989 Addenda which includes Appendix VIII				
902	NRR/EMCB	5.2.4-3	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should modify the SSAR to indicate that the AP600 design will provide for pre-service and inservice inspection (PSI and ISI) examinations to meet the requirements of Appendix VIII. In addition, Westinghouse should provide the means of accomplishing this commitment during the design phase.				
				Closed - SSAR Rev. 3 describes the design for inspectability program				
903	NRR/EMCB	5.2.4-4	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should provide a detailed discussion of its methodology for achieving inspectability of parts, components, assemblies, systems, and supports.				
				Closed - A description of inspectability program is included in SSAR Rev. 3				
904	NRR/EMCB	5.2.4-5	DSER-OI		Closed	Inactive		
				Westinghouse should define those situations where inservice inspection of a component is not meaningful, or where there are very high costs in terms of radiation exposure, risk of damage to components, and so on; and, if necessary, propose alternative requirements to the code to address these situations on a case-by-case basis.				
				Closed - none of these situations have been identified.				
905	NRR/EMCB	5.2.4-6	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should revise the SSAR to commit and demonstrate that all code-required inservice inspections can be accomplished during the construction stage without the need for relief.				
				Closed - The SSAR Revision 3 includes a description of the design for inspectability program.				
906	NRR/EMCB	5.2.4-7	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR COL Action Item 5.2.4-1, related to the plant-specific psi/ISI program.				
				Closed - A COL item to address this items is included in the SSAR Rev. 3				
907	NRR/EMCB	5.2.4-8	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR COL Action Item 5.2.4-2, related to the requirements of the ASME Boiler and Pressure Vessel Code				
				Closed - A COL item on inservice inspection is included in SSAR Revision 3				
908	NRR/SPLB	5.2.5.3-1	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should provide in the SSAR a complete discussion regarding the seismic and safety classification of the leak detection system (LDS)				
				Closed - This information is included in Subsection 5.2.5 of SSAR Revision 3				

Total Records: 87

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '5*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
909	NRR/SPLB	5.2.5.3-2	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should provide more information regarding the sensitivity and response times for all methods of leakage detection and monitoring used in the AP600 design.				
				Closed - This information is included in Subsection 5.2.5 of SSAR Revision 3				
910	NRR/SPLB	5.2.5.3-3	DSER-OI		Closed	Active	NTD-NRC-95-4464	
				Westinghouse should incorporate reactor coolant pressure boundary leakage detection RAI responses into the SSAR.				
				Closed - This information is included in Subsection 5.2.5 of SSAR Revision 3				
911	NRR/SPLB	5.2.5.3-4	DSER-OI		Closed	Active	NTD-NRC-95-4464	
				Westinghouse should correct discrepancies noted by the staff in the SSAR.				
				Closed - This information is included in Subsection 5.2.5 of SSAR Revision 3				
912	NRR/SPLB	5.2.5.3-5	DSER-OI		Closed	Active	NTD-NRC-95-4464	
				Westinghouse should discuss in the SSAR its commitment to identified leakage requirements.				
				Closed - This information is included in Subsection 5.2.5 of SSAR Revision 3				
913	NRR/SPLB	5.2.5.3-6	DSER-OI		Closed	Active	NTD-NRC-95-4464	
				Westinghouse should revise the SSAR to include a commitment to comply with the guidance in Regulatory Guide 1.45.				
				Closed - See SSAR Rev. 3. The sump monitor will be seismic catetgory I and have Class 1E power. The containment atmospheric radiation detector will be seismic Catergory 1.				
914	NRR/SPLB	5.2.5.3-7	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Westinghouse should supply additional details in the SSAR related to the reactor coolant pressure boundary leakage detection system.				
				Closed - This information is included in Subsection 5.2.5 of SSAR Revision 3				
915	NRR/EMCB	5.3.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				In its response to Q252.93, Westinghouse described the application of six surveillance capsules, three of which were scheduled for withdrawal before the end of the 60-year design life of the plant. This information should also be provided in the SSAR.				
				Closed - This information is included in Section 5.3 of SSAR Revision 3				
916	NRR/EMCB	5.3.2-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				The controls to be used during all stages of welding to prevent contamination must be further defined. (See Section 5.2.3 of this report)				
				Closed - This information is included in Subsection 5.2.3 and referenced in 5.3.2 of SSAR Revision 3.				
917	NRR/EMCB	5.3.2-3	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse's response to Q252.66 indicates that lubricants containing molybdenum disulfide are prohibited for use in all areas of a nuclear power plant. These restrictions will be reflected in the plant and equipment specifications. The SSAR should be modified to reflect this commitment.				
				Closed - This information is included in Subsection 5.2.3 and referenced in 5.3.2 of SSAR Revision 3				

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Selection: [type] like 'dser*' And [DSER Section] like '5*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
918	NRR/EMCB	5.3.2-4	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should be amended to address how the AP600 design satisfies the recommendations of RG 1.65. (Vessel closure studs)				
				Closed - The reactor vessel closure studs are in conformance with the guidance of Regulatory Guide 1.65. This information is included in SSAR Revision 3				
919	NRR/EMCB	5.3.2-5	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse must provide adequate technical justification for not including heat-affected-zone materials in the AP600 materials surveillance program.				
				Closed - SSAR Rev 3 clarifies the materials to be included in the capsules				
920	NRR/EMCB	5.3.2-6	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Because Westinghouse has not yet established the locations of the surveillance capsules, the lead factors have not yet been determined. This information should be provided in the SSAR.				
				Closed - This information is included in Subsection 5.2.3 of SSAR Revision 3				
921	NRR/EMCB	5.3.2-7	DSER-OI		Closed	Inactive		
				Westinghouse has not described the specimens in the surveillance capsules as requested in Q252.94. The SSAR should be modified to include this information.				
				Closed - The RAI requests information on use of correlation material. This material was a common heat of SA-302 material included in capsules for a number of vessels. The AP600 does not use SA-302 in the vessel and will not include correlation material.				
922	NRR/EMCB	5.3.2-8	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR COL Action Item 5.3.2-1, related to the reactor vessel materials surveillance program. (Specific materials capsule lead factors, withdrawal schedule, neutron fluence)				
				Closed - This information is included in Subsection 5.2.3 of SSAR Revision 3				
923	NRR/EMCB	5.3.3-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR COL Action Item 5.3.3-1, related to actual temperature-pressure limit curves.				
				Closed - SSAR Rev. 3 includes COL item for plant specific curves.				
924	NRR/EMCB	5.3.3-2	DSER-OI		Action N	Inactive		
				Westinghouse should include in the SSAR COL Action Item 5.3.3-1, related to the use of foreign steel for beltline materials.				
				Action N - Review chemistry requirements to verify that source of material does not matter. Discussed in phone call 5/22/95.				
925	NRR/EMCB	5.3.5-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR COL Action Item 5.3.5-1, related to plant-specific material properties. (Verify that plant-specific materials and end of life fluence are within limits assumed in AP600 analysis)				
				Closed - SSAR Rev. 3 adds COL item for plant specific material properties.				

Total Records: 87

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Selection: [type] like 'dser*' And [DSER Section] like '5*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
926	NRR/SRXB	5.4.1.1-1	DSER-OI		Closed	Inactive		
				Westinghouse should ensure that the RCP flow rates used in the Chapter 15 accident analyses are conservative when the final head-capacity curve for the AP600 RCPs is provided.				
				Closed - In order to provide conservatism, the flow rates used in the Chapter 15 analysis are the Thermal Design flow rates and not the Best Estimate flow rates. During startup testing it will be verified that the flow rates used in the Chapter 15 analysis are conservative with respect to the tested flow rates. The coastdown curve of the reactor coolant pumps will also be verfied during the startup to testing to ensure they are conservative relative to the values used in the Chapter 15 analysis.				
927	NRR/SRXB	5.4.1.1-2	DSER-OI		Action W	Inactive		
				Westinghouse should include in the SSAR COL Action Item 5.4.1.1-1, related to the RCP preoperational test program.				
				Action W - Meet or talk ot NRC explain why this item would be redundant with preoperational test program in Chapter 14.				
928	NRR/SRXB	5.4.1.1-3	DSER-OI		Resolved	Inactive		
				In its response to Q440.124, Westinghouse stated that it may be necessary to restrict the operation of certain combinations of reactor coolant pumps when running at low reactor coolant pressures approaching the cut-in pressure of the normal residual heat removal system. Westinghouse should modify the SSAR to include these pump restrictions and/or the operation guidelines.				
				Resolved - The SSAR will be revised to say that pump restrictions are not needed for safe operation.				
929	NRR/SRXB	5.4.1.2-1	DSER-OI		Action W	Inactive		
				Westinghouse should ensure that it has provided correct or conservative RCP coast-down flow rates for use in the Chapter 15 design-basis analyses.				
				Action W - The coast down curve is a design requirement that is included in the functional and design specifications. Pre-operational test will be performed to confirm that coastdown characteristics meet requirements and analysis assumptions. Discuss this with the NRC.				
930	NRR/SRXB	5.4.1.2-2	DSER-OI		Closed	Inactive		
				Westinghouse should ensure that reactor coolant pump coast-down flow is included in the Inspection, Test and Analysis Acceptance Criteria (ITAAC).				
				Closed - The flow coast down test is included as item 7 in Table 3.1.2-1 for the reactor coolant system ITAAC.				
931	NRR/EMCB	5.4.1.4-1	DSER-OI		Closed	Active	NTD-NRC-95-4405	2/7/95
				The flex-foot design of the RCP flywheel can is subjected to high stresses. Westinghouse should provide more information to demonstrate the adequacy of this particular enclosure.				
				Closed - Response to RAI 210.127 provided this information.				
932	NRR/EMCB	5.4.1.4-2	DSER-OI		Closed	Active		
				Westinghouse must demonstrate the validity of a correlation between the Charpy V-notch and Jlc or Klc values for the uranium flywheel material.				
				Closed - Response to RAI 210.121 addressed this issue.				
933	NRR/EMCB	5.4.2.1-1	DSER-OI		Action W	Inactive		
				The AP600 design should meet the requirements of EPRI NP-5960 "PWR Primary Water Chemistry Guidelines," Rev. 1, and EPRI NP-6239, "PWR Secondary Water Chemistry Guidelines," Rev. 2.				
				Action W - Discuss with guidelines with NRC.				

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Selection: [type] like 'dser*' And [DSER Section] like '5*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
934	NRR/EMCB	5.4.2.1-2	DSER-OI		Resolved	Inactive	
				Westinghouse should revise the SSAR to include the assumed corrosion allowances for the steam generator (SG) shell and support plate materials.			
				Resolved - Allowance for the shell is 0.050. The stainless steel support plates do not have a corrosion allowance. This information will be included in the SSAR			
935	NRR/EMCB	5.4.2.1-3	DSER-OI		Action W	Inactive	
				Westinghouse should describe in the SSAR its procedures for removing and replacing AP600 steam generators.			
				Action W - Discuss this with the NRC. Inclusion of procedure descriptions not appropriate for SSAR. The design features of the steam generator easing replacement is described.			
936	NRR/SRXB	5.4.4-1	DSER-OI		Resolved	Inactive	
				Westinghouse should confirm in the SSAR that the SG steamline flow restrictor will limit the steamline break flow to no more than the design-basis steam flow. Additionally, Westinghouse should confirm in the SSAR that the maximum SG steam flow rate (or a conservatively selected higher rate) is used in the Chapter 15 design-basis analysis for the main steamline break event.			
				Resolved - The Chapter 15 analyses use the area of the flow restrictor not a flow rate as input to the analysis			
937	NRR/SRXB	5.4.4-2	DSER-OI		Resolved	Inactive	
				Westinghouse should confirm in the SSAR that the maximum SG steam flow rate (or a conservatively selected higher rate) is used in the Chapter 15 design-basis analysis for the main steamline break event.			
				Resolved - The Chapter 15 analyses use the area of the flow restrictor not a flow rate as input to the analysis			
938	NRR/SRXB	5.4.5-1	DSER-OI		Resolved	Inactive	
				Westinghouse should revise the SSAR to to reflect the recent design change to the pressurizer heater logic.			
				Resolved - 5.4.5.2.3 of the SSAR will be revised to include this info.			
939	NRR/SRXB	5.4.6-1	DSER-OI		Resolved	Inactive	
				Westinghouse should revise Section 5.4.6 of the SSAR to be consistent with the February 15, 1994 design change report. The staff will review this section when it is updated.			
				Resolved - The SSAR will be revised to delete specific ADS valve body type for stage 1, 2, and 3.			
940	NRR/SRXB	5.4.6-2	DSER-OI		Action N	Inactive	
				The staff has not yet completed its review of the adequacy of the ADS system.			
				Action NRC - Complete review of ADS system			
941	NRR/SRXB	5.4.7.6-1	DSER-OI		Action W	Inactive	
				The staff requires that Westinghouse submit its AP600 Emergency Response Guidelines (ERGs) so that the possible interactions between passive and active features of the AP600 can be better understood.			
				Action W - ERGs are being developed.			
942	NRR/SRXB	5.4.7.7-1	DSER-OI		Action N	Inactive	
				The compliance of the normal residual heat removal system (RNS) design with applicable GDCs and RGs is under staff review.			
				Action NRC - Complete review			

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Selection: [type] like 'dser*' And [DSER Section] like '5*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
914	NRR/SRXB	5.4.7.9-1	DSER-OI		Action W	Inactive		
				The staff is still awaiting Westinghouse's response to Q440.53, related to the AP600 shutdown risk assessment.				
				Action W - The information on the shutdown risk assessment will be provided.				
914	NRR/SRXB	5.4.7.9-2	DSER-OI		Action N	Inactive	NTD-NRC-95-4413	3/6/95
				The shutdown risk issue remains open pending resolution of the technical issues identified in Q440.54 through Q440.72, issued on April 15, 1994, and Q440.168, issued on May 26, 1994.				
				Action N - Complete review of RAIs				
915	NRR/SRXB	5.4.7.10-1	DSER-OI		Action N	Inactive		
				The staff is still evaluating the AP600 PRA and the RTNSS evaluation.				
				Action N - Complete evaluation				
916	NRR/SRXB	5.4.9.2-1	DSER-OI		Resolved	Inactive		
				Section 5.4.9.4 of the SSAR states that the RNS relief valve is not required to be tested. Westinghouse should justify this position.				
				Resolved - SSAR will have an explanation for why 10CFR 50.34(f)(2)(x) for testing RCS safety and relief valves for water relief does not apply to RNS valves.				
917	NRR/SPLB	5.4.11.4-1	DSER-OI		Closed	Closed	NTD-NRC-95-4464	
				Westinghouse should provide the safety valve relief capacity and ADS valve discharge capacity.				
				Closed - ADS Valve sizing is discussed in Section 6.3, Rev. 2 evaluation of safety valve sizing is part of the overpressure protection discussed in 5.2.2, Rev. 3. Discussed in Plant systems meeting.				
918	NRR/SPLB	5.4.11.4-2	DSER-OI		Action N	Action N		
				Westinghouse should identify the worse-case load on the pressurizer relief discharge system (including the IRWST).				
				Action N - Review Appendix 3F				
919	NRR/SPLB	5.4.11.4-3	DSER-OI		Closed	Closed		
				Westinghouse should clarify the scope of the pressurizer relief discharge system.				
				Closed - There is no pressurizer relief discharge system. Discussed in Plant systems meeting.				
950	NRR/SPLB	5.4.11.4-4	DSER-OI		Closed	Action N		
				Westinghouse should provide the inspection and testing requirements for the pressurizer relief discharge system.				
				Closed - There is no pressurizer relief discharge system. Discussed at plant systems meeting.				
951	NRR/SPLB	5.4.11.4-5	DSER-OI		Resolved	Resolved		
				Westinghouse should provide additional information on the instru- mentation associated with the pressurizer relief discharge system.				
				Resolved - SSAR 5.4.11 will state that there is not a pressurizer relief discharge system.				
952	NRR/SPLB	5.4.11.4-6	DSER-OI		Closed	Action N		
				Westinghouse should address Bulletin 80-05, regarding the susceptibility of the IRWST to vacuum conditions resulting from the cooling of hot water in the tank.				
				Closed - The IRWST is not a PRT and is not pressure tight. Discussed at plant systems meeting -				

Selection: [type] like 'dser*' And [DSER Section] like '5*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
953	NRR/SPLB	5.4.11.4-7	DSER-OI		Closed	Closed		
				Westinghouse should identify seismic and safety classes associated with the pressurizer relief discharge system.				
				Closed - Discussed at plant systems meeting. There is no pressurizer relief dicharge system.				
954	NRR/SPLB	5.4.11.4-8	DSER-OI		Resolved	Resolved		
				Westinghouse should provide information regarding divisional separation and isolation of the redundant, safety-related portions of the pressurizer relief discharge system.				
				Resolved - Add to 5.4.6 a discussion of separation of ADS groups with steel plates.				
955	NRR/SRXB	5.4.12.4-1	DSER-OI		Action N	Inactive		
				Steam generator tube venting procedures are described in Westinghouse's responses to Q440.142 and Q440.144. These responses are presently under staff review.				
				Action NRC - complete review of 440.142 and 440.144				
956	NRR/SRXB	5.4.13-1	DSER-OI		Resolved	Inactive		
				The core makeup tank (CMT) information discussed in Section 5.4.13 of the SSAR, Revision 1, contains information that is inconsistent with the February 15, 1994, and June 30, 1994, Design Change Reports. Westinghouse should revise the SSAR to reflect these design changes.				
				Resolved - Revision 2 of 6.3 included these changes. Revision of 5.4.14 will include these changes.				
957	NRR/SRXB	5.4.13-2	DSER-OI		Action N	Inactive		
				The staff's review of the adequacy of the CMT is an open item pending review of outstanding RAI responses, computer codes, design-basis safety analyses, and information from the ongoing test program.				
				Action NRC - complete review				
958	NRR/SRXB	5.4.14.5-1	DSER-OI		Resolved	Action W	NTD-NRC-94-4181	6/27/94
				Westinghouse should revise the SSAR to include recent PRHR design changes.				
				Resolved - SSAR revision 2 of 6.3 and Revision of 5.4.14 will include changes				
959	NRR/SRXB	5.4.14.5-2	DSER-OI		Action N	Inactive		
				The staff's review of the adequacy of the PRHR heat exchanger, as a part of the overall operation of the passive core cooling system (PXS), is an open item pending review of outstanding RAI responses, computer codes, design-basis safety analyses, and information from the ongoing test program.				
				Action NRC - Complete review				
1892	NRR/EMCB	5.2.1.1-1	DSER-COL		Closed	Inactive		
				5.2.1.1-1 The COL applicant should ensure that the design is consistent with the construction practices (including inspection and examination methods) of the ASME Code edition and addenda in effect at the time of the COL application, as endorsed in 10 CFR 50.55a.				
				Closed - A COL item for the applicant to address the use of later Code editions and addenda has been added in Rev. 3				
1893	NRR/EMCB	5.2.1.1-2	DSER-COL		Closed	Inactive		
				5.2.1.1-2 The COL applicant should identify in its application portions of later Code editions and addenda for NRC staff review and approval.				
				Closed - A COL item for the applicant to address the use of later Code editions and addenda has been added in Rev. 3				

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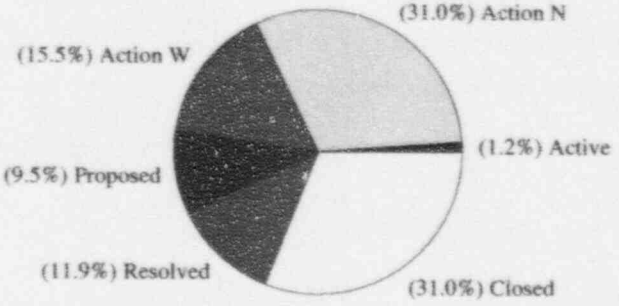
Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '5*' Sorted by Item #

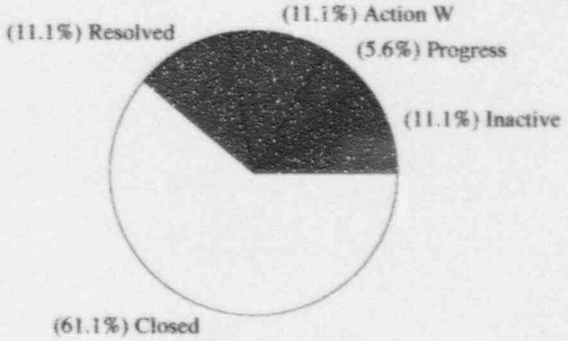
Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1894	NRR/EMCB	5.2.4-1	DSER-COL		Closed	Inactive		
				5.2.4-1 The COL applicant must submit the complete plant-specific psi/ISI program to the NRC, including references to the edition and addenda of the ASME Code Section XI that will be used to select components subject to examination, as well as a description of the components exempt from examination by the applicable code, and isometric drawings used for the examination. The COL applicant should also verify that its psi and ISI programs will incorporate the requirements of Appendices VII and VIII and Subsection IWH of ASME Section XI.				
				Closed - A COL item for the applicant to address the PSI and ISI program has been added in Rev. 3				
1895	NRR/EMCB	5.2.4-2	DSER-COL		Closed	Inactive		
				5.2.4-2 The COL applicant must meet the requirements of the ASME Boiler and Pressure Vessel Code, Section XI, as reviewed by the staff and determined to be appropriate for this application.				
				Closed - A COL item for the applicant to address the PSI and ISI program has been added in Rev. 3				
1896	NRR/EMCB	5.3.2-1	DSER-COL		Closed	Inactive		
				5.3.2-1 The COL applicant should provide details of its reactor vessel materials surveillance program, including the specific materials in each surveillance capsule, the capsule lead factors, the withdrawal schedule for each capsule, the neutron fluence to be received by each capsule at the time of its withdrawal, and the vessel end-of-life peak neutron fluence.				
				Closed - A Combined license item is added to SSAR Section 5.3 to address this issue.				
1897	NRR/EMCB	5.3.3-1	DSER-COL		Resolved	Inactive		
				5.3.3-1 The COL applicant should submit actual pressure-temperature (PT) curves for staff review.				
				Closed - A Combined license item is added to SSAR Section 5.3 to address this issue.				
1898	NRR/EMCB	5.3.3-2	DSER-COL		Action N	Inactive		
				5.3.3-2 The COL applicant, if utilizing foreign steel for beltline materials, must assess the need to estimate neutron irradiation embrittlement with a methodology more appropriate than that specified in Regulatory Guide 1.99, Revision 2.				
				Action N - NRC will review issue and other COL items to verify that foreign steel does not have additional requirements.				
1899	NRR/EMCB	5.3.5-1	DSER-COL		Closed	Inactive		
				5.3.5-1 The COL applicant should verify that plant-specific material properties and end-of-life fluence (60 years) are within the limits assumed in the AP600 analysis.				
				Closed - A Combined license item will be added to SSAR Section 5.3 to address this issue.				
1900	NRR/SRXB	5.4.1.1-1	DSER-COL		Action W	Inactive		
				5.4.1.1-1 The COL applicant should submit its planned preoperational test program to be performed for the RCPs, as required by Section 14.2.8.1.40 of the SSAR.				
				Action W - Discuss this issue with the NRC. Chapter 14 has the requirements for the preoperational test program. This duplicates OI 926 (DSER 5.4.1.1-2)				

Open Item Status - Chapter 6 (ESF)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	1	26	13	7	10	20	77
DSER-Confirmatory	0	0	0	0	0	0	0	0	0
DSER-COL	0	0	0	0	0	1	0	6	7
Subtotal	**0**	**0**	**1**	**26**	**13**	**8**	**10**	**26**	**84**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	0	0
Meeting-OI	2	1	0	0	2	0	2	11	18
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**2**	**1**	**0**	**0**	**2**	**0**	**2**	**11**	**18**
Total	**2**	**1**	**1**	**26**	**15**	**8**	**12**	**37**	**102**

Westinghouse Status as of 29-May-95

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Selection: [type] like 'dser*' And [DSER Section] like '6*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
960	NRR/EMCB	6.1.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should revise the SSAR to identify the materials used by specification, type, grade, and heat treatment.				
				Closed - Information included in SSAR Revision 3				
961	NRR/EMCB	6.1.1-2	DSER-OI		Action W	Inactive		
				Westinghouse should identify in the SSAR the specific weld metals used in fabricating ESF components by specification, type, grade, and heat treatment.				
				Closed - Information included in SSAR Revision 3				
962	NRR/EMCB	6.1.1-3	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should identify in the SSAR the nickel alloy(s) that will be used, (by specification, type, grade, and heat treatment).				
				Closed - Information included in SSAR Revision 3				
963	NRR/EMCB	6.1.1-4	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should justify each application of a nickel-based alloy, and the weld metals for the AP600 (except for the RCP flywheel enclosure, which has already been discussed).				
				Closed - Information included in SSAR Revision 3				
964	NRR/EMCB	6.1.1-5	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should indicate in the SSAR the base materials and/or hard surfacing (materials and processes) to be used in lieu of cobalt alloys, as well as the test programs and the results of such programs. Data should be presented to ensure a 60-year design life.				
				Closed - Information included in SSAR Revision 3				
965	NRR/EMCB	6.1.1-6	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should address those aspects identified that are not currently addressed in the SSAR, and should discuss its position when different from the URD. (Cold work control, justification for cold work stainless steel, grinding controls)				
				Closed - Information included in SSAR Revision 3				
966	NRR/EMCB	6.1.1-7	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should add COL Action Item 6.1.1-1 to the SSAR.				
				Closed - COL item included in SSAR Revision 3				
967	NRR/EMCB	6.1.1-8	DSER-OI		Action W	Inactive		
				Westinghouse should confirm that the ESF materials are compatible with the reactor coolant as described in Subarticles NB-, NC-, and ND-2160, as well we Subarticles NB-, NC-, and ND-3120, of the ASME Code, as appropriate.				
				Action W - Address the operating temperature of cast material in ESF materials				
968	NRR/EMCB	6.1.1-9	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should discuss in the SSAR the chemical content controls for non-metallic materials that can come in contact with pressure boundary components.				
				Closed - Information included in SSAR Revision 3				

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Selection: [type] like 'dser*' And [DSER Section] like '6*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
969	NRR/EMCB	6.1.2-1	DSER-OI		Action W	Inactive		
				Westinghouse should further justify the non-safety related classification of all coatings within the AP600 containment.				
				Action W - Resolve AP600 approach on containment coatings and meet or talk with the NRC				
970	NRR/EMCB	6.1.2-2	DSER-OI		Action W	Inactive		
				Westinghouse should provide more information indicating that the appropriate coatings will be correctly applied and will provide adequate protection throughout the plant's life. In addition, Westinghouse should supply data and an in-depth analysis to provide justify using new coating types (such as high-top coatings) in containment.				
				Action W - Resolve AP600 approach on containment coatings and meet or talk with the NRC				
971	NRR/EMCB	6.1.2-3	DSER-OI		Action W	Inactive		
				Westinghouse should indicate in the SSAR whether the changes in the recommended practices result in a greater or lesser amount of predicted hydrogen production.				
				Action W: In DSER open item 6.2.5.2-3 the staff indicated that the source term used is unacceptable. As indicated in response to that open item, Westinghouse will recalculate the design basis hydrogen generation using the source term specified in RG 1.7.				
972	NRR/SCSB	6.2.1-1	DSER-OI		Resolved	Inactive		
				The new method for calculating the source term for the AP600 is currently under staff review.				
				Resolved: The source term originally proposed in the SSAR is being abandoned in favor of the source term defined in NUREG-1465 (the historical source term as defined in TID-14844 and RG 1.4 has been superseded by the source term described in NUREG-1465).				
973	NRR/SCSB	6.2.1-2	DSER-OI		Active	Inactive		
				Because the AP600 design does not have containment sprays, natural deposition on surfaces in containment is far more important than in past designs. The elimination of containment sprays from the design requires further staff review.				
				Active: Communication ongoing between Westinghouse and NRC relative to the concept of aerosol removal capability that could be used for severe accident mitigation.				
974	NRR/SCSB	6.2.1-3	DSER-OI		Resolved	Inactive		
				Westinghouse should submit values for the peak calculated external pressure.				
				Peak calculated external pressures will be provided in preliminary SSAR markups in May 1995. These will be finalized the end of July 1995.				
975	NRR/SCSB	6.2.1-4	DSER-OI		Proposed	Inactive		
				Westinghouse is still validating the performance of the PCCS, and staff review is continuing.				
				Letter report on stratification and mixing, and PCS evaluation model framework issued in May 1995.				
976	NRR/SCSB	6.2.1-5	DSER-OI		Resolved	Inactive		
				The staff will perform confirmatory calculations after Westinghouse resolved the issue of powering the thermal recombiners with non-safety-grade ac.				
				Resolved - Adoption of PARs closes this issue. SSAR section 6.2.4 will document switch to PARs.				
977	NRR/SCSB	6.2.1.1-1	DSER-OI		Action N	Inactive		
				The staff is currently reviewing the analyses-related portions of the August 10, 1994 Westinghouse submittals (EPRI reports on GOTHIC, including the Technical Manual, Users Manual, and Qualification Report), as well as the applicable test qualifications.				
				Action NRC - awaiting specific questions on this item.				

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Selection: [type] like 'dser*' And [DSER Section] like '6*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
978	NRR/SCSB	6.2.1.1-2	DSER-OI		Proposed	Inactive		
				Pertaining to the modeling of the passive cooling features, the staff will review the input assumptions, along with the calculated results.				
				Westinghouse will provide sensitivity cases for initial conditions (temperature and humidity) in May 1995 preliminary SSAR Section 6 markups. NRC agrees to cases per 2/21/95 phone call.				
979	NRR/SCSB	6.2.1.1-3	DSER-OI		Action N	Inactive		
				Westinghouse's review of the data from the Large Scale Tests (LSTs) is ongoing, as is the staff's review of the analytical models and input assumptions.				
				Action NRC - awaiting specific questions on this item				
980	NRR/SCSB	6.2.1.1-4	DSER-OI		Proposed	Inactive		
				The treatment of metal-water reaction energy should be considered as an energy source.				
				Westinghouse will consider metal-water reaction energy in May 1995 preliminary SSAR Section 6 markups. 1% metal-water reaction (per Appendix K) will be credited.				
981	NRR/SCSB	6.2.1.1-5	DSER-OI		Proposed	Inactive		
				The input assumptions for WGOTHIC 1.0 in the SSAR containment model are under staff review.				
				Proposed - Per telecon with Chris Hoxie (2/16/95), this open item is the same as 6.2.1.1-2. Westinghouse will provide sensitivity cases for initial conditions (temperature and humidity) in preliminary SSAR markups. NRC agrees to cases per 2/21/95 phone call.				
982	NRR/SCSB	6.2.1.1-6	DSER-OI		Action N	Inactive		
				Westinghouse is still conducting the WGOTHIC computer code verification and validation (V&V), which is concurrently under staff review.				
				Action NRC - awaiting specfic questions. Detailed discussions were held with NRC on 3/17/95 and 4/11/95, and specific actions relevant to content of the WGOTHIC V&V report and followup information have been added separately to this database.				
983	NRR/SCSB	6.2.1.1-7	DSER-OI		Resolved	Inactive		
				Westinghouse should include in the SSAR a table demonstrating compliance with the requirements of GDC 38.				
				Per 3/17/95 W/NRC Meeting. Pressure at 24 hours will be shown to meet 50% of design in May 1995 preliminary SSAR section 6 markups.				
984	NRR/SCSB	6.2.1.1-8	DSER-OI		Action W	Inactive		
				Westinghouse stated in the SSAR that the external pressure condition was combined with dead and live loads during normal operation; however, it was not clear whether this also included the loads associated with DBA or severe accident conditions.				
				Action W - Westinghouse to clarify basis and justification for external pressure loads.				
985	NRR/SCSB	6.2.1.2-1	DSER-OI		Proposed	Inactive		
				Westinghouse should clearly state in the SSAR exactly which subcompartments were analyzed, and what the design pressures of the walls are.				
				Section 3.8.3.4 of the SSAR Rev. 3 indicates that subcomparments containing high-energy piping are designed for a pressurization load of 5 psi. Also, a table of the compartments analyzed will be included in the preliminary SSAR markups.				
986	NRR/SCSB	6.2.1.2-2	DSER-OI		Action W	Inactive		
				Westinghouse should state in the SSAR the reasons for not applying the 7.62-cm (3-in.) DEG break, as was done with the other subcompartments.				
				No high-energy piping is present within the IRWST and reactor cavity. Table 3.6-2 of SSAR will be revised to include all high-energy piping to be considered for subcompartment pressurization.				

Total Records: 84

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
987	NRR/SCSB	6.2.1.2-3	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should state in the SSAR the design capability of the walls.				
				Section 3.8.3.4 of the SSAR Rev. 3 indicates that subcompartments containing high-energy piping are designed for a pressurization load of 5 psi.				
988	NRR/SCSB	6.2.1.2-5	DSER-OI		Action N	Inactive		
				The staff is currently reviewing the use of the TMD and SATAN- VI codes as they apply to the AP600, as well as the modeling assumptions made by Westinghouse.				
				NRC Action. No specific questions have been received.				
989	NRR/SCSB	6.2.1.3-1	DSER-OI		Action N	Inactive		
				The short-term mass/energy release data and methodology are currently under review by the staff as they apply to the AP600.				
				NRC Action. No specific questions have been received.				
990	NRR/SCSB	6.2.1.3-2	DSER-OI		Action N	Inactive		
				The long-term LOCA mass/energy release data, and methodology are currently under review by the staff as it applies to the AP600.				
				NRC Action. No specific questions have been recieved.				
991	NRR/SCSB	6.2.1.3-3	DSER-OI		Action N	Inactive		
				The staff is currently reviewing the methods and assumptions used to release the various energy sources during the blowdown phase.				
				NRC Action. No specific questions have been received.				
992	NRR/SCSB	6.2.1.3-4	DSER-OI		Action N	Inactive		
				The staff is currently reviewing the post-blowdown model as it applies to the AP600.				
				NRC Action. No specific questions have been received.				
993	NRR/SCSB	6.2.1.3-5	DSER-OI		Action N	Inactive		
				The staff is currently reviewing passive system reliability and its application to the AP600.				
				NRC Action. No specific questions have been received.				
994	NRR/SCSB	6.2.1.3-6	DSER-OI		Proposed	Inactive		
				Westinghouse should address the treatment of metal-water reaction energy as an energy source.				
				Westinghouse will consider metal-water reaction energy in preliminary SSAR markups. 1% metal-water reaction (per Appendix K) will be credited.				
995	NRR/SCSB	6.2.1.4-1	DSER-OI		Action N	Inactive		
				The staff is currently reviewing the significant parameters affecting steamline break mass and energy releases, as they apply to the AP600.				
				NRC action. No specific questions have been received.				
996	NRR/SCSB	6.2.1.4-2	DSER-OI		Action N	Inactive		
				The staff is currently reviewing the application of the blowdown model methodologies to the AP600.				
				NRC action. No specific questions have been received.				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
997	NRR/SCSB	6.2.1.5-1	DSER-OI		Proposed	Inactive		
				The staff is currently reviewing the application of a constant backpressure of 14.7 psia in perfonnance capability studies of the AP600 ECCS.				
				Westinghouse will provide details of containment backpressure calculation using WGOTHIC in May 1995 preliminary SSAR section 6 markups. This calculation used a one-node model of the AP600 with assumptions similar to that used in the COCO backpressure calculations.				
998	NRR/SCSB	6.2.1.5-2	DSER-OI		Action N	Inactive		
				The staff is currently reviewing the application of the methodology pertaining to the mass and energy release data.				
				NRC Action. No specific questions have been received.				
999	NRR/SCSB	6.2.1.6-1	DSER-OI		Action N	Inactive		
				The staff is currently reviewing the issue of containment- related testing and inspection.				
				Vent areas inside containment: The subject vent areas are structural openings between compartments/areas and should not require periodic inspection. The COL's 10CFR 50.59 will control plant modification to preclude unacceptable changes to the vent areas. SSAR 3.8.3.7 specifies "There are no in service testing or inspection requirements for the containment internal structures." Containment outer surface: Commitment made in the response to RAI 252.25. Discussion will be scheduled with the NRC to determine if additional details are required. Baffles: Commitment made in the Tech Specs, to verify the air flow path is unobstructed; if the NRC needs additional commitments we will discuss.				
1000	NRR/SCSB	6.2.1.7-1	DSER-OI		Action N	Inactive		
				The staff is currently reviewing the containment-related instrumentation requirements.				
				NRC Action. No concerns have been identified at this time.				
1001	NRR/SCSB	6.2.1.8-1	DSER-OI		Action N	Inactive		
				The staff is currently reviewing the issue of filtering corrosion products, dust, and other debris in the IRWST and containment sump, to prevent the clogging of strainers and screens.				
				NRC Action. No specific questions have been received. Per 2/16/95 telecon (with Chris Hoxie), NRC to provide list of informations notices related to this issue. This was reiterated in 5/23/95 phone call with Ed Throm.				
1002	NRR/SCSB	6.2.4.2-1	DSER-OI		Action N	Inactive		
				The staff will explore with Westinghouse the requirements that must be followed to allow the RHR penetration to be opened while a containment isolation signal exists.				
				Action N - Discussed 4/4 Senior Management Meeting. NRC mgt. accepted closure by independant safety related 1E signal as acceptable (NRC to make final decision).				
1003	NRR/SCSB	6.2.4.6-1	DSER-OI		Action N	Inactive		
				The use of a single blind flange to isolate spare penetrations is not acceptable, unless the penetration is welded.				
				Action N - Discussed with Throm and Hoxie during 3/23/95 telecon. Other plants use this method (e.g., System 80+, Wolf Creek, Callaway). Throm to discuss with Kudric.				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1004	NRR/SCSB	6.2.4.13-1	DSER-OI		Action N	Inactive		
				The containment vent/purge system should only be used for safety- related containment entries.				
				Action NRC NRC to review and accept VFS containment penetrations.				
1005	NRR/SCSB	6.2.5.1-1	DSER-OI		Action N	Inactive		
				The staff is currently evaluating whether the HCMS satisfies the requirements.				
				NRC action. No specific questions have been received.				
1006	NRR/SCSB	6.2.5.2-1	DSER-OI		Resolved	Inactive		
				The non-safety-related power to the active HRS does not satisfy the requirements.				
				Resolved - Adoption of PARs closes this issue. SSAR section 6.2.4 revision will provide documentation of switch to PARs.				
1007	NRR/SCSB	6.2.5.2-2	DSER-OI		Action W	Inactive		
				The containment internal structures should have design features that promote the free circulation of the atmosphere. Westinghouse should present an analysis of the effectiveness of these features for convective mixing.				
				Westinghouse will perform evaluation of the potential H2 release locations and the vent areas available to enhance mixing. Discussion of the evaluation will be added to in revision to SSAR.				
1008	NRR/SCSB	6.2.5.2-3	DSER-OI		Action W	Inactive		
				The percentage of core fission product inventory in the sump solution proposed by Westinghouse is unacceptable.				
				Action W. The design basis LOCA hydrogen generation will be reanalyzed using the TID-14844 source term as specified in RG 1.7.				
1009	NRR/SCSB	6.2.5.2-4	DSER-OI		Resolved	Inactive		
				The staff is currently evaluating the HRS to determine if the design conforms to the regulations and standards in Section 6.2.5 of the SRP.				
				Adoption of PARs closes this issue. SSAR revision to section 6.2.4 will provide documentation of switch to PARs.				
1010	NRR/SCSB	6.2.6.1-1	DSER-OI		Action N	Inactive		
				The proposed 4-year maximum interval would decouple the Type A test schedule from Section XI of the ASME Code, define a maximum interval between successive Type A tests, and permit increased operational flexibility with no reduction in containment reliability.				
				Discussed with Throm and Hoxie during 3/23/95 telecon. Throm to discuss with Bill Long.				
1011	NRR/SCSB	6.2.6.2-1	DSER-OI		Action N	Inactive		
				Westinghouse's proposal to extend airlock testing until three days after the next airlock usage if the airlock has not been opened is not consistent with the Commission's July 21, 1993, recommendation that six-month test intervals be retained.				
				Discussed with Throm and Hoxie during 3/23/95 telecon. Throm to discuss with Bill Long.				
1012	NRR/SCSB	6.2.8-1	DSER-OI		Action W	Inactive		
				The staff will review the pressurization loads that result from ADS stage 1, 2, and 3 blowdown through the spargers consistent with the methods used for BWRs.				
				Westinghouse to provide NRC with a "roadmap" related to this issue during June 1995. NRC will then supply specific questions.				
1013	NRR/SRXB	6.3-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/24/95
				Section 6.3 of the SSAR contains information that is not consistent with the design changes, and should be updated accordingly.				
				Closed - Changes were incorporated into SSAR Section 6.3 Revision 2.				

Selection: [type] like 'dser*' And [DSER Section] like '6*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1014	NRR/SRXB	6.3.2.6-1	DSER-OI		Action N	Inactive		
				Westinghouse stated that the specific valve types will be selected as a COL application activity, and the AP600 safety analysis will be performed using bounding ADS valve and system parameters. The staff is still reviewing this approach.				
				Action NRC - NRC review activities underway.				
1015	NRR/SRXB	6.3.2.7-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/24/95
				The staff will evaluate the appropriateness of the check valve arrangements in the PXS.				
				Closed - Changes were incorporated into SSAR Section 6.3 Revision 2.				
1016	NRR/SRXB	6.3.2.8-1	DSER-OI		Action N	Inactive		
				Section 6.3.2.5 of the SSAR described the specific PXS design features to enhance the system reliability. These features are currently under staff review.				
				Action NRC -NRC review is underway.				
1017	NRR/SRXB	6.3.3-2	DSER-OI		Action W	Inactive		
				The staff is currently reviewing the application of computer programs used for the analyses of design-basis events (LOFTRAN, LOFTTR2, NOTRUMP, and WCOBRA/TRAC), which are being verified and validated through various test programs.				
				Action W - The verification and validation of the AP600 design basis computer codes is underway. Resulting reports and schedules are incorporated into the AP600 Design Certification schedule.				
1018	NRR/SRXB	6.3.4-1	DSER-OI		Action W	Inactive		
				Issues pertaining to post-72 hour support actions require resolution.				
				Action W - Prepare changes resulting from meeting with NRC on 4/27/95				
1019	NRR/SPLB	6.4-1	DSER-OI		Action W	Inactive		
				In order to provide any credit for iodine removal by charcoal adsorbers in the supplemental air filtration units in evaluating the control room radiological habitability, the system is subjected to the staff's position described in Section A of SECY-94-084.				
				Action W - Resolve RTNSS requirements for this system. NRC meeting scheduled for mid-June to resolve RTNSS questions related to normal control room habitability system				
1020	NRR/SPLB	6.4-2	DSER-OI		Resolved	Action W		
				The staff is currently reviewing the expectation that occupancy in MCRE can be limited to five persons throughout the 72-hour period following an accident				
				Additional occupancy of up to 11 persons in MCR during VES operation to be discussed in revision to SSAR Section 6.4				
1021	NRR/SPLB	6.4-3	DSER-OI		Resolved	Action W		
				Westinghouse should add COL Action Item 6.4-1 to the SSAR.				
				SSAR to be amended to add statement on COL action in Section 6.4.7 regarding role of COL applicant				
1022	NRR/SPLB	6.4-4	DSER-OI		Resolved	Action W		
				Westinghouse should add COL Action Item 6.4-2 to the SSAR.				
				SSAR to be amended to add statement on COL action in Section 6.4.7 regarding role of COL applicant				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1023	NRR/SPLB	6.4-5	DSER-OI		Action N	Inactive		
				The staff will perform an independent radiological consequence analysis for each DBA to verify the Westinghouse conclusion in meeting GDC 19 after resolution of (1) source term-related issues in Chapter 15 of this report, and (2) control room X/Q values in Chapter 2 of this report.				
				Action N - NRC independent evaluation ongoing.				
1024	NRR/SPLB	6.4-6	DSER-OI		Resolved	Action W		
				Because of the unavailability of sufficient information at the time of review, the staff is unable to reach a conclusion concerning the conformance of the VES with GDCs 4, 5, and 19 referenced in Section 6.4 of the SRP, and consequently, with the subject SRP acceptance criteria.				
				See responses to item no. 193 through 200				
1025	NRR/SPLB	6.5.3-1	DSER-OI		Action N	Inactive		
				The staff's acceptance of the fission product control systems and structures will be based on the conclusions of the reviews addressed in Sections 6.2.1, 6.2.4, and 15.4 of this report.				
				Action N - Complete review				
1026	NRR/EMCB	6.6-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should add COL Action Item 6.6-1 to the SSAR.				
				Closed - Information included in SSAR Revision 3				
1027	NRR/EMCB	6.6-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				As the AP600 design certification code, Westinghouse has specified the 1989 Edition, including the 1989 Addenda, of the ASME Code, Section XI. The 1989 Addenda have not yet been referenced in 10 CFR 50.55a(b).				
				Closed - The 1989 Addenda is included in SSAR Rev. 3.				
1028	NRR/EMCB	6.6-3	DSER-OI		Closed	Inactive		
				For proposed alternatives to design certification code-required PSI or ISI, Westinghouse should specify the specific instances in the SSAR, and should obtain NRC approval of the proposed alternative approaches.				
				Closed - Proposed alternatives will not be included as part of the design certificaiton program. Discussed w/ NRC by teleconference.				
1029	NRR/EMCB	6.6-4	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should provide the means to ensure that PSI will be conducted using equipment and techniques equivalent to those that would be used for ISI.				
				Closed - Combined License information item is included in SSAR Revision 3				
1030	NRR/EMCB	6.6-5	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should revise the SSAR to reflect the position that relief of ISI would be granted to the COL applicant only for inspections conducted under later codes, and would not apply to psi requirements of the design certification code.				
				Closed - Combined License information item is included in SSAR Revision 3				
1031	NRR/EMCB	6.6-6	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse stated that the components and welds requiring ISI are designed to allow for the application of ISI methods. Westinghouse should revise the SSAR to describe the means to accomplish these objectives.				
				Closed - Description of design for inspectability program is included in SSAR Revision 3				

Selection: [type] like 'dser*' And [DSER Section] like '6*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1032	NRR/EMCB	6.6-7	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should add COL Action Item 6.6-2 to the SSAR.				
				Closed - Combined License information item is included in SSAR Revision 3				
1033	NRR/EMCB	6.6-8	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should discuss in the SSAR its design approaches to reduce the potential for erosion or corrosion of steel piping, apply measures to ensure that inspections will be possible and meaningful, and provide provisions for repair or replacement.				
				Closed - This information is included in SSAR Revision 3				
1034	NRR/EMCB	6.6-9	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should add COL Action Item 6.6-3 to the SSAR.				
				Closed - Combined License information item is included in SSAR Revision 3				
1035	NRR/EMCB	6.6-10	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should add COL Action Item 6.6-4 to the SSAR.				
				Closed - Combined License information item is included in SSAR Revision 3				
1646	NRR/SCSB	6.2.1.2-4	DSER-OI		Action N	Inactive		
				The LBB concept is currently under staff review, as it specifically applies to the AP600.				
				Action N - Application of LBB for AP600 is currently under staff review.				
1901	NRR/EMCB	6.1.1-1	DSER-COL		Closed	Inactive		
				6.1.1-1 The COL applicant should review vendor fabrication and welding procedures to ensure that austenitic stainless steels meet the guidelines of Regulatory Guides 1.31 and 1.44.				
				Closed - Combined License information item is included in SSAR Revision 3				
1902	NRR/SPLB	6.4-1	DSER-COL		Closed	Action W		
				6.4-1 The COL applicant must also determine the amounts and locations of any possible sources of toxic substances near the plant using the methods in RG 1.78 and RG 1.95. The COL applicant must include specific toxic gas detectors where necessary to permit automatic isolation of the control room.				
				See response to item no. 201 and 1021				
1903	NRR/SPLB	6.4-2	DSER-COL		Closed	Action W		
				6.4-2 The COL applicant will verify that the as-built design, procedures, and training are consistent with the licensing basis documentation and the intent of Generic Issue (GI) 83, "Control Room Habitability."				
				See response to item no. 202 and 1022				
1904	NRR/EMCB	6.6-1	DSER-COL		Closed	Inactive		
				6.6-1 The COL applicant should develop the psi and ISI programs for Class 2 and 3 systems, components, and supports.				
				Closed - Combined License information item is included in SSAR Revision 3				
1905	NRR/EMCB	6.6-2	DSER-COL		Proposed	Inactive		
				6.6-2 The COL applicant is responsible for inspecting pipe wall thinning as a result of E/C.				
				COL item is not needed because the design addresses pipe thinning by material selection and layout.				

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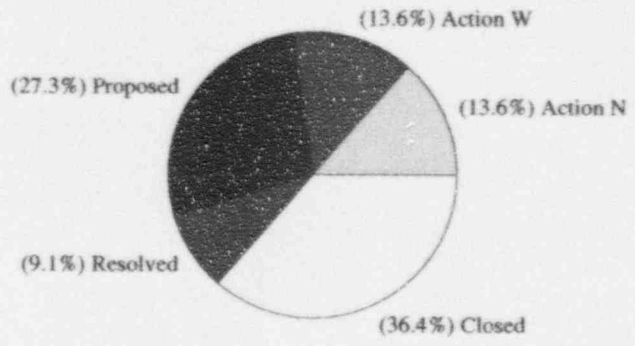
Date: 5/27/95

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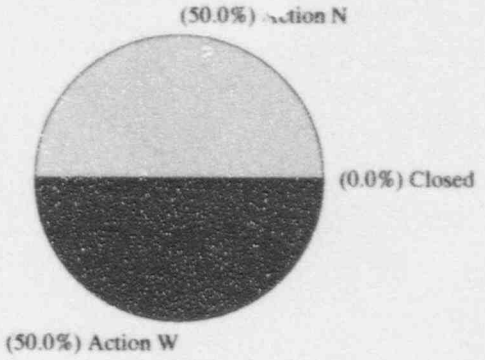
Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1966	NRR/EMCB	6.6-3	DSER-COL		Closed	Inactive		
				6.6-3 The COL applicant should submit psi and ISI program plans for staff review and approval. The COL applicant should verify that its psi and ISI programs will incorporate the requirements of Appendices VII and VIII of ASME Section XI and Generic Letter 89-08, "Erosion/Corrosion-Induced Pipe Wall Thinning".				
				Closed - Combined License information item is included in SSAR Revision 3				
1967	NRR/EMCB	6.6-4	DSER-COL		Closed	Inactive		
				6.6-4 The COL applicant is responsible for completing the design and constructing safety-related and non-safety-related systems, components, and their supports.				
				Closed - Combined License information item is included in SSAR Revision 3				

Open Item Status - Chapter 7 (I&C)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	0	3	3	6	2	6	20
DSER-Confirmatory	0	0	0	0	0	0	0	2	2
DSER-COL	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**0**	**0**	**3**	**3**	**6**	**2**	**8**	**22**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	0	0
Meeting-OI	0	0	0	1	1	0	0	0	2
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**
Total	**0**	**0**	**0**	**4**	**4**	**6**	**2**	**8**	**24**

Westinghouse Status as of 29-May-95

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '7*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1036	NRR/HICB	7.1.3.2-1	DSER-OI		Action N	Inactive		
				Westinghouse should provide a table comparing the design of the instrumentation and controls of the AP600 design and the guidance of the EPRI ALWR URD. The staff concludes that Westinghouse should update the response to Q100.1 so that the staff can evaluate the extent to which the AP600 design complies with the EPRI requirements.				
				Action N - Westinghouse is a principle participant in the development of the EPRI sponsored URD and continue to be involved with EPRI on changes to that document. Therefore, the AP600 design remains consistent with the EPRI URD. The SSAR will be revised to reflect consistency with the EPRI URD. The URD conformance database is available for NRC review at the Westinghouse Rockville Licensing office. See related item (DSER OI 1.1-2)				
1037	NRR/HICB	7.1.3.3-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	5/31/95
				Westinghouse should commit to digital I&C industry system standards. The staff concludes that an explicit commitment to industry hardware- and software-related standards is important to achieving high quality in the digital I&C system product. Therefore, Westinghouse should commit to and reference digital microprocessor-related industry standards.				
				Closed - List of standards reviewed by NRC during meeting on May 15-16. Standards incorporated into Revision 3 of the SSAR, Subsection 7.1.4.1.8.				
1038	NRR/HICB	7.1.4-1	DSER-OI		Action W	Inactive		
				Westinghouse should describe in the SSAR, CDM, and ITAAC the digital system design process. Westinghouse should provide a detailed descritpiton of the digital system design process in the SSAR and CDM with a corresponding ITAAC.				
				Action W - WCAP-13383, which describes the digital system design process is being updated. The certified design material and ITAACs will be modified. The SSAR has been modified to reference the design process and to indicate the software design standards the design process conforms to. This information is provided in Revision 3 of the SSAR, Subsection 7.1.2.15. The WCAP and ITAAC revisions must be completed before this item can be closed out. NRC has requested a presentation when all elements are completed.				
1039	NRR/HICB	7.1.7-1	DSER-OI		Action W	Inactive		
				Westinghouse should describe a commercial grade item dedication program for digital systems. Westinghouse has not addressed the commercial grade item dedication program that is necessary to ensure sufficient quality in the design of safety-related and nonsafety-related I&C systems using commercial of-the-shelf equipment. The desiagn, verification, and validation process for COTS software and hardware should be clearly documented for design certification.				
				Action W - WCAP-13383 is being updated to include a commercial grade item dedication process. The SSAR has been modified to reference this process. This information is provided in Revision 3 of the SSAR, Subsection 7.1.2.15. The WCAP revision must be completed before this item can be closed out.				
1040	NRR/HICB	7.2.5-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should provide additional description of the bypass logic for the engineered safety feature actuation systems. ...during the time the plant is operating with two channels bypassed, any subsequent single failure could lead to an inadvertent reactor trip, and, thus, from an operational standpoint, operation with two channels bypassed should be limited. In addition, Westinghouse should verify that this bypass logic applies only to RTS and does not apply to the ESFAS. The topical report (Addendum 2 to WCAP 8897) should provide additional descriptions of the bypass logic for the engineered safety feature actuation system.				
				Closed - Technical proposal accepted by NRC during meeting on May 15-16. Approved additional technical description is incorporated into Revision 3 of the SSAR, Subsection 7.1.2.10.				

Total Records: 22

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '7*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1041	NRR/HICB	7.2.6-1	DSER-OI		Action N	Action N		
				The staff has not yet completed its evaluation of the software architecture design. ...because WCAP 14080 was submitted in July 1994, the staff has not completed its review of the document and is continuing its evaluation of the software architecture based on both the proposed design and the associated design process. The results from this evaluation will be presented int he final SER for AP600.				
				Action N - NRC has not provided Westinghouse with the results of their evaluation.				
1042	NRR/HICB	7.2.7-1	DSER-OI		Action W	Inactive		
				Westinghouse should provide the instrument setpoint methodology document that applies to the AP600 design. ...Westinghouse stated that the details of the AP600 setpoint study will be provided during the equipment procurement phase. This is not acceptable. The staff concludes that the setpoint methodology must be submitted to support the design certification review. Therefore, Westinghouse must provide the setpoint methodology document for the staff to review before the final SER is written.				
				Action W - A document which describes the AP600 setpoint methodology is being prepared and will be provided to NRC staff.				
1043	NRR/HICB	7.2.8-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should provide a discussion concerning the qualification of digital equipment to the electromagnetic environment. Westinghouse has not addressed the issue of electromagnetic environmental qualification and has not committed to the appropriate standards.				
				Closed - List of standards reviewed by NRC during meeting on May 15-16. Standards incorporated into Revision 3 of the SSAR, Subsection 7.1.4.1.6.				
1044	NRR/HICB	7.2.8-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should provide information concerning environmental qualification of PMS components addressing local temperature rises above the room ambient experienced by the components during operation. It is desirable to have additional margin built into the design. The components should, therefore, be qualified by testing to higher temperatures than specified in the SSAR for a given room environment. Westinghouse should address this concern in the SSAR. Westinghouse should also provide mild environment equipment qualification in the CDM with the corresponding ITAAC.				
				Closed - Technical information agreeded to by NRC during meeting on May 15-16. Additional technical information regarding the equipment design margin to loss of HVAC has been incorporated into Revision 3 of the SSAR, Subsection 7.1.4.1.8.				
1045	NRR/HICB	7.3.3-1	DSER-OI		Action N	Action N		
				Westinghouse must satisfactorily address the issue concerning the regulatory treatment of non-safety-related systems for essential auxiliary supporting systems. The staff has not completed its review of the RTNSS issue and, as discussed in Section 19 of this report, has not completed its review of the PRA for the AP600 design. Additional systems may be identified by the RTNSS process for further review after the staff completes its review of the AP600 PRA.				
				Action N - NRC has not provided Westinghouse with the results of their review.				
1046	NRR/HICB	7.3.4-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should address the possible adverse interaction between the soft control design at the operator workstation and the hardware/software of the safety-related actuation system. Additional information is required with respect to workstation operation, soft control of the safety- and nonsafety-related equipment, and data management between protection and control systems to enable the staff to evaluate the consequence of failures in the control system.				
				Closed - Technical information accepted by NRC during meeting on May 15-16. This additional technical detail has been incorporated into Revision 3 of the SSAR, Subsection 7.1.3.4.				

Selection: [type] like 'dser*' And [DSER Section] like '7*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1047	NRR/HICB	7.4.3-1	DSER-OI		Resolved	Inactive		
				Westinghouse should provide in the SSAR additional information to confirm that the safety-related monitoring for safe shutdown at the remote shutdown workstation is operational without the transfer switch in the local position, and whether operation of the transfer switch to local disables all indications in the main control room. To maintain continuity of operation between the MCR and the remote shutdown room, the indication of the status of the parameters required for safe shutdown should be available to the operators at both locations before, during, and following transfer between the control room and the remote shutdown room, and vice-versa.				
				Resolved - Technical information accepted by NRC during meeting on May 15-16. This additional technical detail will be incorporated into Revision 4 of the SSAR, Subsection 7.4.3.1.1.				
1048	NRR/HICB	7.4.3-2	DSER-OI		Resolved	Inactive		
				Westinghouse should provide in the SSAR a description of the design features of the transfer switch located outside the main control room. Details regarding the separation features of the transfer switch (between safety divisions, and between safety and non-safety divisions), its single failure vulnerability, and its access are needed in order for the staff to complete its safety determination.				
				Resolved - Technical information accepted by NRC during meeting on May 15-16. This additional technical detail will be incorporated into Revision 4 of the SSAR, Subsections 7.4.3.1.1 and 7.4.3.2.				
1049	NRR/HICB	7.5.8-1	DSER-OI		Proposed	Inactive		
				Westinghouse should describe the design features of the incore instrumentation system. In its response to Q492.5 dated July 25, 1994, Westinghouse states that information on the employment of fixed incore detectors in conjunction with an online power distribution monitoring system will be provided to the NRC to support the final SER.				
				Proposed - The technical information was accepted by the I&C Branch of NRC during the meeting on May 15-16. This technical information has been incorporated into Revision 3 of the SSAR, Subsection 4.4.6.1. This technical information must be reviewed by the Reactor Systems Branch of NRC before this item can be closed.				
1050	NRR/HICB	7.5.9-1	DSER-OI		Proposed	Inactive		
				Westinghouse should describe the design features of the loose parts monitoring system and address its conformance with RG 1.133.				
				Proposed - The technical information was accepted by the I&C Branch of NRC during the meeting on May 15-16. This technical information has been incorporated into Revision 3 of the SSAR, Subsection 4.4.6.4. This technical information must be reviewed by the Reactor Systems Branch of NRC before this item can be closed.				
1051	NRR/HICB	7.6.1-1	DSER-OI		Proposed	Inactive		
				Westinghouse should provide additional design details of the NRHR isolation valve interlocks important to safety to confirm that the design meets the relevant requirements of the SRP, including IEEE 279.				
				Proposed - Additional technical information has been incorporated into Revision 3 of the SSAR, Subsection 7.6.1.1.1. Figure 7.2-1 was also modified to include additional technical detail. This technical information must be reviewed by NRC before this item can be closed.				
1052	NRR/HICB	7.6.2-1	DSER-OI		Proposed	Inactive		
				Westinghouse should provide additional design details of the accumulator isolation valve interlocks important to safety to confirm that the design meets the relevant requirements of the SRP, including IEEE 279.				
				Proposed - Additional technical information has been incorporated into Revision 3 of the SSAR, Subsection 7.6.2.1. Figure 7.2-1 was also modified to include additional technical detail. This technical information must be reviewed by NRC before this item can be closed.				

AP600 Open Item Tracking System Database: Executive Summary

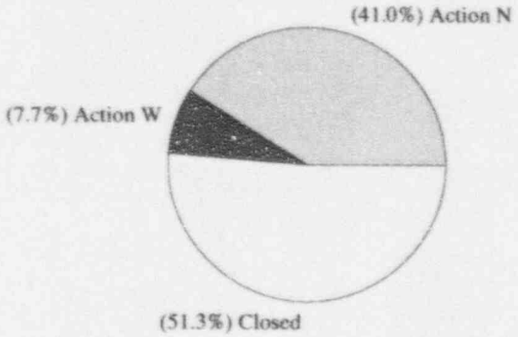
Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '7*' Sorted by Item #

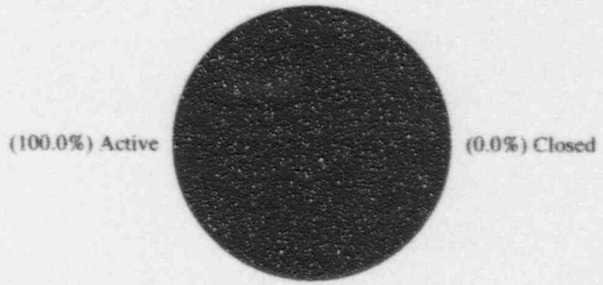
Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1053	NRR/HBCB	7.6.3-1	DSER-OI		Proposed	Inactive		
				Westinghouse should provide additional design details of the IRWST discharge valve interlocks important to safety to confirm that the design meets the relevant requirements of the SRP, including IEEE 279.				
				Proposed - Additional technical information has been incorporated into Revision 3 of the SSAR, Subsection 7.6.2.2. Figure 7.2-1 was also modified to include additional technical detail. This technical information must be reviewed by NRC before this item can be closed.				
1054	NRR/HBCB	7.6.4-1	DSER-OI		Proposed	Inactive		
				Westinghouse should provide additional design details of the PRHR inlet isolation valve interlocks important to safety to confirm that the design meets the relevant requirements of the SRP, including IEEE 279.				
				Proposed - Additional technical information has been incorporated into Revision 3 of the SSAR, Subsection 7.6.2.3. Figure 7.2-1 was also modified to include additional technical detail. This technical information must be reviewed by NRC before this item can be closed.				
1055	NRR/HBCB	7.7.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should provide additional information concerning the design of the DAS.				
				Closed - Technical information accepted by NRC during meeting on May 15-16. This additional technical detail has been incorporated into Revision 3 of the SSAR, Subsection 7.7.1.11.				
1819	NRR/HBCB	7.2.3-1	DSER-CN		Closed	Inactive	NTD-NRC-95-4464	
				7.2.3-1 Westinghouse should clarify in the SSAR that only one processor is to be used in any single IEEE-796 bus configuration.				
				Closed - Technical proposal accepted by NRC during meeting on May 15-16. Approved additional technical description is incorporated into Revision 3 of the SSAR, Subsection 7.1.2.4.1.				
1820	NRR/HBCB	7.2.3-2	DSER-CN		Closed	Inactive	NTD-NRC-95-4464	
				7.2.3-2 Westinghouse should clarify in the SSAR that there is no bus priority arbiter required or used in the design.				
				Closed - Technical proposal accepted by NRC during meeting on May 15-16. Approved additional technical description is incorporated into Revision 3 of the SSAR, Subsection 7.1.2.4.1.				

Open Item Status - Chapter 8 (Electrical)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	0	16	3	0	0	9	28
DSER-Confirmatory	0	0	0	0	0	0	0	0	0
DSER-COL	0	0	0	0	0	0	0	11	11
Subtotal	**0**	**0**	**0**	**16**	**3**	**0**	**0**	**20**	**39**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	0	0
Meeting-OI	0	0	1	0	0	0	0	0	1
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**
Total	**0**	**0**	**1**	**16**	**3**	**0**	**0**	**20**	**40**

Westinghouse Status as of 29-May-95

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '8*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1056	NRR/EELB	8.2.3.1-1	DSER-OI		Action N	Active	NTD-NRC-95-4464	
				(Offsite Operating Voltage Range) Westinghouse should add COL Action Item 8.2.3.1-1 to the SSAR.				
				Status: Action N - References: 5/12/95 (W)/NRC Telecon and Rev. 3 of SSAR Section 8.2.4. COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.2.4. NRC action to review acceptability of COL item wording. Rev. 3 of SSAR Section 8.2.4 includes the following COL items; 1908/1056, 1909/1057, 1910/1058, 1912/1060, and 1913/1063.				
1057	NRR/EELB	8.2.3.2-1	DSER-OI		Action N	Active	NTD-NRC-95-4464	
				(Transient Stability Study) Westinghouse should add COL Action Item 8.2.3.2-1 to the SSAR.				
				Status: Action N - References: 5/12/95 (W)/NRC Telecon and Item 1056. COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.2.4. NRC action to review acceptability of COL item wording.				
1058	NRR/EELB	8.2.3.3-1	DSER-OI		Action N	Active	NTD-NRC-95-4464	
				(Frequency decay rate and switchyard voltage selection) Westinghouse should add COL Action Item 8.2.3.3-1 to the SSAR.				
				Status: Action N - References: 5/12/95 (W)/NRC Telecon and Item 1056. COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.2.4. NRC action to review acceptability of COL item wording.				
1059	NRR/EELB	8.2.3.4-1	DSER-OI		Closed	Active	NTD-NRC-95-4464	
				(Tests and inspections of offsite power systems equipment and components) Westinghouse should add COL Action Item 8.2.3.4-1 to the SSAR.				
				Status: Closed - References: 5/12/95 (W)/NRC Telecon and Rev. 3 of SSAR Subsection 8.2.2.5. Westinghouse indicated that the GDC does not require the actual test program. The GDC requires the systems to be designed with the capability of testing. SSAR Section 8.2.2.5 will be revised to delete the paragraph on GDC 18 and replace with a cross-reference to SSAR Section 3.1 where GDC compliance is provided.				
1060	NRR/EELB	8.2.3.5-1	DSER-OI		Action N	Active	NTD-NRC-95-4464	
				(Capacity and capability of the offsite power system outside AP600 scope of design) Westinghouse should add COL Action Item 8.2.3.5-1 to the SSAR.				
				Status: Action N - References: 5/12/95 (W)/NRC Telecon and Item 1056. COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.2.4. NRC action to review acceptability of COL item wording.				
1061	NRR/EELB	8.2.3.5-2	DSER-OI		Action W	Active		
				(Offsite ac interface requirement) Westinghouse included in the AP600 standard design an interface identified as the "minimum number of ESF trains to be energized simultaneously." This interface appears to convey some safety significance, and the staff requires further clarification.				
				Status: Action W - Reference: 5/12/95 (W)/NRC Telecon. Entry in Table 1.8-1 referring to ESF simultaneously energized will be deleted because there is no requirement for ESF trains to be energised simultaneously on the AP600. SSAR Section 1.8.1 will be revised accordingly. Westinghouse explain that RCP underfrequency is not required for plant protection in the AP600. The signal will be used for RCP equipment protection only. The AP600 includes an RCP underspeed trip as shown on Sheet 5 of Figure 7.2-1 and is credited in the analyses described in Section 15.3. No SSAR revision is required.				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '8*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No /	Date
1062	NRR/EELB	8.2.4-1	DSER-OI		Closed	Active		
				(Lack of a second offsite power supply circuit) The lack of a separate offsite power supply circuit will be reviewed and resolved as part of the RTNSS process.				
				Status: Closed - References: 5/12/95 (W)/NRC Telecon and Items 1064/2026. During telecon, agreed to close this item as the concern is included in item 1064. Lack of a second offsite power supply/part of RTNSS process.				
1063	NRR/EELB	8.2.5.2-1	DSER-OI		Action N	Active	NTD-NRC-95-4464	
				(Grounding and lightning protection) Westinghouse should add COL Action Item 8.2.5.2-1 to the SSAR.				
				Status: Action N - References: 5/12/95 (W)/NRC Telecon and Item 1056. COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.2.4. NRC action to review acceptability of COL item wording.				
1064	NRR/EELB	8.2.6-1	DSER-OI		Action N	Active		
				((W) exception to GDC 17, two separate power sources) As part of the RTNSS review, the staff will continue its review of the acceptability of not meeting the criteria in GDC 17.				
				Status:Action N - Reference: 5/12/95 (W)/NRC Telecon. Staff indicated that their concern focuses on the potential need for providing exemption request for areas where AP600 does not comply with GDC 17. Staff to determine their position on GDC 17 (part of RTNSS issue).				
1065	NRR/EELB	8.3.1-1	DSER-OI		Action N	Active		
				(Onsite ac power system) The main onsite ac power system is a non-Class 1E system, and does not perform any safety function. However, there is some possibility that additional requirements will need to be placed on the non-Class 1E portion of the electrical system as part of the resolution of the RTNSS issue.				
				Status: Action N - Reference: 5/12/95 (W)/NRC Telecon. NRC action to identify any additional requirements beyond those specified in WCAP 13856. The WCAP documents the Westinghouse implementation of the RTNSS process, including the additional regulatory oversight proposed to verify three of four ac power sources are available prior to entering a reduced RCS inventory, midloop condition.				
1066	NRR/EELB	8.3.1.1-1	DSER-OI		Closed	Active		
				(Osite standby DG start time) Westinghouse should resolve the conflict between its February 9, 1993 response to Q435.16, which states that the start time for the diesel generators is 20 seconds and actuation times for the non-safety-related defense-in-depth systems are fast enough to prevent actuation of the safety-related passive systems following transients or reactor coolant system leaks, and amendment 1 to Section 8.3.1.1.2.3 of the SSAR, which states that the diesel generators are available to accept loads in 120 seconds.				
				Status: Closed - Reference: 5/12/95 (W)/NRC Telecon. RAI response is incorrect and the SSAR diesel start of 120 seconds is correct. See Item 2433.				
1067	NRR/EELB	8.3.2.1-1	DSER-OI		Closed	Active		
				(Class 1E dc distribution) Westinghouse should clearly indicate the divisions of the Class 1E dc and UPS system which comprise a "safety group" (as defined in IEEE 308-1980).				
				Status: Closed - References: 5/12/95 (W)/NRC Telecon. Westinghouse referred to the definition of safety group in IEEE 308-1980 as clearly indicating that the provisions of four independent divisions should not imply additional failure tolerance. NRC indicated that the SSAR statement of 3/4 is acceptable based on meeting single failure. Westinghouse referred staff to the Completion Time criteria being proposed to the Technical Specification Branch. NRC also indicated that completion times for batteries will be addressed as part of the Tech Spec review.				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '8*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1068	NRR/EELB	8.3.2.1-2	DSER-OI		Action N	Active	NTD-NRC-95-4464	

(Ground fault protection for ungrounded systems) Westinghouse should add COL Action Item 8.3.2.1-1 to the SSAR.
Add:
(W) response to RAI 435.25 committed that during the detailed design phase, the concerns expressed in Information Notice 88-86 and its Supplement 1 will be addressed for the Class 1E dc ground detection system.

Status: Action N - Reference: 5/12/95 (W)/NRC Telecon.
COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.3.4.
NRC action to review acceptability of COL item wording.

Rev. 3 of SSAR Section 8.3.4 includes the following COL items; 1914/1068, 1916/1071, 1917/1074, and 1918/1076.

1069	NRR/EELB	8.3.2.1-3	DSER-OI		Closed	Active	NTD-NRC-95-4464	

(Application data for dc circuit breakers) Westinghouse should add COL Action Item 8.3.2.1-2 to the SSAR.

Status: Closed - References: 5/12/95 (W)/NRC Telecon and Rev. 3 of SSAR Subsection 8.3.2.1.1.1.
Rev.3 of SSAR Subsection 8.3.2.1.1.1 revised to include the following statement " AP600 generally uses fusible disconnect switches in Class 1E dc system and that if molded case circuit breaker are used for dc applications, they will be sized to meet the dc interrupting requirements." No COL item is required.

1070	NRR/EELB	8.3.2.1-4	DSER-OI		Closed	Active	NTD-NRC-95-4464	

(Monitoring and alarms) Westinghouse should provide the "Battery High Discharge Rate Alarm" in case the battery is short circuited.

Status: Closed - References: 5/12/95 (W)/NRC Telecon and Rev. 3 of SSAR Subsection 8.3.2.1.1.
Rev. 3 of SSAR Subsection 8.3.2.1.1.1 revised to include the following statement " Monitoring and alarming of dc current and voltage will be through the Plant Control System which will include the battery discharge rate alarm."

1071	NRR/EELB	8.3.2.1-5	DSER-OI		Action N	Active	NTD-NRC-95-4464	

(Periodic inspection of battery for sulfated plates and other anomalous conditions) Westinghouse should add COL Action Item 8.3.2.1-3 to the SSAR.

Status: Action N - References: 5/12/95 (W)/NRC Telecon and Item 1068.
COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.3.4.
NRC action to review acceptability of COL item wording.

Total Records: 39

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '8*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1072	NRR/EELB	8.3.2.1-6	DSER-OI		Action N	Active	NTD-NRC-95-4464	

(Minimun separation) Westinghouse should justify establishing a minimum separation distance of 1 inch between non-Class 1E conduit and Class 1E open top cable trays, since this separation is not in accordance with IEEE 384-1981.

Status: Action N - Reference: 5/12/95 (W)/NRC Telecon and Rev. 3 of SSAR Subsection 8.3.2.4.2
AP600 complies with RG 1.75 with the following exceptions:
- Within the MCR and RSA (Nonhazard Areas), the minimum vertical separation for open top cable tray is 3 inches and the minimum horizontal separation is 1 inch.
- Within the general plant areas (Limited Hazard Areas), the minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches for open top cable trays with low voltage power circuits for cable sizes < 2/0 AWG. For configurations that involved exclusively limited energy content cables (instrument and contols) these minimum distances are reduced to 3 inches and 1 inch respectively.
- Within panels and control switchboards the minimum horizontal separation between components or cables of different separation groups (both field routed and vendor supplied internal wiring) is 1 inch and the minimum vertical separation is 6 inches (Specific exceptions are based on IEEE 384-1992).
- Use of fuses (two fuses in series) as a power isolation device for Class 1E and Non-Class 1E isolation.

SSAR Section 8.3.2.4.2 and Appendix 1A revised to address these exceptions.

1073	NRR/EELB	8.3.2.1-7	DSER-OI		Closed	Active	NTD-NRC-95-4464	

(Circuit breakers used as Non-Class 1E/Class 1E isolation device) Westinghouse should state in the SSAR whether the circuit breakers at the input and output sides of the Class 1E battery chargers and Class 1E regulating transformers are coordinated and periodically tested.

Status: Closed - References: 5/12/95 (W)/NRC Telecon and Rev. 3 of SSAR Subsection 8.3.2.2
SSAR Subsection 8.3.2.2 revised to include the following " The circuit breakers are properly coordinated and periodically tested to verify their current-limiting characteristic has not been lost."

1074	NRR/EELB	8.3.2.1-8	DSER-OI		Action N	Active	NTD-NRC-95-4464	

(Manufacturer's recommendation for proper battery maintenance and surveillance) Westinghouse should add COL Action Item 8.3.2.1-4 to the SSAR.

Status: Action N - References: 5/12/95 (W)/NRC Telecon and Item 1068.
COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.3.4.
NRC action to review acceptability of COL item wording.

1075	NRR/EELB	8.4.1-1	DSER-OI		Closed	Active	NTD-NRC-95-4464	

(Electrical Penetration) Westinghouse should state in the SSAR that the penetrations will be protected for the full range of currents up to the maximum short circuit currents.

Status: Closed - References: 5/12/95 (W)/NRC Telecon and Rev. 3 of SSAR Subsection 8.3.2.4.2.
SSAR Subsection 8.3.2.4.2 revised to state that "penetrations are protected and rated to withstand the full range of currents up to the maximum short circuit current available."

1076	NRR/EELB	8.4.1-2	DSER-OI		Action N	Active	NTD-NRC-95-4464	

(Periodic testing of electrical penetration protection) Westinghouse should state in the SSAR that the COL applicant will address the provisions for periodically testing penetra- tion protective devices (COL Action Item 8.4.1-1).

Status: Action N - References: 5/12/95 (W)/NRC Telecon and Item 1068.
COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.3.4.
NRC action to review acceptability of COL item wording.

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Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1077	NRR/EELB	8.4.4-1	DSER-OI		Action W	Action W		
				(BTP ICSB 18, Item B4 Power lockout to MOV)Westinghouse should address the aspect of redundant indication be powered from different sources.				
				Status: Action W - Reference: 5/12/95 (W)/NRC Telecon. For MOVs where there is power lockout to meet the single failure criterion, redundant position indication in the MCR will be provided and the indication will be powered by different sources. SSAR Chapter 7 (Section 7.5) will be revised to identify MOVs with redundant indication power requirements.				
1078	NRR/EELB	8.5-1	DSER-OI		Action N	Active		
				(Supplemental informations provided in RAI responses)Westinghouse should include in the SSAR supplemental information involving additional description of the design.				
				Status: Action N - Reference: 5/12/95 (W)/NRC Telecon. Westinghouse position that level of detail provided in the SSAR is sufficient. The level of detail is based on the significance of the system. NRC to identify any specific needs for additional information.				
1079	NRR/EELB	8.6.1-1	DSER-OI		Action N	Active		
				(Generic issues and operational experience) The staff will further review the electrical design requirements after the RTNSS process is resolved.				
				Status: Action N - Reference: 5/12/95 (W)/NRC Telecon NRC to review RTNSS implementation.				
1080	NRR/EELB	8.6.2-1	DSER-OI		Action N	Active		
				(Station blackout) The staff will resolve the station blackout issue for the AP600 design as part of the process defined for resolving the RTNSS issue.				
				Status: Action N - Reference: 5/12/95 (W)/NRC Telecon. The staff will resolve the station blackout issue for the AP600 design as part of the process defined for resolving the RTNSS issue. Westinghouse indicated that resolution of this item is related to deterministic RTNSS criteria (10 CFR 50.63). Review should proceed (not dependent on baseline PRA or focused PRA sensitivity study).				
1081	NRR/EELB	8.6.2.2-1	DSER-OI		Closed	Active		
				(Two offsite power supplies) The staff will resolve the electrical distribution issue for the AP600 by evaluating the ac power system features using the process defined herein for resolving RTNSS.				
				Status: Closed - Reference: 5/12/95 (W)/NRC Telecon and Item 1064. During telecon, agreed to close this item as the concern is included in item 1064. Lack of a second offsite power supply/part of RTNSS process.				
1082	NRR/EELB	8.6.2.3-1	DSER-OI		Action W	Active		
				(Industry codes and standards) The Commission has not yet accepted the 1983 version of the IEEE 323 standard, and the staff will require that Westinghouse delete from the analysis all references to this standard.				
				Status: Action W - Reference; 5/12/95 (W)/NRC Telecon. See DSER OI 3.11.3.2-1. Westinghouse will conform with IEEE 323-1974 with some exceptions which will be noted. Action to revise SSAR 3.11 to address IEEE 323-1974 with specified exceptions.				

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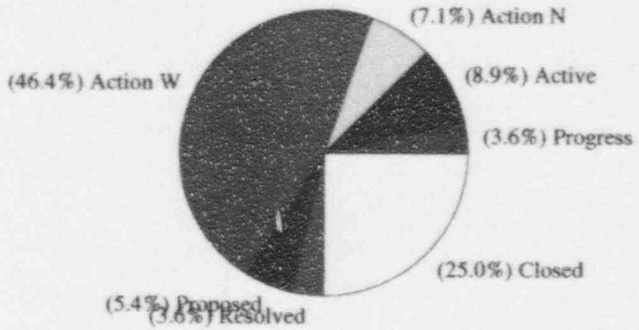
Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1083	NRR/EELB	8.6.2.4-1	DSER-OI		Action N	Active		
				(RTNSS) The staff is still pursuing the issue of RTNSS.				
				Status: Action N - Reference: 5/12/95 (W)/NRC Telecon Westinghouse position that this item should not require RTNSS resolution to resolve. The DID functions of other systems are being reviewed independent of RTNSS resolution details. Staff should review the electrical non-safety related systems to verify their Defense-In-Depth capability. If a meeting is necessary, NRC will identify.				
1908	NRR/EELB	8.2.3.1-1	DSER-COL		Closed	Active	NTD-NRC-95-4464	
				8.2.3.1-1 The COL applicant should determine the operating voltage for the high side of the AP600 transformer and transmission switchyard.				
				Status: Closed - References: 5/12/95 (W)/NRC Telecon and Item 1056. COL Applicant Responsibility added in Rev 3 of SSAR Section 8.2.4. NRC action to review acceptability of COL item wording documented in item 1056.				
1909	NRR/EELB	8.2.3.2-1	DSER-COL		Closed	Active	NTD-NRC-95-4464	
				8.2.3.2-1 The COL applicant should provide a site-specific transient stability study simulating peak/valley loading conditions such that the stability performance of the AP600 are analyzed under all reactive loading or power factor conditions.				
				Status: Closed - References: 5/12/95 (W)/NRC Telecon and Item 1057. COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.2.4. NRC action to review acceptability of COL item wording documented in Item 1057.				
1910	NRR/EELB	8.2.3.3-1	DSER-COL		Closed	Active	NTD-NRC-95-4464	
				8.2.3.3-1 The COL applicant should determined the frequency decay rate upon site selection and switchyard voltage selection.				
				Status: Closed - References: 5/12/95 (W)/NRC Telecon and Item 1058. COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.2.4. NRC action to review acceptability of COL item wording documented in Item 1058.				
1911	NRR/EELB	8.2.3.4-1	DSER-COL		Closed	Active	NTD-NRC-95-4464	
				8.2.3.4-1 The COL applicant should include the specified periodic tests and inspections in appropriate plant procedures.				
				Status: Closed - References: 5/12/95 (W)/NRC Telecon and Item 1059. COL will not not be added in SSAR. (W) indicated that the GDC does not require the actual test program. The GDC requires the systems to be designed with the capability for testing. Rev. 3 of SSAR Subsection 8.2.2.5 revised to delete the paragraph on GDC 18 and replace with a cross-reference to SSAR Section 3.1 where GDC compliance is provided.				
1912	NRR/EELB	8.2.3.5-1	DSER-COL		Closed	Active	NTD-NRC-95-4464	
				8.2.3.5-1 The COL applicant should provide the design of the offsite power system.				
				Status: Closed - References: 5/12/95 (W)/NRC Telecon and Item 1060. COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.2.4. NRC action to review acceptability of COL item wording documented in Item 1060.				

Selection: [type] like 'dser*' And [DSER Section] like '8*' Sorted by Item #

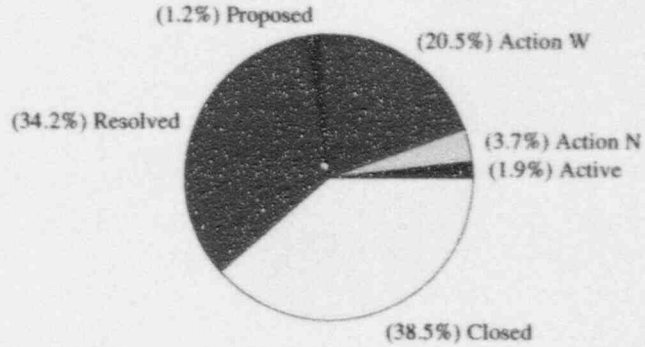
Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No /	Date
1913	NRR/EELB	8.2.5.2-1	DSER-COL		Closed	Active	NTD-NRC-95-4464	
				8.2.5.2-1 The COL applicant should provide the design of the direct lightning protection and the associated grounding.				
				Status: Closed - References: 5/12/95 (W)/NRC Telecon and Item 1063. COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.2.4. NRC action to review acceptability of COL item wording documented in item 1063.				
1914	NRR/EELB	8.3.2.1-1	DSER-COL		Closed	Active	NTD-NRC-95-4464	
				8.3.2.1-1 The COL applicant will establish plant procedures so that prompt action is taken to clear any ground fault on the Class 1E dc system.				
				Status: Closed - References: 5/12/95 (W)/NRC Telecon and Item 1068. COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.3.4. NRC action to review acceptability of COL item wording documented in Item 1068.				
1915	NRR/EELB	8.3.2.1-2	DSER-COL		Closed	Active	NTD-NRC-95-4464	
				8.3.2.1-2 The COL applicant will obtain proper documentation to ensure that the molded-case breakers have an adequate dc interrupting rating.				
				Status: Closed - References: 5/12/95 (W)/NRC Telecon. and Item 1069. COL Item will not be added in the SSAR. SSAR Subsection 8.3.2.1.1.1 was revised to include the following statement "AP600 generally uses fusible disconnect switches in the Class 1E dc system and that if molded-case circuit breakers are used for dc applications, they will be sized to meet the interrupting rating requirement".				
1916	NRR/EELB	8.3.2.1-3	DSER-COL		Closed	Active	NTD-NRC-95-4464	
				8.3.2.1-3 The COL applicant will provide plant procedure for checking sulfated plates or other anomalous conditions which require periodic inspections.				
				Status: Closed - References: 5/12/95 (W)/NRC Telecon and Item 1071. COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.3.4. NRC action to review acceptability of COL item wording documented in Item 1071.				
1917	NRR/EELB	8.3.2.1-4	DSER-COL		Closed	Active	NTD-NRC-95-4464	
				8.3.2.1-4 The COL applicant should provide proper maintenance and surveillance procedures based on the manufacturer's recommendations.				
				Status: Closed - References: 5/12/95 (W)/NRC Telecon and Item 1074. COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.3.4. NRC action to review acceptability of COL item wording documented in Item 1074.				
1918	NRR/EELB	8.4.1-1	DSER-COL		Closed	Active	NTD-NRC-95-4464	
				8.4.1-1 The COL applicant should address the provisions for periodically testing penetration protective devices.				
				Status: Closed - References: 5/12/95 (W)/NRC Telecon and Item 1076. COL Applicant Responsibility added in Rev. 3 of SSAR Section 8.3.4. NRC action to review acceptability of COL item wording documented in Item 1076.				

Open Item Status - Chapter 9 (Auxiliary Systems)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	2	5	4	21	3	2	13	50
DSER-Confirmatory	0	0	0	0	0	0	0	0	0
DSER-COL	0	0	0	0	5	0	0	1	6
Subtotal	**0**	**2**	**5**	**4**	**26**	**3**	**2**	**14**	**56**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	2	2
Meeting-OI	0	0	3	6	33	2	55	60	159
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**0**	**3**	**6**	**33**	**2**	**55**	**62**	**161**
Total	**0**	**2**	**8**	**10**	**59**	**5**	**57**	**76**	**217**

Westinghouse Status as of 29-May-95

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Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1084	NRR/SPLB	9.1.1-1	DSER-OI		Resolved	Action W		
				Westinghouse should address the seismic classification of the new fuel storage structure.				
				Resolved: See items 203 and 204.				
1085	NRR/SPLB	9.1.1-2	DSER-OI		Action W	Inactive		
				Westinghouse should provide information regarding protecting the fuel inside the fuel storage pit.				
				Action W : Resolution of open items 204, 207, and 208 (M9.1.1-2, M9.1.1-5 and M9.1.1-8) will resolve this item.				
1086	NRR/SPLB	9.1.2-1	DSER-OI		Action W	Active		
				The staff has not yet determined the acceptability of the design of the spent fuel storage facility.				
				Action W : Resolution of open items 213, 214, 215, 216, 217, and 218 (M9.1.2-1, M9.1.2-2, M9.1.1-3, M9.1.1-4, M9.1.1-5, and M9.1.1-6) will resolve this item.				
1087	NRR/SPLB	9.1.3-1	DSER-OI		Closed	Active		
				The staff has not yet determined the acceptability of the design of the spent-fuel pool cooling and pool purification system.				
				Closed: See resolution of open items 220, 221, and 222 (M9.1.3-1, M9.1.3-2 and M9.1.3-3).				
1088	NRR/SPLB	9.1.4-1	DSER-OI		Action N	Action N		
				The staff has not yet determined the acceptability of the design of the light load handling system.				
				Action N: The staff has not indicated, in either the DSER text or separate corresondence, the problems with the description of the light load handling system in 9.1.4. In a meeting on January 26, 1995 the staff indicated that they will provide clarification.				
1089	NRR/SPLB	9.1.5-1	DSER-OI		Action N	Action N		
				The staff has not yet determined the acceptability of the design of the overhead heavy load handling systems.				
				Acion N: The staff has not indicated, in either the DSER text or separate correspondence, the problems with the description of the heavy load handling system in 9.1.5. In a meeting on January 26, 1995 the staff indicated that they will provide clarification.				
1090	NRR/SPLB	9.2.1-1	DSER-OI		Active	Active		
				(SERVICE WATER SYSTEM, SWS) The staff has not yet determined the acceptability of the design of the service water system.				
				Note: Items 223 through 229 apply. Status: Items 223, 226 through 229 are Closed. Resolution of Item 224and 225 are pending staff position regarding DID and RTNSS systems.				
1091	NRR/SPLB	9.2.2-1	DSER-OI		Active	Active		
				(COMPONENT COOLING WATER SYSTEM, CCS) The staff has not yet determined the acceptability of the design of the component cooling water system.				
				Active: Once meeting open items on 9.2.2 are closed this item will be closed. No additional issues beyond the meeting open items.				
1092	NRR/EMCB	9.2.3-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				(DEMINERALIZED WATER TREATMENT SYSTEM, DTS) Westinghouse should specify maximum concentrations of halogens and sulfate for the demineralized water treatment system.				
				Closed. SSAR Rev. 3 incoporates information on halogen and sulfates in Table 9.2.3-1.				

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1093	NRR/SPLB	9.2.8-1	DSER-OI		Closed	Active	NTD-NRC-95-4464	
				(TURBINE BUILDING CLOSED COOLING WATER SYSTEM, TCS) The staff has not yet determined the acceptability of the design of the turbine building closed cooling system.				
				Closed: Incorporated responses to RAIs 410.128 and 410.133 in SSAR Rev. 3 section 9.2.8.5 and revised Table 9.2.8.1. Note: This item is the same as Item 235.				
1094	NRR/SPLB	9.3.1-1	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				The staff has not yet determined the acceptability of the design of the compressed and instrument air system.				
				Closed: See responses to DSER OIs 236 through 245.				
1095	NRR/EMCB	9.3.3-1	DSER-OI		Proposed	Inactive		
				Westinghouse should classify the lines and associated components and instruments of the primary sampling system consistent with the classification of the system to which they are connected.				
				Progress: Telecon to be scheduled with NRC to discuss				
1096	NRR/EMCB	9.3.3-2	DSER-OI		Closed	Inactive		
				Westinghouse should ensure and specify in the SSAR that samples from the post-accident sampling systems will be taken without radiation exposures to any individual that exceed 5 rem to the whole body and 50 rem to the extremities.				
				Closed - Westinghouse response to NRC Request for Additional Information (RAI) 471.22 specifies compliance with the 5 Rem limit and provides additional explanatory information relative to the projected personnel dose at this location.				
1097	NRR/EMCB	9.3.3-3	DSER-OI		Proposed	Inactive		
				Westinghouse should ensure that the post-accident sampling system conforms with SECY-93-087, and should modify the SSAR accordingly.				
				In the Westinghouse response to the NRC Request for Additional Information (RAI) 281.20 a "detailed description of the proposed PASS that includes a discussion of the compliance of individual features of the proposed system with the pertinent NRC requirements" was provided that addressed specifically compliance with SECY-93-087.				
1098	NRR/EMCB	9.3.3-4	DSER-OI		Closed	Inactive		
				Westinghouse should provide assurances that the isolation signal can be overridden to allow opening of these valves for taking post-accident samples.				
				From SSAR 6.2.3 "The containment isolation system is designed according to 10 CFR 50.34, so that the resetting of an isolation signal will not cause any valve to change position." "Also, in the case of certain valves with actuators, a manual override of an automatic isolation signal is installed to permit manual control of the associated valve. The override control function can be performed only subsequent to resetting of the actuation signal. That is, deliberate manual action is required to change the position of containment isolation valves in addition to resetting the original actuation signal. Resetting of the actuator signal does not cause any valve to change position. The design does not allow ganged reopening of the containment isolation valve Reopening of the isolation valves is performed on a valve-by-valve basis, or on a line-by-line basis."				
1099	NRR/SPLB	9.3.5-1	DSER-OI		Action W	Action W		
				The staff has not yet determined the acceptability of the design of the radioactive waste drain system.				
				Action W: Closure path and status based on meeting open items (item numbers 246 through 260).				

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1100	NRR/EMCB	9.3.6-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	
				Westinghouse should ensure that the total amount of stored hydrogen does not exceed the quantity which, when accidentally released, could cause an explosion large enough to damage the safety-related equipment.				
				Closed - See 3.5.1.1.2.2 of SSAR Rev. 2. One tank at a time is connected to the system at a time.				
1101	NRR/EMCB	9.3.6-2	DSER-OI		Active	Inactive		
				Westinghouse must satisfactorily address the issue of the regulatory treatment of non-safety-related systems for the chemical and volume control system, as well as other non- safety-related systems.				
				Active: This is a generic issue. The closure path will be consistent with the results of on going W / NRC discussions.				
1102	NRR/EMCB	9.3.6-3	DSER-OI		Progress	Inactive		
				Westinghouse should address criteria identified in Section 9.3.4 of the SRP concerning the CVS.				
				Progress: This is a generic issue. The closure path will be consistent with the results of on going W / NRC discussions.				
1103	NRR/SPLB	9.4.1-1	DSER-OI		Action W	Action W		
				The staff has not yet determined the acceptability of the design of the nuclear island nonradioactive ventilation system.				
				Action W - SSAR Revision will include resolutions to MTG-OI 261 through 264.				
1104	NRR/SPLB	9.4.2-1	DSER-OI		Active	Active		
				The staff has not yet determined the acceptability of the design of the non-radioactive HVAC system in the annex/auxiliary buildings.				
				Active: Closure path and status based on meeting open items (item numbers 265 through 274).				
1105	NRR/SPLB	9.4.3-1	DSER-OI		Action N	Action N	NTD-NRC-95-4464	
				The staff has not yet determined the acceptability of the design of the radiologically controlled area ventilation system.				
				Closed. SSAR Rev.3 includes resolution to meeting open items 275 to 284				
1106	NRR/SPLB	9.4.5-1	DSER-OI		Active	Active		
				The staff has not yet determined the acceptability of ventilation systems for RTNSS-important systems.				
				Active. Generic Issue.				
1107	NRR/SPLB	9.4.6-1	DSER-OI		Action W	Action N		
				The staff has not yet determined the acceptability of the design of the containment recirculation cooling system.				
				Action W: Closure path and status based on meeting open items (items numbers 285 through 287 and 1766).				
1108	NRR/SPLB	9.4.7-1	DSER-OI		Action W	Action N	NTD-NRC-95-4464	
				The staff has not yet determined the acceptability of the design of the containment air filtration system.				
				Action W - SSAR Revision to include resolution to meeting open items 288 to 291				
1109	NRR/SPLB	9.4.8-1	DSER-OI		Resolved	Inactive		
				The staff has not yet determined the acceptability of the design of the radwaste building HVAC system.				
				Resolved. Items 292 through 297 are all closed or resolved. See "status detail" field of items 292 through 297 for details.				

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1110	NRR/SPLB	9.4.9-1	DSER-OI		Action W	Active		
				The staff has not yet determined the acceptability of the design of the turbine building ventilation system.				
				Acton W: VTS has no class A, B, C or D components. See item 298.				
1111	NRR/SPLB	9.4.10-1	DSER-OI		Action W	Action W		
				The staff has not yet determined the acceptability of the design of the diesel generator building heating and ventilation system.				
				Action W: Closure path and status based on meeting open items (item numbers 299 through 301).				
1112	NRR/SPLB	9.4.11-1	DSER-OI		Action W	Action W		
				The staff has not yet determined the acceptability of the design of the health physics and hot machine shop HVAC system.				
				Action W: Closure path and status based on meeting open items (item numbers 302 through 305).				
1113	NRR/SPLB	9.5.1.2-1	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				Westinghouse should provide information regarding the remote shutdown workstation.				
				Closed. SSAR Rev. 3 lists the remote shutdown workstation room as an exception to the fire barrier separation criteria.				
1114	NRR/SPLB	9.5.1.2-2	DSER-OI		Action W	Action W		
				Westinghouse should provide information regarding fire protection inside containment.				
				Action W. Westinghouse to provide requested information.				
1115	NRR/SPLB	9.5.1.3-1	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Westinghouse should provide information regarding the fire detectors.				
				Closed. See item 313.				
1116	NRR/SPLB	9.5.1.3-2	DSER-OI		Action W	Action W		
				W- tinghouse should provide information regarding the design of the fire water tank volume.				
				Action W. Westinghouse to provde requested information.				
1117	NRR/SPLB	9.5.1.3-3	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Westinghouse should provide information regarding automatic suppression systems				
				Closed. See item 316.				
1118	NRR/SPLB	9.5.1.4-1	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				The staff has not yet determined the acceptability of AP600 emergency lighting.				
				Closed. See item 319.				
1119	NRR/SPLB	9.5.1.4-2	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				The staff has not yet determined the acceptability of the AP600 portable radio communications systems for fire brigade and other operations personnel.				
				Closed. See item 320.				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '9*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1120	NRR/SPLB	9.5.1.4-3	DSER-OI		Action W	Action W		
				The staff has not yet determined the acceptability of the fire brigade emergency breathing air.				
				Action W. Westinghouse to provide additional information.				
1121	NRR/SPLB	9.5.1.4-4	DSER-OI		Action N	Action W		
				The staff has not yet determined the acceptability of the AP600 design for curbs and drains.				
				Action N. Clarification required from the NRC about what additional information is needed.				
1122	NRR/SPLB	9.5.1.4-5	DSER-OI		Action W	Action W		
				The staff has not yet determined the acceptability of the AP600 smoke control features.				
				Action W. See items 323 and 324. (Item 323 is closed.)				
1123	NRR/SPLB	9.5.1.4-6	DSER-OI		Closed	Inactive		
				The staff has not yet determined the acceptability of the AP600 fire protection design concerning interaction with other systems.				
				Closed. This item is the same as Item 325 (closed.)				
1124	NRR/SPLB	9.5.1.4-7	DSER-OI		Action W	Inactive		
				The staff has not yet determined the acceptability of the preoperational acceptance test for all active components of the entire fire-protection system(s).				
				Action W: 2/22/95 PLANT SYSTEMS BRANCH MEETING Action W - Check NFPA-24 for additional testing requirements. Action W - Check for testing requirements on other features (fire doors, dampers, etc.).				
1125	NRR/EELB	9.5.3.2-1	DSER-OI		Proposed	Inactive		
				(Emergency lighting) The staff has not yet determined the acceptability of the power to the normal and emergency lighting in the MCR and remote shutdown area.				
				Proposed. Per latest Westinghouse design, the emergency lighting in the MCR and remote shutdown area has been revised to non-Class 1E. The ELS SSD will be and SSAR 9.5.3 Rev.3 have been revised to reflect this change. There will not be any conflict between the plant normal lighting and emergency lighting system.				
1126	NRR/EELB	9.5.3.4-1	DSER-OI		Progress	Inactive		
				(Additional lighting capabilities) Westinghouse should address the effect of RTNSS on lighting capabilities.				
				Progress: Part of RTNSS issue.				
1127	NRR/SPLB	9.5.4.1-1	DSER-OI		Action W	Action W		
				The staff has not yet determined the acceptability of the design of the AP600 diesel generator auxiliary systems.				
				Action W: Status tied to meeting open items (item numbers 326 through 341).				
1128	NRR/SPLB	9.5.4.2-1	DSER-OI		Action W	Action N		
				The staff has not yet determined the acceptability of the design of the AP600 standby diesel and auxiliary boiler fuel oil system.				
				Action W - Westinghouse and NRC need to discuss further diesel and auxiliary boiler fuel oil system designs.				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '9*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1129	NRR/SPLB	9.5.5-1	DSER-OI		Action W	Action W		
				The staff has not yet determined the acceptability of the design of the AP600 standby diesel engine cooling system.				
				Action W: Status changed to Action W based on 3/21/95 markup from J. Lyons. Status tied to item numbers 342 through 345.				
1130	NRR/SPLB	9.5.6-1	DSER-OI		Action W	Action W		
				The staff has not yet determined the acceptability of the design of the AP600 standby diesel engine starting system.				
				Action W: Status changed to Action W based on 3/21/95 markup from J. Lyons. Status tied to item numbers 346 through 348.				
1131	NRR/SPLB	9.5.7-1	DSER-OI		Action W	Action W		
				The staff has not yet determined the acceptability of the design of the AP600 standby diesel lubricating oil system.				
				Status changed to Action W based on 3/21/95 markup from J. Lyons. Status tied to items 349 through 353.				
1132	NRR/SPLB	9.5.8-1	DSER-OI		Action W	Action W		
				The staff has not yet determined the acceptability of the design of the AP600 standby diesel combustion air intake and exhaust system.				
				Action W: Status changed to Action W based on 3/21/95 markup from J. Lyons. Status tied to items 354 through 357.				
1919	NRR/SPLB	9.5.1.2-1	DSER-COL		Action W	Inactive		
				9.5.1.2-1 The COL applicant should provide a fire protection system maintenance program.				
				Action W - Add COL item to SSAR				
1920	NRR/SPLB	9.5.1.3-1	DSER-COL		Closed	Action W		
				9.5.1.3-1 The COL applicant should address deviations from the guidance of BTP CMEB 9.5-1.				
				Closed - COL item added to SSAR Section 9.5				
1921	NRR/SPLB	9.5.1.5-1	DSER-COL		Action W	Inactive		
				9.5.1.5-1 The COL applicant should provide procedures and administrative controls governing the fire protection program during plant operation.				
				Action W - Add COL item to SSAR				
1922	NRR/EELB	9.5.3-1	DSER-COL		Action W	Inactive		
				9.5.3-1 The COL applicant should describe the security lighting system.				
				Action W - Add COL item to SSAR				
1923	NRR/SPLB	9.5.4.1-1	DSER-COL		Action W	Action W		
				9.5.4.1-1 The COL applicant should describe personnel training of the diesel generator (DG) operating staff.				
				Action W - Set up meeting with NRC to explan why COL item is not required for this nonsafety-related equipment.				
1924	NRR/SPLB	9.5.4.1-2	DSER-COL		Action W	Action W		
				9.5.4.1-2 The COL applicant should provide a program for testing, test loading, and preventive maintenance.				
				Action W - Set up meeting with NRC to explan why COL item is not required for this nonsafety-related equipment.				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '9*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1996	NRR/SPLB	9.5.1.3-4	DSER-OI		Action W	Action W		

In Table 9.5.1-1 of the SSAR, under BTP CMEB 9.5-1 Guideline 155, Westinghouse indicates that water will be supplied to standpipes and hose connections for manual fire fighting in areas containing equipment required for safe plant shutdown in the event of an SSE. The piping systems serving these hose stations will be analyzed for SSE loading and will be provided with supports to ensure system pressure integrity. The piping and valves for the portion of the hose standpipe system affected by this functional requirement will, as a minimum, satisfy ANSI B31.1, "Power Piping." The water supply will be capable of delivering at least 75 gallons per minute for two hose stations. The staff requires the following additional information:

availability of the water dedicated to the manual hose stations from the passive containment water storage tank

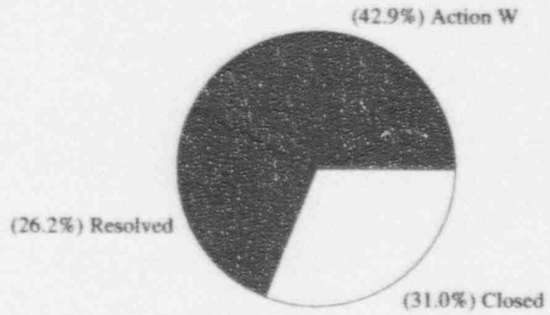
the pressure required to produce at least two effective hose streams inside containment utilizing the passive containment water storage tank

assurance that no possibility exists for channeling water from fire-extinguishing operations in one redundant fire area into another redundant fire area

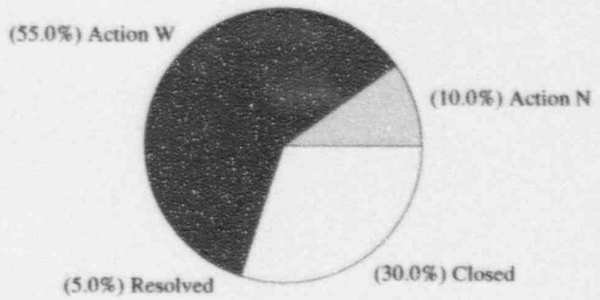
Action W. Westinghouse to provide additional information.

Open Item Status - Chapter 10 (Steam Systems)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	0	0	17	0	8	9	34
DSER-Confirmatory	0	0	0	0	0	0	2	3	5
DSER-COL	0	0	0	0	1	0	1	1	3
Subtotal	**0**	**0**	**0**	**0**	**18**	**0**	**11**	**13**	**42**
Follow-on Items									
RAI-OI	0	0	0	0	1	0	0	1	2
Meeting-OI	0	0	0	2	10	0	1	5	18
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**0**	**0**	**2**	**11**	**0**	**1**	**6**	**20**
Total	**0**	**0**	**0**	**2**	**29**	**0**	**12**	**19**	**62**

Westinghouse Status as of 29-May-95

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '10*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1133	NRR/SPLB	10.2-1	DSER-OI		Closed	Resolved	NTD-NRC-95-4464	
				(TURBINE-GENERATOR POWER RATING) Westinghouse should resolve the discrepancy in thermal output and nominal power rating in the SSAR.				
				Closed - SSAR subsection 10.2.2.1 and Table 10.2-1 revised (Revision 3).				
1134	NRR/SPLB	10.2.4-1	DSER-OI		Action W	Action W		
				(TURBINE OVERSPEED TRIP) Westinghouse should address the concern of diversity and common mode failure pertaining to a mechanical overspeed trip device.				
				Action-W - Westinghouse to provide additional justification in SSAR revision to demonstrate why the electronic trip devices are more reliable and to address the staff concern on the diversity and common mode failure per 12/13/94 meeting agreement. Related item-Active - Concerns related to turbine missiles (OITS 2030) were discussed at Westinghouse/NRC Senior Management Meetings. A meeting of NRC Staff and Westinghouse technical personnel is required to establish appropriate closure for impacted items.				
1135	NRR/EMCB	10.2.9-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				(TURBINE ROTOR MANUFACTURING PROCESS) AP600 turbine rotors are made from a vacuum-melted, deoxidized Ni-Cr-Mo-V alloy steel by processes that minimize flaw occurrence and can provide adequate fracture toughness. Westinghouse should describe these processes in Chapter 10 of the SSAR.				
				Closed - See SSAR Rev. 3 section 10.2.3.1				
1136	NRR/EMCB	10.2.9-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				(TURBINE ROTOR MATERIAL PROPERTIES) Westinghouse should revise the SSAR to contain all of the necessary chemical and material property requirements; this will enable the staff to evaluate the adequacy of the turbine rotors for their performance in service.				
				Closed: See SSAR Rev.3 section 10.2.3.1.				
1137	NRR/EMCB	10.2.9-3	DSER-OI		Action W	Inactive		
				(TURBINE ROTOR MATERIAL) Westinghouse needs to include in the SSAR the basis for the correlation of Charpy V-notch properties and fracture toughness of the turbine rotor material. In addition, Westinghouse should discuss in the SSAR the relevance of a well-defined Charpy energy and fracture appearance transition curve and strain-rate sensitivity.				
				Action W - Concerns related to turbine missiles (OITS 2030) were discussed at Westinghouse/NRC Senior Management Meetings. A meeting of NRC Staff and Westinghouse technical personnel is required to establish appropriate closure for impacted items.				
1138	NRR/EMCB	10.2.9-4	DSER-OI		Action W	Inactive		
				(TURBINE ROTOR MANUFACTURING PROCESS) Westinghouse should provide a technical justification for not boring the centers of the high-pressure turbines.				
				Active - Concerns related to turbine missiles (OITS 2030) were discussed at Westinghouse/NRC Senior Management Meetings. A meeting of NRC Staff and Westinghouse technical personnel is required to establish appropriate closure for impacted items.				
1139	NRR/EMCB	10.2.9-5	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				(TURBINE ROTOR MANUFACTURING PROCESS)Westinghouse should provide a justification in the SSAR if surface examination of drilled and tapped holes is not performed.				
				Closed - SSAR section 10.2.3.5 revised (revision 3) to detail surface examination procedure.				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '10*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1140	NRR/EMCB	10.2.9-6	DSER-OI		Action W	Inactive		
				(TURBINE MAINTENANCE PROGRAM, MISSILE PROBABILITY CALCULATION OR VOLUMETRIC ROTOR INSPECTION)Westinghouse should add COL Action Item 10.2.9-1 to the SSAR.				
				Action W - Concerns related to turbine missiles (OITS 2030) were discussed at Westinghouse/NRC Senior Management Meetings. A meeting of NRC Staff and Westinghouse technical personnel is required to establish appropriate closure for impacted items.				
1141	NRR/EMCB	10.2.9-7	DSER-OI		Action W	Inactive		
				(TURBINE ROTOR TEST DATA AND CALCULATED TOUGHNESS CURVES) Westinghouse should add COL Action Item 10.2.9-2 to the SSAR.				
				Action W - Concerns related to turbine missiles (OITS 2030) were discussed at Westinghouse/NRC Senior Management Meetings. A meeting of NRC Staff and Westinghouse technical personnel is required to establish appropriate closure for impacted items.				
1142	NRR/SPLB	10.2.10-1	DSER-OI		Action W	Action W		
				(TURBINE OVERSPEED TRIP, EXTRACTION NONRETURN CLOSING TIME, VALVE TESTING INTERVAL, STAFF QUESTIONS)The staff has not yet determined the acceptability of the design of the turbine-generator.				
				Action-W (M10.2-2) - Westinghouse to provide additional discussion in SSAR revision to address the staff concern and to reflect a change in valve closing time per 12/13/94 meeting agreement. Action-W(M10.2-3) - Westinghouse to provide information to address the staff concern and may change the valve inspection interval per 12/13/94 meeting agreement. Action-W(M10.2-4) - Westinghouse to specify a valve test interval in the SSAR and provide justification per 12/13/94 meeting agreement. Closed(Q410.139) - The staff found response to RAI 410.139, TG / RCS compatability, acceptable per 12/13/94 meeting. (No SSAR revision required.) Closed(Q410.144) - The staff found response to RAI 410.144, compliance with URD, acceptable per 12/13/94 meeting. (No SSAR revision required.) Action-W(Q410.143) - The staff found response to RAI 410.143, compliance with Standard Review Plan, partially acceptable per 12/13/94 meeting. Remaining concerns are detailed in meeting items M10.2-1 through M10.2-4 (OITS 358, 359, 360, 361). WCAP 13054 to be reviewed for consistency.				
1143	NRR/SPLB	10.3-1	DSER-OI		Action W	Action W		
				(MAIN STEAM SYSTEM, STAFF REVIEW OF RAI RESPONSES)The staff has not yet determined the acceptability of the design of the main steam supply system.				
				Resolved - Items related to SSAR Ch 10 are resolved. Action-W - Items related to SSAR Ch 16 (Tech Specs) to be addressed per 2/22/95 meeting agreements.				
1144	NRR/EMCB	10.3.1-1	DSER-OI		Resolved	Inactive		
				(STEAM AND FEEDWATER SYSTEM MATERIALS) Westinghouse should revise the SSAR to identify the materials used (by specification, type, grade, and heat treatment), as well as the applicable ASME Code Cases used for steam and feedwater system materials.				
				Resolved - SSAR to be revised per DSER OI				
1145	NRR/EMCB	10.3.1-2	DSER-OI		Closed	Inactive	NTD-NRC-9?-4464	
				(STEAM AND FEEDWATER SYSTEM MATERIALS) The materials that were identified by specification in the SSAR, and the ASME Code Class 2 materials specified for the main steam and feedwater system, do not satisfy the requirements of Appendix I to Sectio: III of the ASME Code and Parts A, B, and C of Section II of the Code, because some ASTM specifications were also listed.				
				Closed - SSAR Rev.3 revised section 10.3				

Selection: [type] like 'dser*' And [DSER Section] like '10*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1146	NRR/EMCB	10.3.1-3	DSER-OI		Action W	Inactive		
				(STEAM AND FEEDWATER SYSTEM MATERIALS) The staff cannot reach a safety finding on the acceptability of the materials until the SSAR has a specific commitment as to the materials selected for the steam and feedwater systems.				
				Action-W - SSAR revision pending resolution of LBB issue.				
1147	NRR/EMCB	10.3.1-4	DSER-OI		Resolved	Inactive		
				(FEEDWATER SYSTEM EROSION/CORROSION) Westinghouse should address in the SSAR the measures used to control and minimize the effects of erosion and corrosion over the 60-year design life.				
				Resolved - SSAR to be revised per DSER OI. (Note. 103.2.2.1 SCS scope already addressed.)				
1148	NRR/EMCB	10.3.1-5	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				(STEAM AND FEEDWATER SYSTEM EROSION/CORROSION)Westinghouse should discuss in the SSAR the design approaches to reduce the potential for erosion or corrosion of steel piping (single-phase and two-phase), and should identify measures to ensure that inspections will be possible and meaningful.				
				Closed - SSAR Rev. 3 revised section 10.3.2.2.1				
1149	NRR/EMCB	10.3.1-6	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				(STEAM AND FEEDWATER SYSTEMS, COPPER CONTENT)Westinghouse should identify in the SSAR whether the AP600 design used any copper or copper alloys in the steam and feedwater systems, including the condenser.				
				Closed. - SSAR Rev.3 section 10.3.6.2 revised to state no copper in steam and feedwater systems per DSER-OI 10.3.1-6.				
1150	NRR/SPLB	10.4.1-1	DSER-OI		Resolved	Active		
				(MAIN CONDENSER, COOLING WATER INLEAKAGE) The staff has not yet determined the acceptability of the design of the main condensers.				
				Resolved - SSAR revision to incorporate changes identified in RAI 410.255 response in section 10.4.2.1				
1151	NRR/SPLB	10.4.2-1	DSER-OI		Action W	Active		
				(MAIN CONDENSER EVACUATION SYSTEM, CMS, QUALITY GROUP CLASSIFICATION) The staff has not yet determined the acceptability of the design of the main condenser evacuation system.				
				Action-W - Westinghouse to revise WCAP-13054, Compliance with SRP Acceptance Criteria, to reflect that RG 1.26 will not be met, in accordance with agreements of 2/22/95 meeting. No SSAR revision required.				
1152	NRR/SPLB	10.4.3-1	DSER-OI		Action W	Active		
				(TURBINE STEAM SEALING SYSTEM, GSS, QUALITY GROUP CLASSIFICATION AND DESIGN INFO) The staff has not yet determined the acceptability of the turbine steam sealing system.				
				Action-W(410.258) - Westinghouse to revise WCAP-13054, Compliance with SRP Acceptance Criteria, to reflect that RG 1.26 will not be met, in accordance with agreements of 2/22/95 meeting. No SSAR revision required. Action-W(410.259) - Westinghouse will re-evaluate its position regarding diagram and P&ID for turbine steam sealing system in accordance with agreements of 2/22/95 meeting.				
1153	NRR/SPLB	10.4.4-1	DSER-OI		Closed	Active	NTD-NRC-95-4464	
				(TURBINE BYPASS SYSTEM, MSS)The staff has not yet determined the acceptability of the turbine bypass steam system.				
				Closed - Response provided via NTD-NRC-94-4311. SSAR figure 10.3.2-2 revised.				

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1154	NRR/SPLB	10.4.5-1	DSER-OI		Resolved	Inactive		
				(CIRCULATING WATER SYSTEM, CWS) Westinghouse should add COL Action Item 10.4.5-1 to the SSAR.				
				Resolved - SSAR revision to incorporate COL item in section 10.4.5.6-1 per 2/22/95 meeting agreement.				
1155	NRR/EMCB	10.4.6-1	DSER-OI		Resolved	Inactive		
				(CONDENSATE POLISHING SYSTEM, CPS, RESIN BED VESSEL LINING) Westinghouse should identify in the SSAR the type of coating (or lining) to be used. If rubber is to be used, limits on sulfur content should be specified.				
				Resolved - SSAR section 10.4.6.2 to be revised to specify use of rubber lining in CPS resin bed vessels, sulpher content of rubber, and to corrects inconsistency between text and table per DSER-OI 10.4.6-1.				
1156	NRR/EMCB	10.4.6-2	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				(CONDENSATE POLISHING SYSTEM, CPS, RESIN STORAGE TANK) In Section 10.4.6.3 of the SSAR, Westinghouse stated that if condensate polisher resins become contaminated, they can be transferred to a 1500 ft3 resin storage tank. Westinghouse should clarify whether this tank will be used only in the event of resin contamination.				
				Closed - SSAR Rev 3 clarifies use of resin storage tank per DSER-OI 10.4.6-2 in section 10.2.6.2.				
1157	NRR/EMCB	10.4.6-3	DSER-OI		Action W	Inactive		
				(SECONDARY WATER CHEMISTRY, OXYGEN SCAVENGER)Westinghouse should specify in the SSAR the oxygen scavenger to be used.				
				Action W - Westinghouse to specify oxygen scavenger.				
1158	NRR/EMCB	10.4.6-4	DSER-OI		Action W	Inactive		
				(SECONDARY WATER CHEMISTRY, CONSISTENCY WITH EPRI GUIDELINES)Westinghouse should clarify whether its secondary water chemistry is consistent with the latest EPRI guidelines. If not, inconsistencies with the EPRI guidelines should be discussed in the SSAR.				
				Action W - Westinghouse to identify inconsistencies, if any.				
1159	NRR/EMCB	10.4.6-5	DSER-OI		Resolved	Inactive		
				(CONDENSATE POLISHING SYSTEM, CPS, & SECONDARY WATER CHEMISTRY PARAMETERS DURING HOT STANDBY & HOT SHUTDOWN) Westinghouse should discuss in the SSAR the condensate cleanup system functions during hot standby and hot shutdown modes, and should discuss the secondary water chemistry parameters for each of these modes.				
				Resolved - SSAR section 10.4.6 to be revised to describe secondary water chemistry parameters in all modes of operation per DSER-OI 10.4.6-5.				
1160	NRR/EMCB	10.4.6-6	DSER-OI		Action W	Inactive		
				(SECONDARY WATER CHEMISTRY, SAMPLING) Westinghouse should discuss the sampling frequency schedule for the secondary system grab sample points, as described in Section 9.3.4 of the SSAR.				
				Action W - Secondary sampling program to be defined.				
1161	NRR/EMCB	10.4.6-7	DSER-OI		Action W	Inactive		
				(SECONDARY WATER CHEMISTRY PROGRAM) Westinghouse should describe the program for recording, managing, and interpreting secondary water chemistry data.				
				Action W - Secondary sampling program to be defined.				

Selection: [type] like 'dser*' And [DSER Section] like '10*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1162	NRR/SPLB	10.4.7-1	DSER-OI		Action W	Action W		
				(FEEDWATER SYSTEM, FWS, WATER HAMMER) Westinghouse should provide procedures for testing feedwater hammer occurrence.				
				Action-W - Westinghouse to provide justification for not performing testing in accordance with meeting agreement of 2/22/95. Check WCAP 13054 for consistency.				
1163	NRR/EMCB	10.4.8-1	DSER-OI		Resolved	Inactive		
				(STEAM GENERATOR BLOWDOWN SYSTEM, BDS, DISPOSAL OF WATER)Westinghouse should state in the SSAR if the WWS is same system as the WLS mentioned in Section 10.4.8.2.2.2 of the SSAR.				
				Resolved - SSAR Rev. 3 sections 10.4.8.2.2.2 and 10.4.8.2.2.6 to be revised to clarify disposal of steam generator flushing water per DSER-OI 10.4.8-1.				
1164	NRR/SPLB	10.4.9-2	DSER-OI		Action W	Action W		
				(STARTUP FEEDWATER SYSTEM, FWS, WATER HAMMER) Westinghouse should address the issue of plant damage due to water hammer during startup.				
				Action-W - Westinghouse will submit a written response to justify that initial flow control will not result in plant damage due to water hammer in accordance with meeting agreements of 2/22/95.				
1165	NRR/SPLB	10.4.10-1	DSER-OI		Resolved	Active		
				(AUXILIARY STEAM SYSTEM, ASS, CONTROLS AND INDICATORS) The staff has not yet determined the acceptability of the design of the auxiliary steam system.				
				Resolved - SSAR revision to section 10.4.10.5 to provide a description of the Auxiliary Steam System instruments per 2/22/95 meeting agreement.				
1712	NRR/SPLB	10.4.9-1	DSER-OI		Action W	Action W		
				(STARTUP FEEDWATER SYSTEM, FWS, MAINTENANCE AND RELIABILITY PROGRAM)Westinghouse should incorporate the maintenance, surveillance, and inservice inspection and testing of the Startup Feedwater System in their maintenance and reliability assurance programs.				
				Action-W - Changes to SSAR Ch 16, Sec 16.2 to be made to incorporate a maintenance and reliability assurance program for the startup feedwater system in accordance with the agreements of 2/22/95 meeting. No SSAR Ch 10 revision required.				
1821	NRR/SPLB	10.1-1	DSER-CN		Closed	Resolved		
				10.1-1 (PLANT HEAT BALANCE) In the August 8, 1994, response to Q410.135, Westinghouse agreed to add Figure 10.1-2 to the SSAR.				
				Closed - Non-proprietary heat balance figure provided per RAI 410.135 response in SSAR rev.3 figure 10.2.-2.				
1822	NRR/SPLB	10.2-1	DSER-CN		Closed	Resolved		
				10.2-1 (TURBINE-GENERATOR OUTLINE DRAWING) In the August 3, 1994 response to Q410.140, Westinghouse agreed to add Figure 10.2-2 to the non-proprietary version of the SSAR illustrating the system.				
				Closed - A non-proprietary drawing of the T/G, MSR, Exciter, Controls, and auxiliary subsystems added to SSAR per RAI 410.140 response (Figure 10.2-2) SSAR Revision 3.				
1823	NRR/EMCB	10.3.1-1	DSER-CN		Resolved	Inactive		
				10.3.1-1 (STEAM AND FEEDWATER SYSTEM MATERIALS) In the December 22, 1992 response to Q252.137, Westinghouse identified the steam and feedwater system pipe materials in the SSAR. However, that discussion contained a typographical error, in that ASTM A-355, "Standard Specification for Alloy Steel Bars for Nitriding," was specified instead of SA-335, which covers alloy steel pipe.				
				Resolved - SSAR to be revised per DSER CN				

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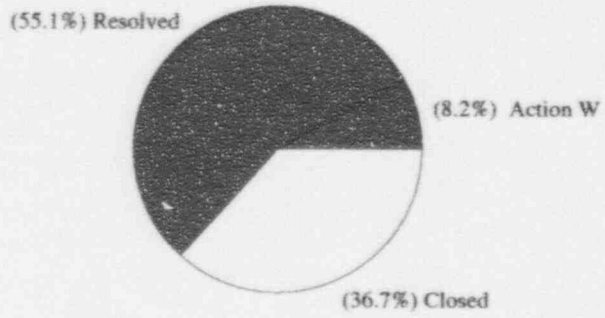
Date: 5/27/95

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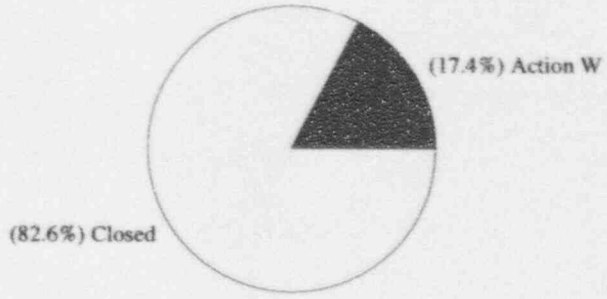
Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1824	NRR/EMCB	10.4.6-1	DSER-CN		Resolved	Inactive		
				10.4.6-1 (CONDENSATE POLISHING SYSTEM, CPS, NO. OF POLISHERS) In Table 10.4.6-1 of the SSAR, the number of polishers is listed as one, whereas Figure 10.4.6-1 of the SSAR shows two polishers. Westinghouse should correct the table.				
				Resolved - SSAR Figure 10.4.6-1 to be revised to correct inconsistencies per DSER-CN 10.4.6-1.				
1825	NRR/SPLB	10.4.9-1	DSER-CN		Closed	Closed		
				10.4.9-1 (STARTUP FEEDWATER SYSTEM, FWS, TECH SPECS) Westinghouse committed to incorporate in the proposed Technical Specifications (TS) a statement that one essential SFS pump train may be inoperable for no more than 72 hours, as well as a verification test for the SFS flow path. During this test, water is pumped from the primary source to the steam generators before startup after any cold shutdown of 30 days or longer.				
				Closed - In response to item concerning TS 3.7.7, as discussed at 2/22/95 meeting, staff concurred with Westinghouse position that isolation of startup feedwater system to mitigate MSLB is safety related, other functions of the startup feedwater system are nonsafety related and require no TS.				
1925	NRR/EMCB	10.2.9-1	DSER-COL		Action W	Inactive		
				10.2.9-1 (TURBINE MAINTENANCE PROGRAM, MISSILE PROBABILITY CALCULATIONS) The COL applicant should submit for staff review and approval, within three years of obtaining a combined license, a turbine maintenance program including probability calculations of turbine missile generation based on the NRC-approved methodology, or volumetrically inspect all low-pressure turbine rotors at the second refueling outage and every other refueling outage thereafter until a maintenance program is approved by the staff.				
				Action W- Concerns related to turbine missiles (OITS 2030) were discussed at Westinghouse/NRC Senior Management Meetings. A meeting of NRC Staff and Westinghouse technical personnel is required to establish appropriate closure for the noted items.				
1926	NRR/EMCB	10.2.9-2	DSER-COL		Closed	Inactive		
				10.2.9-2 (TURBINE ROTOR TEST DATA AND CALCULATED TOUGHNESS CURVES) The COL applicant should submit test data for the turbine rotors and the calculated toughness curves to the staff for review and approval.				
				Closed - per SSAR Rev.3 section 10.2.3.2				
1927	NRR/SPLB	10.4.5-1	DSER-COL		Resolved	Inactive		
				10.4.5-1 (PLANT HEAT SINK) The COL applicant should determine the plant design heat sink to suit the specific site circumstances.				
				Resolved - COL item to be added to SSAR section 10.4.5 per DSER-COL 10.4.5-1				

Open Item Status - Chapter 11 (Rad. Waste)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	0	0	4	0	19	14	37
DSER-Confirmatory	0	0	0	0	0	0	1	0	1
DSER-COL	0	0	0	0	0	0	7	4	11
Subtotal	**0**	**0**	**0**	**0**	**4**	**0**	**27**	**18**	**49**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	0	0
Meeting-OI	0	0	0	0	4	0	0	19	23
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**19**	**23**
Total	**0**	**0**	**0**	**0**	**8**	**0**	**27**	**37**	**72**

Westinghouse Status as of 29-May-95

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1166	NRR/SPLB	11.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR COL Action Item 11.1-1, related to compliance 10 CFR Part 50, Appendix I guidelines for maximally exposed offsite individual doses and population doses via liquid and gaseous effluents to the environs, and ANSI N13.1-1969, and RGs 1.21 and 4.15 guidelines.				
				Closed - SSAR section 11.5.7.2, Rev. 3 added to require COL to demonstrate conformance to ANSI N13.1, RGs 1.21 and 4.15. Section 11.2.4.3 was added with statement that sites with parameters which are not within the assumed envelope will have to perform site specific analysis to show compliance 10 CFR Part 50, Appendix I.				
1167	NRR/SPLB	11.2-1	DSER-OI		Resolved	Inactive		
				Westinghouse should include in the SSAR COL Action Item 11.2-1, related to the identification of liquid waste demineralizer media in the liquid waste management system (LWMS).				
				Resolved - SSAR section 11.2.4.4 will be added to SSAR to address this item.				
1168	NRR/SPLB	11.2-2	DSER-OI		Resolved	Inactive		
				Westinghouse should include in the SSAR COL Action Item 11.2-2, related to the planned discharge flow rate for borated wastes.				
				Resolved - SSAR section 11.2.4.1 will be added to SSAR to address this item.				
1169	NRR/SPLB	11.2-3	DSER-OI		Resolved	Inactive		
				Westinghouse should include in the SSAR COL Action Item 11.2-3, related to the identification of operational set points for the LWMS radiation monitors.				
				Resolved - SSAR section 11.2.4.5 will be added to SSAR to address this item.				
1170	NRR/SPLB	11.2-4	DSER-OI		Action W	Action W	NTD-NRC-4254	8/3/94
				Westinghouse has not yet responded to Q460.25, which deals with the rerun of the GALE code.				
				Action W - RAI 460.25 response transmitted August 3, 1994. Westinghouse will rerun the GALE code.				
1171	NRR/SPLB	11.2-5	DSER-OI		Action W	Action W		
				Westinghouse has not responded to Q460.21, which deals with AP600 LWMS compliance with 10 CFR 20.1302.				
				Action W: Discussion is needed with staff to resolve the question regarding what to use for design basis fuel defect level. When this is determined and when the revised GALE code analysis is completed, the corrected report of effluent concentrations (and comparison with 10 CFR 20 limits) will be plced in the SSAR.				
1172	NRR/SPLB	11.2-6	DSER-OI		Resolved	Inactive		
				Westinghouse has not yet clarified whether indoor LWMS tanks will have curbs or thresholds with floor drains routed to the LWMS.				
				Resolved - SSAR, section 11.2, will be revised to describe features to contain inventory of ruptured tanks. The desired information is also included in the response to RAI 460.6R1.				
1173	NRR/SPLB	11.2-7	DSER-OI		Resolved	Inactive		
				Westinghouse should identify in the SSAR COL Action Item 11.2-4, related to mobile processing equipment intended for use in the processing of liquid radwastes.				
				Resolved - SSAR section 11.2.4.1, will be added to include Combined License Applicant information item to describe mobile processing equipment intended for use in the processing of liquid radwastes.				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1174	NRR/SPLB	11.3-1	DSER-OI		Resolved	Proposed		
				Westinghouse has not provided a complete response to Q460.10(c) regarding instrumentation for the gaseous radwaste system (GRS).				
				Resolved - RAI 460.10 Rev. 1 response transmitted September 30, 1994. SSAR, section 11.3.3.4, Tables 11.2-6, 11.3-3 and 11.3-4, will include the revisions provided in RAI 460.10R1.				
1175	NRR/SPLB	11.3-2	DSER-OI		Resolved	Inactive		
				Westinghouse should include in the SSAR COL Action Item 11.3-1, related to the identification of the operational set point for the GRS radiation monitor.				
				Resolved - SSAR, section 11.3.4.4, will be added to include information on WGS radiation monitor setpoint in OCDM to be submitted by COL.				
1176	NRR/SPLB	11.3-3	DSER-OI		Resolved	Inactive		
				Westinghouse should completely respond to Q460.10, pertaining to the calculated delay times for gaseous effluent.				
				Resolved - RAI 460.10 Rev. 1 response transmitted September 30, 1994. SSAR, section 11.3.3.4, Tables 11.2-6, 11.3-3 and 11.3-4, will include the revisions provided in RAI 460.10R1.				
1177	NRR/SPLB	11.3-4	DSER-OI		Resolved	Inactive		
				Westinghouse should identify in the SSAR COL Action Item 11.3-2, related to the QA program for the installation, procurement, and fabrication of the GRS components.				
				Resolved - SSAR, section 11.3.4.1, will be added to include information on WGS QA program to be submitted by COL.				
1178	NRR/SPLB	11.3-5	DSER-OI		Resolved	Active		
				It is not clear whether the dual oxygen analyzers are independent and can, therefore, provide independent measurements of oxygen concentrations in the GRS process stream upstream of the charcoal beds. Further, the staff considers that the GRS should be designed such that the oxygen source gets automati- cally isolated and nitrogen gets automatically injected upon a high-high oxygen alarm setting (4-percent oxygen concentra- tion).				
				Resolved - The oxygen monitors are independent. This fact will be clarified in the SSAR, section 11.3. The system has been revised to automatically stop the degasifer vacuum pumps as source of oxygen and automatically inject nitrogen to dilute combustible gases.				
1179	NRR/SPLB	11.3-6	DSER-OI		Action W	Inactive		
				Table 11.3-4 of the SSAR does not include carbon-14, tritium, argon-41, and other radionuclides in particulate form. Further, the table does not sum up the ratios to demonstrate that the sum is below 1.0.				
				Action W: Westinghouse is to run the GALE code to determine revised values for anticipated annual releases of activity. When this is reported in the SSAR, C-14, Ar-41, and particulate releases will be included in the tabulation.				
1180	NRR/SPLB	11.3-7	DSER-OI		Action W	Action W	NTD-NRC-4254	8/3/94
				Westinghouse has not responded to Q460.21, pertaining to site boundary effluent concentrations.				
				Action W: Discussion is needed with staff to resolve the question regarding what to use for design basis fuel defect level. When this is determined and when the revised GALE code analysis is completed, the corrected report of effluent con.,entrations (and comparison with 10 CFR 20 limits) will be placed in the SSAR.				
1181	NRR/SPLB	11.4-1	DSER-OI		Resolved	Action W		
				Westinghouse has not provided details on packaging of secondary system wet wastes.				
				Resolved - SSAR sections 10.4.6.3 and 10.4.8.2.3.6, will be revised to describe provisions to handle and contain radioactive secondary system spent resin. See item 385.				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1182	NRR/SPLB	11.4-2	DSER-OI		Resolved	Action W		
				Westinghouse has not indicated what design feature has been provided to contain the contents of the secondary spent resin tank, in the event of its failure.				
				Resolved - SSAR section 10.4.6.3 will be revised to describe provisions to contain radioactive secondary system spent resin tank contents. See item 385.				
1183	NRR/SPLB	11.4-3	DSER-OI		Closed	Action W	NTD-NRC-95-4433	4/3/95
				Westinghouse should include in the SSAR COL Action Item 11.4-1, related to the submittal of a process control program (PCP) for processing wet solid wastes, and demonstration of SWMS compliance with 10 CFR 61.55 and 61.56 and 10 CFR Part 71 and DOT regulations.				
				Closed - Included in SSAR Revision 2, section 11.4.5.1.				
1184	NRR/SPLB	11.4-4	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should include in the SSAR COL Action Item 11.4-2, related to the QA program for the installation, procurement, and fabrication of the SWMS components.				
				Closed - Included in SSAR Revision 2, section 11.4.5.2.				
1185	NRR/SPLB	11.4-5	DSER-OI		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				Westinghouse should include in the SSAR COL Action Item 11.4-3, related to mobile processing equipment intended for use in the processing of solid radwastes.				
				Closed - Included in SSAR Revision 2, section 11.4.5.1.				
1186	NRR/SPLB	11.5-1	DSER-OI		Resolved	Action W		
				Westinghouse has not yet provided a complete response to Q460.7, which deals with monitoring of the service water effluent.				
				Resolved - RAI 460.7R1 provided a discussion of the radiation monitor in the SWS. SWS blowdown radiation monitor description added SSAR, section 11.5.2.3.1, Rev. 3. SSAR Table 9.3.4-1 to be revised to include the SWS radiation monitor.				
1187	NRR/SPLB	11.5-2	DSER-OI		Closed	Action N		
				Table 3.2-3 of the SSAR should be revised to include the radiation monitoring system (RMS).				
				Closed - As stated in SSAR section 3.2.4, Table 3.2-3 does not include instrumentation systems. Section 3.11 is referenced for identification of safety-related electrical and instrumentation systems.				
1188	NRR/SPLB	11.5-3	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Sections 11.5.2.3.1 through 11.5.2.3.3 of the SSAR make incorrect references to SSAR figures.				
				Closed - SSAR was reviewed. Sections 11.5.2.3.1 and 11.5.2.3.3 figure references are correct. Section 11.5.2.3.2 was revised in SSAR, Rev. 3 to make correct references. New Figures 11.5-5 (Duct Radiation Monitor), 11.5-6 (MCR Air Supply Duct Radiation Monitor) and 11.5-2 (Safety-Related Radiation Monitor) are in Rev. 3.				
1189	NRR/SPLB	11.5-4	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				(RADIATION MONITORING SYSTEM, RMS) Section 11.5 of the SSAR does not explain why the containment atmosphere particulate detector (part of reactor coolant pressure boundary leak detection system) is non-seismic Category I and receives power from non-1E power supply.				
				Closed - SSAR, section 11.5.2.3.2, Rev. 3, describes the Containment Atmosphere Radiation Monitor as being seismically qualified per Reg. Guide 1.100. These detectors are not used for accident and post-accident monitoring. The Class 1E containment radiation monitors functions are discussed in section 11.5.1.1 and these Containment High Radiation Monitors are discussed in section 11.5.2.3.2.				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1190	NRR/SPLB	11.5-5	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Westinghouse should include a grab sampling provision for tritium activity in the effluent via the plant vent.				
				Closed - All radiologically controlled areas ventilation systems exhaust through the plant vent. VFS-M6-001, Rev. 5 shows a continuous sampling capabilty for gases, iodines and particulates. This P&ID is included in SSAR, Rev. 3. SSAR section 11.5.2.3.3, Rev. 3 includes a statement that the plant vent radiation monitor has particulate, iodine, and gaseous grab sampling capability.				
1191	NRR/SPLB	11.5-6	DSER-OI		Resolved	Action W		
				Westinghouse should include grab sampling and continuous sampling provisions for condenser air removal system effluent stream. It should be noted that provision of a monitor, which continuously monitors an effluent stream, is not equivalent to provision of continuous sampling capability for that stream.				
				Resolved - SSAR, section 10.4.2.2.1, to be revised to include a statemcnt that the condenser air removal system discharge includes a connection for taking a grab sample and that connections are provided for installation of portable, continuous sampling equipment.				
1192	NRR/SPLB	11.5-7	DSER-OI		Resolved	Action W		
				Westinghouse should include a grab sampling provision for the turbine gland seal system exhaust.				
				Resolved - As stated in SSAR section 10.4.3.2.2, the gland steam system exhaust is discharged to the turbine island vents, drains, and relief system. Section 10.4.2.2.1, will be revised to describe continuous radiation monitoring of the turbine island vents, drains, and relief system exhaust. Taking grab samples and provisions for continous sampling using temporary equipment connected to the grab sample connection are shown on the gland steam system P&ID.				
1193	NRR/SPLB	11.5-8	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Westinghouse should include grab sampling provisions for noble gas activities in the building ventilation and containment purge exhausts.				
				Closed - All radiologically controlled areas ventilation systems exhaust through the plant vent. SSAR section 11.5.2.3.3, Rev. 3 includes a staement that the plant vent rsdiation monitor has particulate, iodine, and gaseous grab sampling capability.				
1194	NRR/SPLB	11.5-9	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Westinghouse should included grab sampling and continuous sampling provisions for iodine activity in the containment purge exhaust.				
				Closed - All radiologically controlled areas ventilation systems exhaust through the plant vent. VFS-M6-001, Rev. 5 shows a continuous sampling for gases, iodines and particulates. This P&ID is included in SSAR, Rev. 3. SSAR section 11.5.2.3.3, Rev. 3 includes a statement that the plant vent radiation monitor has particulate, iodine, and gaseous grab sampling capability.				
1195	NRR/SPLB	11.5-10	DSER-OI		Resolved	Resolved		
				Westinghouse should include continuous sampling and analysis provisions for service water system effluent. Provision of a continuous radiation monitor in an effluent line is not the same as provision of continuous sampling capability for the line.				
				Resolved - RAI 460.7R1 provided a discussion of the radiation monitor in the SWS. SWS blowdown radiation monitor description added SSAR, section 11.5.2.3.1, Rev. 3. SSAR Table 9.3.4-1, will be revised to include the SWS radiation monitor. The SWS includes provisions for continuous sampling and analysis of the blowdown using temporary equipment connected to the grab sample connection shown on the system P&ID.				
1196	NRR/SPLB	11.5-11	DSER-OI		Resolved	Resolved		
				In Table 9.3.4-1 of the SSAR, Westinghouse includes a reference to a non-existent radiation monitor in the service water system.				
				Resolved - RAI 460.7R1 provided a discussion of the radiation monitor in the SWS. SWS blowdown radiation monitor description added SSAR, section 11.5.2.3.1, Rev. 3. SSAR Table 9.3.4-1, will be revised to include the SWS radiation monitor. The SWS includes provisions for continuous sampling and analysis of the blowdown using temporary equipment connected to the grab sample connection shown on the system P&ID.				

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1197	NRR/SPLB	11.5-12	DSER-OI		Resolved	Action W		
				Westinghouse should explain the purposes of the grab sampling and analysis provisions for the component cooling water system, service water system effluent stream, SG blowdown stream, turbine building drains, and waste water drains. In addition, Westinghouse should indicate if grab sampling and analysis provisions for tritium activity are included for the above system, streams and drains.				
				Resolved - The purpose of sampling is described in SSAR sections 9.3.3 (primary sampling) and 9.3.4 (secondary sampling). SSAR Tables 9.3.3-1 and 9.3.3-2, will be revised to include tritium as one of the radioisotopes which is analyzed in both primary and secondary systems sampling.				
1198	NRR/SPLB	11.5-13	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Westinghouse should include grab sampling and analysis provisions for spent fuel pit treated water.				
				Closed - The spent fuel pool cooling system P&ID has been revised to show a sampling location downstream of the demineralizers. The revised P&ID was included with SSAR, Rev. 3.				
1199	NRR/SPLB	11.5-14	DSER-OI		Resolved	Action W		
				Westinghouse should include grab sampling and analysis provisions for secondary resin slurry stream.				
				Resolved - SSAR sections 10.4.6.3 and 10.4.8.2.3.6, will be revised to describe provisions to handle and contain radioactive secondary system spent resin. The SSAR revisions state that radioactive spent resin processing will be performed in the Auxiliary Building loading bay with mobile equipment. Solid radwaste handling, sampling and processing in the Auxiliary Building loading bay is described in SSAR section 11.4.				
1200	NRR/SPLB	11.5-15	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Westinghouse should include grab sampling and analysis provisions for tritium activity in the LWMS (Liquid management waste system) tanks, chemical waste tank, and primary spent resin tanks.				
				Closed - The liquid radwaste system (WLS) and solid radwaste system (WSS) P&IDs show sampling locations for the waste holdup tanks, the monitor tanks, chemical waste tank, and primary spent resin tanks. Tank contents will be sampled and analyzed to determine appropriate processing to satisfy discharge or shipping requirements. The analysis will include tritium. The WLS and WSS P&IDs are included in SSAR, Rev. 3.				
1201	NRR/SPLB	11.5-16	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Westinghouse should provide in the AP600 design a continuous sampling capability and on-site analysis capability for the plant vent gaseous effluent for iodines and particulates, during and following an accident.				
				Closed - All radiologically controlled areas ventilation systems exhaust through the plant vent. VFS-M6-001, Rev. 5 shows a continuous sampling capabilty for gases, iodines and particulates. This P&ID will be included in SSAR, Rev. 3. SSAR section 11.5.2.3.3, Rev. 3 includes a statement that the plant vent radiation monitor has particulate, iodine, and gaseous grab sampling capability.				
1202	NRR/SPLB	11.5-17	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR COL Action Item 11.5-1, related to the proposed surveillance program which eliminates the potential for unmonitored and uncontrolled release of radioactive material to the environment.				
				Closed - SSAR section 11.5.7.2, Rev. 3 includes the requirement that the OCDM describe the surveillance program which eliminates the potential for unmonitored and uncontrolled release of radioactive material to the environment.				
1826	NRR/SPLB	11.3-1	DSER-CN		Resolved	Inactive	NTD-NRC-95-4464	
				11.3-1 Westinghouse should document in the SSAR the seismic design information for the gaseous radwaste system guard bed and delay beds, and the supports for the beds.				
				Resolved - SSAR section 11.3.2.3.3, will be revised to include design information for the gaseous radwaste system guard bed and delay beds, and the supports for the beds.				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1928	NRR/SPLB	11.1-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				11.1-1 The COL applicant should demonstrate compliance with 10 CFR Part 50, Appendix I guidelines for maximally exposed offsite individual doses and population doses via liquid and gaseous effluents to the environs, and ANSI N13.1-1969, and RGs 1.21 and 4.15 guidelines.				
				Closed - SSAR section 11.5.7.2, Rev. 3 added to require COL to demonstrate conformance to ANSI N13.1, RGs 1.21 and 4.15. Section 11.2.4.3 was added with statement that sites with parameters which are not within the assumed envelope will have to perform site specific analysis to show compliance 10 CFR Part 50, Appendix I.				
1929	NRR/SPLB	11.2-1	DSER-COL		Resolved	Inactive	NTD-NRC-95-4464	
				11.2-1 The COL applicant should identify the media it plans to utilize for the cation bed and the mixed bed demineralizers in the liquid waste management system (LWMS).				
				Resolved - SSAR section 11.2.4.4 will be revised to have the COL applicant identify the media it plans to utilize for the cation bed and the mixed bed demineralizers in the liquid radwaste system (WLS).				
1930	NRR/SPLB	11.2-2	DSER-COL		Resolved	Inactive	NTD-NRC-95-4464	
				11.2-2 The COL applicant should identify its planned discharge flow rate for borated wastes.				
				Resolved - SSAR section 11.2.4.1 will be revised to have the COL applicant identify its planned discharge flow rate for borated wastes.				
1931	NRR/SPLB	11.2-3	DSER-COL		Resolved	Inactive	NTD-NRC-95-4464	
				11.2-3 The COL applicant should identify its planned operational set points for its LWMS radiation monitors in its plant-specific offsite dose calculation manual (ODCM).				
				Resolved - SSAR section 11.2.4.5 will be revised to have the COL applicant identify its planned operational set points for its WLS radiation monitors in its plant-specific offsite dose calculation manual (ODCM).				
1932	NRR/SPLB	11.2-4	DSER-COL		Resolved	Inactive		
				11.2-4 The COL applicant should discuss how any mobile processing equipment, intended for use in the processing of liquid radwastes, meets the guidelines of RG 1.143.				
				Resolved - SSAR section 11.2.4.1 will be revised to include Combined License Applicant information item to describe mobile processing equipment intended for use in the processing of liquid radwastes and conformance to Reg. Guide 1.143.				
1933	NRR/SPLB	11.3-1	DSER-COL		Resolved	Inactive	NTD-NRC-95-4464	
				11.3-1 The COL applicant should identify its planned operational set point for the gaseous radwaste system (GRS) radiation monitor in its plant-specific ODCM.				
				Resolved - SSAR, section 11.3.4.4, will be revised to include information on WGS radiation monitor setpoint in OCDM to be submitted by COL.				
1934	NRR/SPLB	11.3-2	DSER-COL		Resolved	Inactive	NTD-NRC-95-4464	
				11.3-2 The COL applicant should provide details of its proposed QA program related to the installation, procurement, and fabrication of the GRS components.				
				Resolved - SSAR, section 11.3.4.1, will be revised to include information on WGS QA program to be submitted by COL.				
1935	NRR/SPLB	11.4-1	DSER-COL		Closed	Action W	NTD-NRC-95-4433	4/3/95
				11.4-1 The COL applicant should submit a process control program (PCP) that identifies the operating procedures for processing wet solid wastes. Additionally, the COL applicant should demonstrate solid waste management system (SWMS) compliance with 10 CFR 61.55 and 61.56 and 10 CFR Part 71 and DOT regulations.				
				Closed - Included in SSAR Revision 2, section 11.4.5.1.				

AP600 Open Item Tracking System Database: Executive Summary

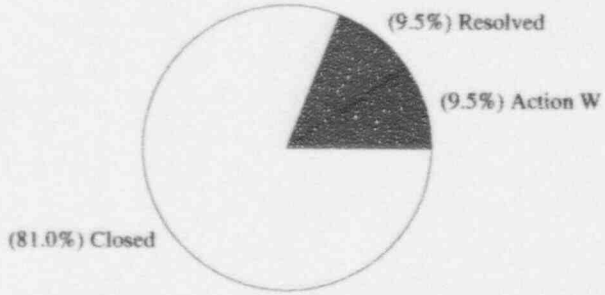
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Selection: [type] like 'dser*' And [DSER Section] like '11*' Sorted by Item #

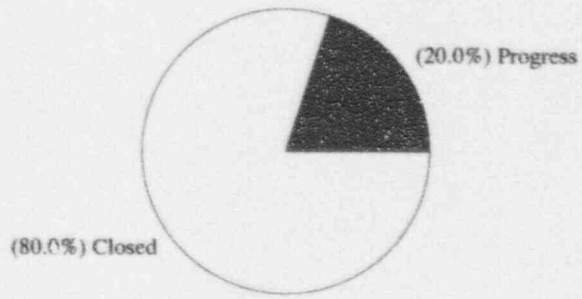
Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1936	NRR/SPLB	11.4-2	DSER-COL		Closed	Inactive	NTD-NRC-95-4433	4/3/95
				11.4-2 The COL applicant should provide details of its proposed QA program related to the installation, procurement, and fabrication of the SWMS components.				
				Closed - Included in SSAR Revision 2, section 11.4.5.2.				
1937	NRR/SPLB	11.4-3	DSER-COL		Resolved	Inactive	NTD-NRC-95-4464	
				11.4-3 The COL applicant should discuss how any mobile processing equipment intended for use in the processing of solid radwastes meets the guidelines of RG 1.143.				
				Resolved - SSAR Revision 3 Subsection 11.4.5.1to be revised to address this item.				
1938	NRR/SPLB	11.5-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				11.5-1 The COL applicant should provide details of its proposed surveillance program, which eliminate the potential for unmonitored and uncontrolled release of radioactive material to the environment.				
				Closed - SSAR section 11.5.7.2, Rev. 3 includes the requirement that the OCDM describe the surveillance program which eliminates the potential for unmonitored and uncontrolled release of radioactive material to the environment.				

Open Item Status - Chapter 12 (Rad Protection)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	0	0	2	0	1	10	13
DSER-Confirmatory	0	0	0	0	0	0	0	1	1
DSER-COL	0	0	0	0	0	0	1	6	7
Subtotal	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**17**	**21**
Follow-on Items									
RAI-OI	0	1	0	0	0	0	0	4	5
Meeting-OI	0	0	0	0	0	0	0	0	0
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**4**	**5**
Total	**0**	**1**	**0**	**0**	**2**	**0**	**2**	**21**	**26**

Westinghouse Status as of 29-May-95

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '12*' / by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1203	NRR/TERB	12.2.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR COL Action Item 12.2.1-1, related to operational ALARA policy considerations.				
				Closed - SSAR section 12.1 has been revised to include this Combined License item (SSAR Rev 3).				
1204	NRR/TERB	12.2.3-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR COL Action Item 12.2.3-1, related to adherence to regulatory guidance.				
				Closed - SSAR section 12.1 has been revised to include this Combined License item (SSAR Rev 3).				
1205	NRR/TERB	12.3.1-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR COL Action Item 12.3.1-1, related to contained radiation sources.				
				Closed - SSAR Section 12.2 has been revised to include this combined license item (SSAR Rev. 3)				
1206	NRR/TERB	12.3.2-1	DSER-OI		Closed	Inactive		
				The staff has not yet accepted the source term models used in the AP600 SSAR.				
				Closed - Westinghouse will base the source term model on the NRC's new source term defined in NUREG-1465.				
1207	NRR/TERB	12.4.1-1	DSER-OI		Closed	Action W	NTD-NRC-95-4414	3/13/95
				Westinghouse should provide the integrated doses to personnel in each of the vital areas. Additionally, the zoning of several vital areas that require access during accident conditions appears to be inappropriate.				
				Closed -This information was provided in the response to RAI 471.22 which was transmitted to the staff by NTD-NRC-95-4414 (3/13/95).				
1208	NRR/TERB	12.4.1-2	DSER-OI		Closed	Action W	NTD-NRC-95-4414	3/13/95
				The remote shutdown area, which is normally classified as a vital area, has not been listed as a vital area for the AP600.				
				Closed - This information was provided in the response to RAI 471.22 which was transmitted to the staff by NTD-NRC-95-4414 (3/13/95).				
1209	NRR/TERB	12.4.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR COL Action Item 12.4.2-1, related to control of access to the reactor cavity.				
				Closed - This Combined License item was added to Section 12.3 in Revision 3 of the SSAR.				
1210	NRR/TERB	12.4.2-2	DSER-OI		Action W	Action W		
				The 5.08 cm (2 in) air gap between the fuel transfer tube shielding and the containment vessel is a possible source for radiation streaming.				
				Action W - Westinghouse is currently evaluating several design alternatives to address this issue.				
1211	NRR/TERB	12.4.2-3	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should include in the SSAR COL Action Item 12.4.2-2, related to control of access to the fuel transfer tube.				
				Closed - this Combined License item was added to Section 12.3 in Revision 3 of the SSAR.				
1212	NRR/TERB	12.4.4-1	DSER-OI		Action W	Inactive		
				Westinghouse should respond to Q471.24-26, related to the radiation monitoring system.				
				Action W - Westinghouse response to subject RAIs is currently undergoing internal review. (see open item #21).				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '12*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1213	NRR/TERB	12.4.4-?	DSER-OI		Closed	Inactive		11/7/94
				Westinghouse should respond to Q471.23, related to the sensitivity of the airborne radiation monitors.				
				Closed - the response to RAI 471.23 was transmitted to the NRC November 7, 1994				
1214	NRR/TERB	12.4.4-3	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should identify in the SSAR the COL Action Item related to the criteria and methods for obtaining representative in-plant airborne radioactivity concentrations in all work areas, as COL Action Item 12.4.4-1.				
				Closed - this Combined License item was added to Section 12.3 in Revision 3 of the SSAR.				
1215	NRR/TERB	12.6-1	DSER-OI		Resolved	Inactive		
				Westinghouse should include in the SSAR COL Action Item 12.6-1, related to the organization and procedures that will be used to ensure that personnel radiation exposures will be maintained ALARA.				
				Resolved - SSAR section 12.5 will be revised to include this Combined License item (SSAR Rev 3).				
1827	NRR/TERB	12.4.4-1	DSER-CN		Closed	Inactive		
				12.4.4-1 Westinghouse should verify in the SSAR that the AP600 design will have four detectors mounted on the inner containment wall, separated by approximately 90 azimuth, and an unobstructed representative volume of the containment atmosphere will be provided to the detectors.				
				Closed -Information currently in the AP600 SSAR.				
1939	NRR/TERB	12.2.1-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				12.2.1-1 The COL applicant should submit an operational "As Low As Reasonably Achievable" (ALARA) policy, which conforms to the requirements of 10 CFR 20 and the recommendations of RG 8.8, RG 1.8, and RG 8.10.				
				Closed - SSAR section 12.1 has been revised to include this Combined License item (SSAR Rev 3).				
1940	NRR/TERB	12.2.3-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				12.2.3-1 The COL applicant should state its intention to follow the guidance contained in the RGs listed in Section 12.2.3 of this report, or state what alternatives will be used.				
				Closed - SSAR section 12.1 has been revised to include this Combined License item (SSAR Rev 3).				
1941	NRR/TERB	12.3.1-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				12.3.1-1 The COL applicant should identify additional contained radiation sources, used for instrument calibration or radiography, for staff review.				
				Closed - SSAR Section 12.2 has been revised to include this Combined License item (SSAR Rev. 3)				
1942	NRR/TERB	12.4.2-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				12.4.2-1 The COL applicant should provide adequate administrative controls (lock and access control procedures) in order to limit access to the reactor cavity.				
				Closed - this Combined License item was added to Section 12.3 in Revision 3 of the SSAR.				
1943	NRR/TERB	12.4.2-2	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				12.4.2-2 The COL applicant should provide adequate administrative controls (lock and access control procedures) in order to limit access to the fuel transfer tube during refueling operations.				
				Closed - this Combined License item was added to Section 12.3 in Revision 3 of the SSAR.				

AP600 Open Item Tracking System Database: Executive Summary

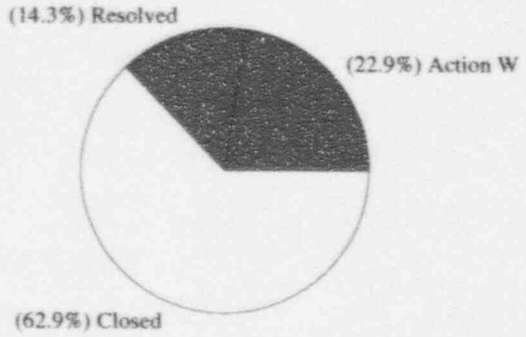
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Selection: [type] like 'dser*' And [DSER Section] like '12*' Sorted by Item #

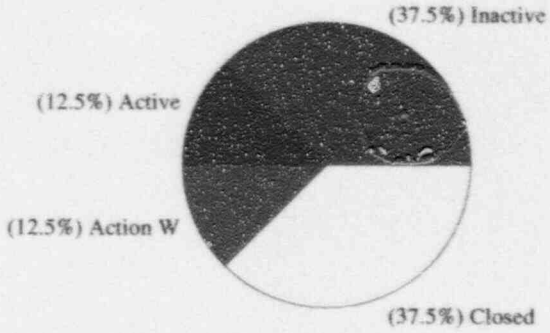
Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1944	NRR/TERB	12.4.4-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				12.4.4-1 The COL applicant should provide the criteria and methods for obtaining representative in-plant airborne radioactivity concentrations in all work areas.				
				Closed - this Combined License item was added to Section 12.3 in Revision 3 of the SSAR.				
1945	NRR/TERB	12.6-1	DSER-COL		Resolved	Inactive	NTD-NRC-95-4464	
				12.6-1 The COL applicant should provide information related to the organization and procedures that will be used to ensure that personnel radiation exposures will be maintained ALARA.				
				Resolved - SSAR section 12.5 will be revised to include this Combined License item (SSAR Rev 3).				

Open Item Status - Chapter 13 (Conduct of Ops)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	0	0	8	0	5	5	18
DSER-Confirmatory	0	0	0	0	0	0	0	0	0
DSER-COL	0	0	0	0	0	0	0	17	17
Subtotal	**0**	**0**	**0**	**0**	**8**	**0**	**5**	**22**	**35**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	0	0
Meeting-OI	3	0	1	0	1	0	0	3	8
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**3**	**0**	**1**	**0**	**1**	**0**	**0**	**3**	**8**
Total	**3**	**0**	**1**	**0**	**9**	**0**	**5**	**25**	**43**

Westinghouse Status as of 29-May-95

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '13*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1216	NRR/TQMB	13.1-1	DSER-OI		Resolved	Inactive		
				Westinghouse should add COL Action Item 13.1-1 to the SSAR for the COL applicant to address the organizational structure of the COL applicant.				
				Resolved - The COL information item to include the management structure of the COL organization will be added to the SSAR, Ssection 13.1				
1217	NRR/TQMB	13.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should add COL Action Item 13.2-1 to the SSAR for the COL applicant to address personnel training by the COL applicant.				
				Closed -The COL information item to include the management structure of the COL organization was added to the SSAR, Section 13.2 (Revision 3)				
1218	NRR/TERB	13.3-1	DSER-OI		Closed	Action W	NTD-NRC-95-4464	
				Westinghouse should add COL Action Item 13.3-1 to the SSAR for the COL applicant to address site-specific aspects of emergency planning.				
				Closed -A COL information item to address the site specific aspects of emergency planning was added to the SSAR, Section 13.3 (Revision 3).				
1219	NRR/TERB	13.3-2	DSER-OI		Action W	Action W		
				Westinghouse should incorporate information on emergency response facilities.				
				Action W - A cross reference will be provided in Chapter 13.3 that directs the reader to the locations in the SSAR where the OSC, TSC, onsite decontamination facility and any other emergency response facilities are located.				
1220	NRR/TERB	13.3-3	DSER-OI		Action W	Action W		
				Westinghouse should describe the size of the technical support center (TSC).				
				Action W - The conformance of the TSC with NUREG-0696 will be addressed in Chapter 18.11				
1221	NRR/TERB	13.3-4	DSER-OI		Action W	Action W		
				Westinghouse should demonstrate the ability of the TSC to meet habitability requirements.				
				Action W - The conformance of the TSC to meet the habitibility requirements of NUREG-0737 when electrical power is available will be addressed in Chapter 18.11				
1222	NRR/TERB	13.3-5	DSER-OI		Action W	Action W		
				Westinghouse should demonstrate the ability of the main control room to support the appropriate number of staff when the TSC is unavailable.				
				Action W - The ERG development will provide the task analysis necessary to determine the number of staff required to support main control room poeration and the required TSC functions. The capability of the MRC to support this staffing level will be provided.				
1223	NRR/TERB	13.3-6	DSER-OI		Action W	Action W		
				Westinghouse should reference RG 1.101.				
				Action W - Westinghouse will reexamine the applicability of RG 1.101 to the AP600. If deemed appropriate, RG 1.101 will be included as an applicable reference to Section 13.3 of the SSAR.				
1224	NRR/TQMB	13.4-1	DSER-OI		Resolved	Inactive		
				Westinghouse should add COL Action Item 13.4-1 to the SSAR for the COL applicant to address the operational review for the plant.				
				Resolved - A COL information item will be added to Section 13.4 of the SSAR to address the operational review of the plant				
1225	NRR/TQMB	13.5.1-1	DSER-OI		Resolved	Inactive		
				Westinghouse should add COL Action Item 13.5.1-1 to the SSAR for the COL applicant to address administrative procedures for the plant.				
				Resolved - A COL information item will be added to Chapter 13.5 of the SSAR to address administrative proceedures for the plant				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '13*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1226	NRR/TQMB	13.5.2-1	DSER-OI		Resolved	Inactive		
				Westinghouse should add COL Action Item 13.5.2-1 to the SSAR for the COL applicant to address operating and maintenance procedures for the plant.				
				Resolved - A COL information item will be added to Section 13.5 of the SSAR to address the development of operating and maintainance procedures for the plant.				
1227	NRR/TSGB	13.6-1	DSER-OI		Closed	Inactive		
				Review of Westinghouse's revised security plan.				
				Closed - see SSAR section 13.6.1 ans white paper sent to NRC on 03/21/95, "AP600 Performance Based Security Design Approach, SES-ASR-001, Rev. A."				
1228	NRR/TSGB	13.6.3.2-1	DSER-OI		Action W	Inactive		
				Westinghouse should provide an analysis of the vulnerabilities of the design to sabotage.				
				Action W - Westinghouse will provide a vulneravibility analysis as a part of the preliminary security plan in August 1995				
1229	NRR/TSGB	13.6.5.1-1	DSER-OI		Resolved	Inactive		
				Westinghouse should describe whether the protected area perimeter abuts or crosses water boundaries.				
				Resolved - The protected area perimeter does not abut or crosses water boundaries. Will be updated in August, 1995 as a part of the AP600 security plan update.				
1230	NRR/TSGB	13.6.5.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should identify the vital equipment list for the security plan				
				Closed - See SSAR Rev3 section 13.6.1.				
1231	NRR/TSGB	13.6.7.2-1	DSER-OI		Action W	Inactive		
				Westinghouse should re-evaluate an internal threat in the security plan.				
				Action W - SECY-93-326 will be addressed in the revised security plan (DSER-OI 13.6-1)				
1232	NRR/TSGB	13.6.10-1	DSER-OI		Action W	Inactive		
				Westinghouse should evaluate the interdiction capability of the security response force.				
				Action W - The capabilities of the security response force will be addressed as a part of the revised security plan (DSER-OI 13.6-1)				
1233	NRR/TSGB	13.7-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4464	
				Westinghouse should reference ANS 3.3-1988.				
				Closed - See section 13.7 of Revision 3 of the SSAR.				
1946	NRR/TQMB	13.1-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				13.1-1 The COL applicant should describe its organizational structure.				
				Closed -The COL information item to include the management structure of the COL organization was added to the SSAR, Section 13.1 (Revision 3).				
1947	NRR/TQMB	13.2-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				13.2-1 The COL applicant should describe its personnel training.				
				Closed -The COL information item to include personnel training of the COL organization was added to the SSAR, Section 13.2 (Revision 3).				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '13*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1948	NRR/TERB	13.3-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				13.3-1 The COL applicant should address emergency planning issues.				
				Closed -A COL information item to include the emergency planning issues was added to the SSAR, Section 13.3 (Revision 3).				
1949	NRR/TQMB	13.4-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				13.4-1 The COL applicant should address the operational review.				
				Closed - A COL information item was added to Section 13.4 of the SSAR (Revision 3) to address the operational review of the plant				
1950	NRR/TQMB	13.5.1-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				13.5.1-1 The COL applicant should develop and describe its administrative procedures.				
				Closed - A COL information item was added to the SSAR, Section 13.5, (Revision 3) to address administrative proceedures for the plant				
1951	NRR/TQMB	13.5.2-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				13.5.2-1 The COL applicant should develop and describe the operating and maintenance procedures.				
				Closed - A COL information item was added to Section 13.5 of the SSAR (Revision 3) to address the development of operating and maintainance procedures for the plant.				
1952	NRR/TSGB	13.6.1-1	DSER-COL		Closed	Inactive		
				13.6.1-1 The COL applicant should develop and describe the preliminary planning document for industrial security.				
				Closed - COL information item added to Section 13.6.1 the SSAR Rev. 3 to address the security plan for the AP600.				
1953	NRR/TSGB	13.6.2-1	DSER-COL		Closed	Inactive		
				13.6.2-1 The COL applicant should develop and describe the security plan.				
				Closed - COL Information Item added to SSAR Rev. 3 section 13.6.1 for the COL applicant to provide a security plan				
1954	NRR/TSGB	13.6.2-2	DSER-COL		Closed	Inactive		
				13.6.2-2 The COL applicant should confirm the operational status of the physical security plan, safeguards contingency plan, and guard qualification and training plan				
				Closed - COL Information item added to Section 13.6.1 of the SSAR Rev. 3 for the COL applicant to confirm the operational status of the physical security plan, safeguards contingency plan, and guard qualification and training plan.				
1955	NRR/TSGB	13.6.4-1	DSER-COL		Closed	Inactive		
				13.6.4-1 The COL applicant should describe its security organization.				
				Closed - COL information item added to section 13.6.1 of SSAR Rev. 3 for the COL applicant to address its security organization				
1956	NRR/TSGB	13.6.5.1-1	DSER-COL		Closed	Inactive		
				13.6.5.1-1 The COL applicant should determine the protected area boundary.				
				Closed - The protected area boundary is provided as a part of the AP600 Security plan SSAR Rev. 3 section 13.6.5.1				
1957	NRR/TSGB	13.6.5.2-1	DSER-COL		Closed	Inactive		
				13.6.5.2-1 The COL applicant should evaluate the completeness of the vital equipment list.				
				Closed - COL information item added to Section 13.6.13.2 of the SSAR Rev.3 for the COL applicant to evaluate the completeness of the vital equipment list.				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '13*' Sorted by Item #

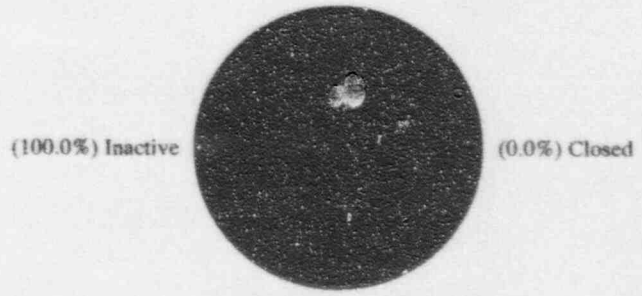
Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1958	NRR/TSGB	13.6.5.2-2	DSER-COL		Closed	Inactive		
				13.6.5.2-2 The COL applicant should confirm the acceptable location of vital equipment.				
				Closed - COL information item added to Section 13.6.13.2 of the SSAR for the COL applicant to confirm the location of the vital equipment.				
1959	NRR/TSGB	13.6.6-1	DSER-COL		Closed	Inactive		
				13.6.6-1 The COL applicant should describe its access control.				
				Closed - COL information item added to SSAR Rev. 3 section 13.6.13.3 for the COL applicant to describe its access control program.				
1960	NRR/TSGB	13.6.7.1-1	DSER-COL		Closed	Inactive		
				13.6.7.1-1 The COL applicant should describe the intrusion detection system.				
				Closed - COL information item added to SSAR Rev. 3 section 13.6.13.3 for the COL applicant to describe its intrusion detection system				
1961	NRR/TSGB	13.6.9-1	DSER-COL		Closed	Inactive		
				13.6.9-1 The COL applicant should describe the testing and maintenance requirements for the plant security system.				
				Closed - COL Information Item added to Section 13.6.13.1 of the SSAR Rev. 3 for the COL applicant to describe the testing and maintenance requirements for the plant security system.				
1962	NRR/TSGB	13.6.10-1	DSER-COL		Closed	Inactive		
				13.6.10-1 The COL applicant should describe response requirements of the security plan.				
				Closed - COL information item added for the COL applicant to describe the response requirements of the security plan in SSAR Rev. 3 section 13.6.13.1.				

Open Item Status - Chapter 14 (Initial Test Prog)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	0	1	24	0	1	0	26
DSER-Confirmatory	0	0	0	0	1	0	1	0	2
DSER-COL	0	0	0	0	6	0	0	0	6
Subtotal	**0**	**0**	**0**	**1**	**31**	**0**	**2**	**0**	**34**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	0	0
Meeting-OI	1	0	0	0	0	0	0	0	1
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
Total	**1**	**0**	**0**	**1**	**31**	**0**	**2**	**0**	**35**

Westinghouse Status as of 29-May-95

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '14*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1234	NRR/TQMB	14.2.1-1	DSER-OI		Action W	Inactive	
				Westinghouse should acceptably address the issues identified in Q260.23, and identify items (discussed in Section 14.2.1 of this report) that are not addressed by the initial test program, and justify their exclusions.			
				Action W - Chapter 14 of the SSAR (Initial Test Program) is being revised. Section 14.2.1 of Chapter 14 will be revised as identifed in the August 8, 1994 response to RAI 260.23.			
1235	NRR/TQMB	14.2.2-1	DSER-OI		Resolved	Inactive	
				In Section 14.2.2 of the SSAR, Westinghouse should replace the phrase "NRC staff personnel from the Office of Inspection and Enforcement" with "NRC inspection personnel."			
				Resolved - Chapter 14 of the SSAR is being revised. Section 14.2.2 will be revised to replace the phrase "NRC staff personnel from the Office of Inspection and Enforcement" with "NRC inspection personnel."			
1236	NRR/TQMB	14.2.2-2	DSER-OI		Action W	Inactive	
				Westinghouse should add to the SSAR the identified COL Action Items.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. The COL applicant responsibilities will be addressed as part of this revision.			
1237	NRR/TQMB	14.2.2.1-1	DSER-OI		Action W	Inactive	
				Westinghouse should include in the SSAR a description of the organizational units and any augmented organizations or other personnel that will manage, supervise, or execute any phase of the ITP in a manner consistent with the guidance in Section 14.2.2 of RG 1.70.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			
1238	NRR/TQMB	14.2.2.2-1	DSER-OI		Action W	Inactive	
				Westinghouse should add COL Action Item 14.2.2.2-1 to the SSAR.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. The COL applicant responsibilities will be addressed as part of this revision.			
1239	NRR/TQMB	14.2.8-1	DSER-OI		Action W	Inactive	
				Westinghouse should modify preoperational test abstract 14.2.8.1.80 in Appendix 1A of the SSAR to include the applicability of this testing to subsequent AP600 plants, or to provide appropriate justification for this exception to RG 1.68, Appendix A, Items 1.a.(2)(d) and 1.h.(2).			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			
1240	NRR/TQMB	14.2.8-2	DSER-OI		Action W	Inactive	
				Westinghouse should modify preoperational test abstract 14.2.8.1.85 in Appendix 1A of the SSAR to include the applicability of this testing to subsequent AP600 plants, or to provide appropriate justification for this exception to RG 1.79 and RG 1.68, Appendix A, Item 1.h.(1).			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '14*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1241	NRR/TQMB	14.2.8-3	DSER-OI		Action W	Inactive	
				Westinghouse should modify preoperational test abstract 14.2.8.1.87 in Appendix 1A of the SSAR to include the applicability of this testing to subsequent AP600 plants, or to provide appropriate justification for this exception to RG 1.139 and RG 1.68, Appendix A, Items 1.d.(5), 1.d.(8), and 1.h.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			
1242	NRR/TQMB	14.2.8-4	DSER-OI		Action W	Inactive	
				Westinghouse should modify preoperational test abstract 14.2.8.1.94 in Appendix 1A of the SSAR to include the applicability of this testing to subsequent AP600 plants, or to provide appropriate justification for this exception to RG 1.68.2, as well as RP C.3 and C.4.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			
1243	NRR/TQMB	14.2.8-5	DSER-OI		Action W	Inactive	
				Westinghouse should modify preoperational test abstract 14.2.8.1.97 in Appendix 1A of the SSAR to include the applicability of this testing to subsequent AP600 plants, or to provide appropriate justification for this exception to RG 1.68, Appendix A, Item 1.h.(3).			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			
1244	NRR/TQMB	14.2.8-6	DSER-OI		Action W	Inactive	
				Westinghouse should modify preoperational test abstract 14.2.8.1.100 in Appendix 1A of the SSAR to include the applicability of this testing to subsequent AP600 plants, or provide appropriate justification for this exception to RG 1.68, Appendix A, Item 1.n.(14)(f).			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			
1245	NRR/TQMB	14.2.8-7	DSER-OI		Action W	Inactive	
				Westinghouse should add additional criteria to startup test abstract 14.2.8.2.34 in Appendix 1A of the SSAR.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			
1246	NRR/TQMB	14.2.8-8	DSER-OI		Action W	Inactive	
				Westinghouse should modify startup test abstract 14.2.8.2.38 in Appendix 1A of the SSAR to include the applicability of this testing to subsequent AP600 plants, or to provide appropriate justification for this exception to RG 1.68, Appendix A, Items 5.b and 5.y.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			
1247	NRR/TQMB	14.2.8-9	DSER-OI		Action W	Inactive	
				Westinghouse should modify startup test abstract 14.2.8.2.41 in Appendix 1A of the SSAR to include the applicability of this testing to subsequent AP600 plants, or to provide appropriate justification for this exception to RG 1.68, Appendix A, Item 5.j.j.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			

Selection: [type] like 'dser*' And [DSER Section] like '14*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1248	NRR/TQMB	14.2.8-10	DSER-OI		Action W	Inactive	
				Westinghouse should modify startup test abstract 14.2.8.2.47 in Appendix 1A of the SSAR to include the applicability of this testing to subsequent AP600 plants, or to provide appropriate justification for this exception to RG 1.68, Appendix A, Item 5.i.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			
1249	NRR/TQMB	14.2.8-11	DSER-OI		Action W	Inactive	
				Westinghouse should modify startup test abstract 14.2.8.2.51 in Appendix 1A of the SSAR to include the applicability of this testing to subsequent AP600 plants, or to provide appropriate justification for this exception to RG 1.68, Appendix A, Item 5.n.n.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			
1250	NRR/TQMB	14.2.8-12	DSER-OI		Action W	Inactive	
				Westinghouse should modify startup test abstract 14.2.8.2.52 in Appendix 1A of the SSAR to include the applicability of this testing to subsequent AP600 plants, or to provide appropriate justification for this exception to RG 1.68, Appendix A, Item 5.h.h.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			
1251	NRR/TQMB	14.2.8-13	DSER-OI		Action W	Inactive	
				Westinghouse should modify startup test abstract 14.2.8.2.55 in Appendix 1A of the SSAR to include the applicability of this testing to subsequent AP600 plants, or to provide appropriate justification for this exception to RG 1.68, Appendix A, Item 5.l.l.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			
1252	NRR/TQMB	14.2.8-14	DSER-OI		Action W	Inactive	
				Westinghouse should revise Section 14.2.8 of the SSAR to reconcile its contents with that of Section 14.2.2 of the SSAR, as discussed above in relation to Q260.24.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			
1253	NRR/TQMB	14.2.8-15	DSER-OI		Action W	Inactive	
				Westinghouse should revise Section 14.2.8 of the SSAR, as well as the individual test methods or performance criteria, to provide specific references to the basis for determining acceptable system and component performance.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			
1254	NRR/TQMB	14.2.8-16	DSER-OI		Action W	Inactive	
				Westinghouse should either expand the test abstracts of Section 14.2.8 of the SSAR to address the issued identified in Appendix A to RG 1.68, or revise Appendix 1A of the SSAR to provide technical justification for any exceptions taken.			
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.			

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '14*' Sorted by Item #

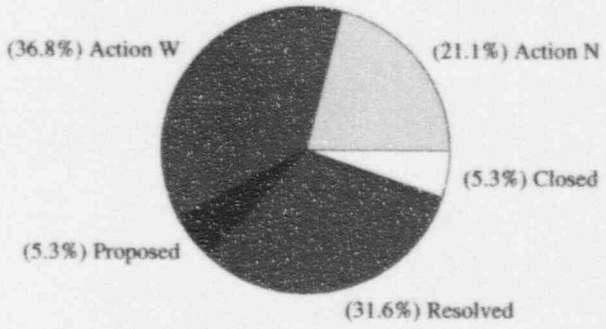
Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1255	NRR/TQMB	14.2.8.3-1	DSER-OI		Action W	Inactive		
				Westinghouse should acceptably address the issues identified in Q260.30.				
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.				
1256	NRR/TQMB	14.2.8.4-1	DSER-OI		Action W	Inactive		
				Westinghouse should acceptably address the issues identified in Q260.31.				
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.				
1257	NRR/TQMB	14.2.9-1	DSER-OI		Action W	Inactive		
				Westinghouse should acceptably address the issues identified in Q260.32.				
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.				
1258	NRR/TQMB	14.2.9-2	DSER-OI		Action W	Inactive		
				Westinghouse should acceptably address the issues identified in Q260.25.				
				Action W - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.				
1259	NRR/PDST	14.3-1	DSER-OI		Action N	Inactive		
				The staff will review the revised ITAAC when it becomes available.				
				Action N - The staff will review the revised ITAAC when it becomes available.				
1828	NRR/TQMB	14.2.7-1	DSER-CN		Action W	Inactive		
				14.2.7-1 Westinghouse will revise the SSAR to state that the startup administrative manual (procedures) will be the responsibility of the COL applicant, as will other documents that delineate the test program schedule for the initial fuel load and for each major test program.				
				Action W - Chapter 14 is being revised to incorporate NRC review comments. The COL applicant responsibilities will be addressed as part of this revision.				
1829	NRR/TQMB	14.2.8-1	DSER-CN		Resolved	Inactive		
				14.2.8-1 Westinghouse will make the appropriate changes to the preoperational and startup test abstracts, pending satisfactory resolution of Q210.53 and Q210.58.				
				Resolved - Chapter 14 is being revised to incorporate NRC review comments. This open item will be addressed in conjunction with the revision of Chapter 14.				
1963	NRR/TQMB	14.2.2-1	DSER-COL		Action W	Inactive		
				14.2.2-1 The COL applicant should provide for staff review, the scoping document (i.e., preoperational and startup test specifications) containing testing objectives and acceptance criteria applicable to Westinghouse's scope of design responsibility.				
				Action W - Chapter 14 is being revised to incorporate NRC review comments. The COL applicant responsibilities will be addressed as part of this revision.				

Selection: [type] like 'dser*' And [DSER Section] like '14*' Sorted by Item #

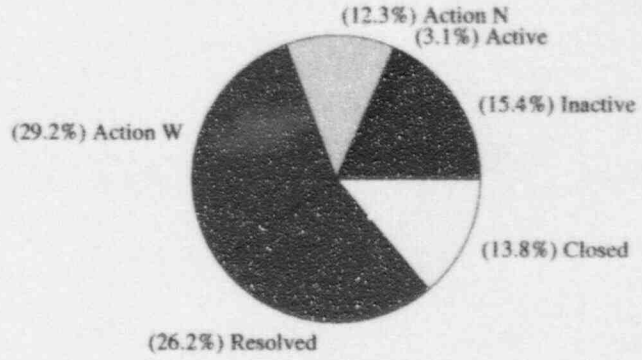
Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1964	NRR/TQMB	14.2.2-2	DSER-COL		Action W	Inactive		
				14.2.2-2 The COL applicant should provide for staff review, the scoping document, and any related documents, which delineate plant operational conditions at which tests are to be conducted, testing methodologies to be utilized, specific data to be collected, and acceptable data reduction techniques to be utilized.				
				Action W - Chapter 14 is being revised to incorporate NRC review comments. The COL applicant responsibilities will be addressed as part of this revision.				
1965	NRR/TQMB	14.2.2-3	DSER-COL		Action W	Inactive		
				14.2.2-3 The COL applicant should provide for staff review, the scoping document that delineates any reconciliation methods needed to account for test conditions, methods, or results if testing is performed at conditions other than representative of design operating conditions.				
				Action W - Chapter 14 is being revised to incorporate NRC review comments. The COL applicant responsibilities will be addressed as part of this revision.				
1966	NRR/TQMB	14.2.2-4	DSER-COL		Action W	Inactive		
				14.2.2-4 The COL applicant should provide for staff review, the approved preoperational test procedures (to be provided approximately 60 days before their intended use, and startup test procedures (to be provided approximately 60 days before fuel loading).				
				Action W - Chapter 14 is being revised to incorporate NRC review comments. The COL applicant responsibilities will be addressed as part of this revision.				
1967	NRR/TQMB	14.2.2.2-1	DSER-COL		Action W	Inactive		
				14.2.2.2-1 The COL applicant should provide the startup administrative manual, which will delineate the review, evaluation, and approval of test results, for staff review.				
				Action W - Chapter 14 is being revised to incorporate NRC review comments. The COL applicant responsibilities will be addressed as part of this revision.				
1968	NRR/TQMB	14.2.8-1	DSER-COL		Action W	Inactive		
				14.2.8-1 The COL applicant will provide the identified information associated with startup test abstract 14.2.8.2.34.				
				Action W - Chapter 14 is being revised to incorporate NRC review comments. The COL applicant responsibilities will be addressed as part of this revision.				

Open Item Status - Chapter 15 (Accident Anal.)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	0	4	7	1	5	1	18
DSER-Confirmatory	0	0	0	0	0	0	0	0	0
DSER-COL	0	0	0	0	0	0	1	0	1
Subtotal	**0**	**0**	**0**	**4**	**7**	**1**	**6**	**1**	**19**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	0	0
Meeting-OI	10	0	2	8	19	0	17	9	65
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**10**	**0**	**2**	**8**	**19**	**0**	**17**	**9**	**65**
Total	**10**	**0**	**2**	**12**	**26**	**1**	**23**	**10**	**84**

Westinghouse Status as of 29-May-95

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Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '15*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1260	NRR/SRXB	15.2-1	DSER-OI		Action W	Inactive		
				Westinghouse should re-submit the Chapter 15 accident analysis when its analysis codes have been verified and validated.				
				Action W - Preliminary chapter 15 accident analysis sections will be submitted for NRC review. Final SSAR Chapter 15 sections will be resubmitted upon completion of code V&V activities.				
1261	NRR/SRXB	15.2-2	DSER-OI		Action W	Inactive		
				Westinghouse should address the sensitivities of various system elevations and configurations (by sensitivity studies, for example) to support the inspection, test, and analyses acceptance criteria (ITAAC) implementation.				
				Action W - Sensitivities to be addressed as part of ITAAC development.				
1262	NRR/TERB	15.3-1	DSER-OI		Resolved	Resolved		
				During the NRC/Westinghouse source term meeting of August 29 and 30, 1994, Westinghouse stated that it would revise its fission product release fractions, in future SSAR revisions, to reflect the staff position, following the resolution of all remaining source term issues.				
				Resolved - Consistent with the NRC/Westinghouse discussions, Westinghouse will be limiting the extent of the accident to exclude ex-vessel and late in-vessel releases. (This status was agreed to in meeting with NRC on 5/23/95.)				
1263	NRR/TERB	15.3-2	DSER-OI		Action N	Action N		
				The staff has not yet completed its review of Westinghouse's technical positions to determine if the fission product release timing, along with the bounding reactor accident sequences selected for the source term applications, are adequate for the AP600 design.				
				Action NRC: (This status was agreed to in meeting with NRC on 5/23/95.)				
1264	NRR/TERB	15.3-3	DSER-OI		Closed	Closed		
				During the NRC/Westinghouse meeting of August 29 and 30, 1994, Westinghouse agreed to the use the staff's value of 0.2-percent iodine in organic form for the AP600 design certification review. Westinghouse should revise the SSAR to reflect the use of the staff's value of 0.15-percent iodine in organic form for the AP600 design.				
				Closed - Per the 3/8/95 telecon between Jay Lee (NRC) and Jim Grover & Cindy Haag, the organic iodine fraction of 0.15% specified in the final version of NUREG-1465 is to be used in the dose analysis. Since this value is consistent with the organic fraction currently used in the dose analyses reported in the SSAR, there is no further action required relative to this item. (This status of "closed" was agreed to in meeting with NRC on 5/23/95.)				
1265	NRR/TERB	15.3-4	DSER-OI		Action W	Inactive		
				The issue of chemical addition to, and mixing of, the containment water following a design-basis accident (DBA), to control and maintain pH of the water in the containment above 7, is not yet resolved.				
				Action W - System design for PH control provided in Revision 2 of SSAR. Westinghouse action to provide system analysis. Discussion with J. Lee (NRC) ongoing.				
1266	NRR/TERB	15.3-5	DSER-OI		Action N	Action N		
				The staff has not yet completed its review of the aerosol removal modeling and removal rates which were proposed by Westinghouse during the NRC/Westinghouse meeting of August 29 and 30, 1994. The staff will also perform an independent evaluation of the bounding accident sequence, and corresponding aerosol behavior and removal rates to the selected bounding accident sequence in the containment following a DBA.				
				Action NRC: (This status was agreed to in meeting with NRC on 5/23/95.)				
1267	NRR/TERB	15.3.2-1	DSER-OI		Action N	Action N		
				The staff's independent radiological consequence assessment of the rod cluster control assembly (RCCA) ejection accident is not yet complete.				
				Action NRC: (This status was agreed to in meeting with NRC on 5/23/95.)				

 Total Records: 19

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '15*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1268	NRR/TERB	15.3.4-1	DSER-OI		Resolved	Inactive		
				Since no specific site is yet associated with the AP600 standard design, Westinghouse defined the site boundaries only in terms of various hypothetical atmospheric relative concentrations (x/Q) values at at fixed EAB and LPZ distances. If site-specific atmospheric dispersion factors are greater than the envelope values (e.g. less dispersion) usied in this evaluation, a COL applicant may have to consider compensatory measures to be relied upon in order to meet the relevant requirements of 10 CFR Part 100 and GDC 19. This is COL Action Item 15.3.4-1. Westinghouse should include COL Action Item 15.3.4-1, related to the identification of compensatory measures to be relied upon in order to meet the relevant requirements of 10 CFR Part 100 and GDC 19 in the SSAR.				
				All COL Action Items will be listed in Chapter 1 of the SSAR. Mention of COL Action Item 15.3.4-1 will be included in a new Sub-Section within Section 15.3.4 of the revised SSAR.				
1269	NRR/TERB	15.3.4-2	DSER-OI		Action W	Action W		
				The staff will review the loss-of-coolant analysis issue in conjunction with Westinghouse technical positions on fission- product release timing which is to be submitted in late 1994 for staff review.				
				Action W: Westinghouse is reanalyzing the LOCA doses based on a large break LOCA. (This status was agreed to in meeting with NRC on 5/23/95.)				
1270	NRR/SRXB	15.3.4-3	DSER-OI		Action W	Inactive		
				The staff awaits Westinghouse's submittal of the proposed Emergency Response Guidelines (ERGs) for the AP600, in order to complete its safety review.				
				The ERGs and the background documents submitted to NRC end of May 1995 with the following exceptions: ERG Background Documents for guidelines AE-1, AES-1.1, AES-1.2, and AE-2 will be submitted. The Low Power/Shutdown ERGs will also be submitted.				
1271	NRR/TERB	15.3.4-4	DSER-OI		Action W	Action W		
				The staff's independent radiological consequences assessment of a hypothetical LOCA is not yet complete.				
				Action W: In order for staff to complete the determination of radiological consequences for the LOCA, Westinghouse needs to provide control room ingress/egress modeling, rate of unfiltered inleakage, and control room occupancy information. (This status was agreed to in meeting with NRC on 5/23/95.)				
1272	NRR/TERB	15.3.5-1	DSER-OI		Action W	Inactive		
				The staff's independent radiological consequence assessment for the SGTR event is not yet complete.				
				The ERGs and the background documents submitted to NRC end of May 1995 with the following exceptions: ERG Background Documents for guidelines AE-1, AES-1.1, AES-1.2, and AE-2 will be submitted. The Low Power/Shutdown ERGs will also be submitted.				
1273	NRR/TERB	15.3.6-1	DSER-OI		Resolved	Resolved		
				For the single dropped fuel assembly accident, Westinghouse assumed that less than 3-percent of fission product core inventory will be present in the fuel gap, while a 5-percent fission product inventory is assumed in NUREG-1465. Westing- house should justify the use of this lower value.				
				Resolved - Based on the final version of NUREG-1465, the NRC source term has been revised to have a 3 percent gap fraction. However, based on discussions with the NRC in the 5/23/95 meeting, this gap fraction is to be adjusted to 3.6% (for the I-131 nuclide only) to reflect concerns and uncertainties regarding the applicablity of the source term to high burnup fuel. This 20% increase in the I-131 gap fraction is modeled after material in NUREG/CR-5009. (This status was agreed to in meeting with NRC on 5/23/95.)				

Selection: [type] like 'dser*' And [DSER Section] like '15*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1274	NRR/TERB	15.3.6-2	DSER-OI		Resolved	Resolved		
				For the single dropped fuel assembly accident, Westinghouse assumed an iodine DF of 250 in the fuel pit, through 7.01 meters (23 feet) of water, while a DF of 100 is listed in RG 1.25 for the fuel handling accident. Westinghouse should justify the use of this higher DF value.				
				Resolved: Westinghouse will use a DF of 133 for elemental iodine (consistent with RG 1.25) in the next revision of the SSAR analysis. The use of the DF of 100 specified in RG 1.25 for overall iodine removal is inconsistent with source term changes made by the NRC and will not be used. (This status was agreed to in meeting with NRC on 5/23/95.)				
1275	NRR/TERB	15.3.6-3	DSER-OI		Resolved	Resolved		
				The staff is currently reviewing the spent fuel pit boiloff rate, boiloff time, and iodine partition factor for the spent fuel pit water.				
				Resolved: The doses resulting from spent fuel boiling after a fuel handling accident will no longer be addressed in the SSAR thus eliminating questions on the methodology and assumptions. Staff has indicated that this event does not need to be addressed and that it is not in the SRP. (This status was agreed to in meeting with NRC on 5/23/95.)				
1276	NRR/TERB	15.3.6-4	DSER-OI		Action N	Action N		
				The staff's independent radiological consequence assessment of the fuel handling accident is not yet complete.				
				Action NRC: (This status was agreed to in meeting with NRC on 5/23/95.)				

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1277	NRR/TERB	15.3.6-5	DSER-OI		Proposed	Inactive		

Westinghouse has not provided the radiological consequence assessment for dropping a heavy object onto the fuel assemblies in the reactor vessel during refueling operations.

Response:

Unresolved Safety Issue A-36 was established to evaluate NRC requirements and licensee design measures, operating procedures, and technical specifications associated with the movement of heavy loads near spent fuel pools, and over the reactor core during refueling. Issuance of NUREG-0612, "Control of Heavy Loads at Nuclear Power Plants," provided resolution of USI A-36.

The criteria for resolution of heavy loads in NUREG-0612 was presented as two phases. Phase I addressed procedures for load handling, inspection of load handling equipment, operator qualification and training, design of special lifting devices (N14.6.6), design of non-special lifting devices (B30.9), and crane design to B30.2 or CMAA-70. Phase II provided criteria for assuring acceptability of critical loads through the use of electrical interlocks and/or mechanical stops, or alternatively, the use
of single-failure-proof crane design or performance of load drop analyses.

Generic Letter 85-11 presented the results of the NRC's review of licensee responses to the Phase I and Phase II criteria of NUREG-0612. For PWR's, it was concluded from the criteria of NUREG-0612 that two solutions were available: single-failure-proof cranes or detailed load drop analyses. Further investigation of the implementation of the Phase I criteria coincident with a review of the cost/benefit associated with requiring either single-failure-proof cranes or load drop analyses, resulted in the conclusion that implementation of the Phase I criteria will provide sufficient protection such that the risk associated with potential heavy load drops is acceptably small. Therefore, strict adherence to the NUREG-0612 Phase I criteria is sufficient, in lieu of providing single-failure-proof cranes or detailed load drop analysis.

In the case of the AP600 design for Overhead Heavy Load Handling systems, in particular the polar crane in the containment building, SSAR Section 9.1.5 states that the polar crane is designed to be single-failure-proof and is classified as seismic Category I. The design of the polar crane is based on ASME NOG-1, which meets the intent of the earlier standards referenced in NUREG-0612 (ANSI B30.2 and CMAA-70). NOG-1 also provides design guidance that is consistent with NUREG-0554 (referenced by NUREG-0612 for the design of single-failure-proof cranes). In addition, the design and operation of the polar will be consistent with the Phase I criteria of NUREG-0612.

In summary, the polar crane for the AP600 is a single-failure-proof system, which will stop and hold a critical load following the credible failure of a single component. The polar crane is designed to support a critical load during and after a safe shutdown earthquake. As a result, the probability of the drop of a critical load is deemed to be acceptably small. Therefore, consistent with the guidance of Generic Letter 85-11, the analysis of dropping a heavy load onto the fuel assemblies in the reactor vessel has not been performed.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1969	NRR/TERB	15.3.4-1	DSER-COL		Resolved	Active		

15.3.4-1 The COL applicant should identify all compensatory measures to be relied upon in order to meet the relevant requirements of 10 CFR Part 100 and GDC 19.

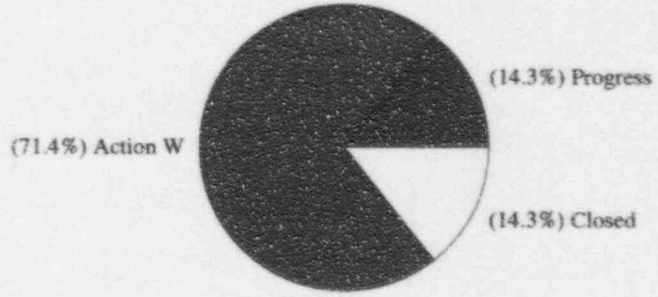
Resolved - All COL Action Items will be listed in Chapter 1 of the SSAR. Mention of COL Action Item 15.3.4-1 will be included in a new Sub-Section within Section 15.3.4 of the revised SSAR.

Open Item Status - Chapter 16 (Tech Specs)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	1	0	1	19	0	0	0	21
DSER-Confirmatory	0	0	0	0	0	0	0	0	0
DSER-COL	0	0	0	0	2	0	0	0	2
Subtotal	**0**	**1**	**0**	**1**	**21**	**0**	**0**	**0**	**23**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	0	0
Meeting-OI	0	1	0	0	5	0	0	1	7
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**1**	**0**	**0**	**5**	**0**	**0**	**1**	**7**
Total	**0**	**2**	**0**	**1**	**26**	**0**	**0**	**1**	**30**

Westinghouse Status as of 29-May-95

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '16*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1278	NRR/OTSB	16.1-1	DSER-OI		Action W	Inactive		
				The staff is currently reviewing Section 4.0 of the TS for consistency with recent industry proposals.				
				Action W - Westinghouse to develop this section consistent with STS and submit as part of the July 1995 submittal				
1279	NRR/OTSB	16.1-2	DSER-OI		Action W	Action W		
				The staff is analyzing submit Section 5.0 of the TS to determine if Westinghouse should provide information on administrative controls for design certification.				
				Action W - review and incorporate the relevant design specific portions of the Administrative control portion of the STS and submit with the July submittal of the T/S.				
1280	NRR/OTSB	16.1-3	DSER-OI		Action W	Inactive		
				The staff has not yet determined whether the current limiting conditions for operation (LCO) during shutdown conditions are adequate, or whether additional requirements are needed.				
				Action W - Revise the technical specifications including the pilot spec's for shutdown presented at the February meeting and appropriate comments in addition to shutdown specifications for other sections as necessary for the revison of the Technical Specifications submittal scheduled in July.				
1281	NRR/OTSB	16.1-4	DSER-OI		Action W	Active		
				Westinghouse proposed a significant revision to LCO 3.0.3, which does not require the reactor coolant system (RCS) temper- ature to be reduced below 200o F. The staff will review this revision when it becomes available.				
				Action W - Submit the revised version of T/S 3.0.3 as presented during the February Meeting, incorporating comments from the Staff, which will result in the plant being required to be in safe shutdown within the time criteria established by the action time criteria developed. The submitted will be within the July version of the T/S.				
1282	NRR/OTSB	16.1-5	DSER-OI		Action W	Action W		
				Westinghouse should format the AP600 TS in accordance with NUREG-1431. The formatting should include correction of the footers and headers				
				Action W - The AP600 T/S will be revised to have formating as per NUREG-1431 and the result will be submitted with the revision of the T/S to be submitted in July.				
1283	NRR/OTSB	16.1-6	DSER-OI		Action W	Inactive		
				Westinghouse should separate the TS and their bases in accor- dance with NUREG-1431.				
				Action W - The AP600 T/S will be revised to have formating and separation as per NUREG-1431 and the result will be submitted with the revision of the T/S to be submitted in July.				
1284	NRR/OTSB	16.1-7	DSER-OI		Action W	Inactive		
				The staff is in the process of reviewing Westinghouse's responses to questions related to the TS, and will verify that the information is incorporated into the SSAR where necessary.				
				Action W - RAI responses that require Technical Specification changes have been identified and will be included as part of the revision process for the Ju'y submittal				
1285	NRR/OTSB	16.1-8	DSER-OI		Action N	Inactive		
				Westinghouse has identified TS-related references in the EPRI URD. The staff will consider these references in its review.				
				Action N - The URD references have been provided and no specific URD issues have been identified by the Staff.				

Total Records: 23

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '16*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1286	NRR/TQMB	16.2.1-1	DSER-OI		Action W	Inactive		
				Westinghouse should revise Section 16.2.1 to include deterministic and other methods with the probabilistic method (i.e., PRA) for determining SSC risk-significance.				
				Action W - Include information in next revision of this section that cites industry experience, information notices, component failure reports and other failure data as tool to be used in the risk-significant SSC identification process.				
1287	NRR/TQMB	16.2.1-2	DSER-OI		Action W	Inactive		
				Westinghouse should revise Section 16.2.1 of the SSAR to state that: a COL applicant referencing the AP600 design will be responsible for developing an effective D-RAP for the completion of design. In addition, the revision should state that the COL applicant will be responsible for reliability activities for risk-significant SSCs to be accomplished before initial fuel load, as required by the applicable D-RAP regula- tion.				
				Action W - Within the next revision of this section add the COL information items as requested.				
1288	NRR/TQMB	16.2.1.1-1	DSER-OI		Action W	Inactive		
				Westinghouse should respond to issues in Q630.1a. Neither the response to Q630.1a nor the Revision 1to SSAR Section 16.2.1.1 resolved Q630.1a.				
				Action W - Include information in next revision of this section that cites, PRA and deterministic criteria to be used in the risk-significant SSC identification process.				
1289	NRR/TQMB	16.2.1.1-2	DSER-OI		Action W	Inactive		
				Westinghouse should response to issues in Q630.1b. Neither the response to Q630.1b nor the Revision 1to SSAR Section 16.2.1.1 resolved Q630.1b. RAI 630.1b It appears that the terms "risk-significant SSCs" and "safety-related and important nonsafety-related systems that provide defense-in-depth or that are used in the PRA evaluation to provide credit for event mitigation" are used interchangeably. Consistent use of the term "risk significant SSCs" is preferred by the staff. Therefore, revise Section 16.2.1.1 of the SSAR so that consistent terminology is used.				
				Action W - SSAR section 16.2 will be updated to provide a method for determining risk-significant SSCs for RAP as determined by probablistic, deterministic or other methods. An example will also be provided.				
1290	NRR/TQMB	16.2.1.1-3	DSER-OI		Action W	Inactive		
				Westinghouse should response to issues in Q630.1c. Neither the response to Q630.1c nor the Revision 1to SSAR Section 16.2.1.1 resolved Q630.1c. Q630.1c The scope of the RAP should be consistent with 10 CFR 50.65 (the maintenance rule). A RAP should encompass those SSCs identified as those that (1) are relied upon to remain functional during and following a design basis accident to assure that the integrity of the reactor coolant pressure boundary is maintained; (2) retain the capability to shutdown the reactor (required to take the plant from hot shutdown to cold shutdown) or mitigate the consequences of accidents; (3) prevent a safety system from performing its intended safety function; (4) could directly cause a reactor scram or actuation of a safety system; and (5) are used in plant Emergency Operating Procedures. Revise Section 16.2.1.1 of the SSAR to state that the scope of the RAP should be consistent with that of 10 CFR 50.65 (the maintenance rule)				
				Action W -The D-RAP process definition and example planned for completion in July will address the applicable portions of the maintentance rule criteria. The process and example will be consistent with the AP600 definition of safe shutdown.				
1291	NRR/TQMB	16.2.1.1-4	DSER-OI		Action W	Inactive		
				WCAP 13856 did not provide an appropriate method for determining risk-significant SSCs for RAP.				
				Action W - SSAR section 16.2 will be updated to provide a method for determining risk-significant SSCs for RAP as determined by probablistic, deterministic or other methods. An example will also be provided.				

AP600 Open Item Tracking System Database: Executive Summary

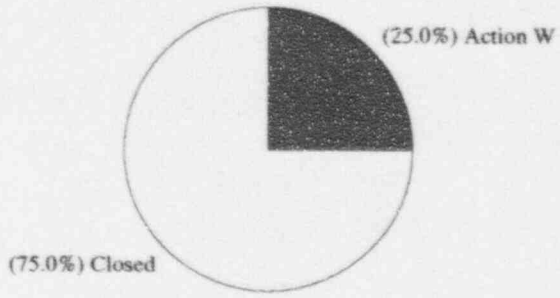
Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '16*' Sorted by Item #

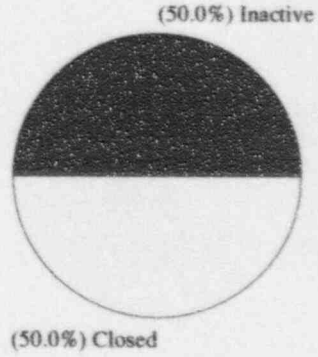
Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1292	NRR/TQMB	16.2.2-1	DSER-OI		Action W	Inactive	
				Westinghouse should modify the D-RAP objectives to include the identification of risk-significant SSCs, as determined by probabilistic, deterministic, or other methods.			
				Action W -SSAR section 16.2 will be updated to provide a method for determining risk-significant SSCs for RAP as determined by probablistic, deterministic or other methods. An example will also be provided.			
1293	NRR/TQMB	16.2.3.1-1	DSER-OI		Action W	Inactive	
				Westinghouse needs to clarify the meaning of the phrase, "evaluation is the responsibility of the risk analysis," which appears in Section 16.2.3.1 of the SSAR and in the February 9, 1993 response to Q630.3. Westinghouse should address the issues in Q630.3.			
				Action W - This sentence will be removed in the next revision of Section 16.2.			
1294	NRR/TQMB	16.2.3.1-2	DSER-OI		Action W	Inactive	
				Westinghouse should revise Section 16.2.3.1 of the SSAR to state that the COL applicant must submit its specific D-RAP organization for staff review.			
				Action W - COL Applicant action item will be included as part of the submittal of the revised 16.2.			
1295	NRR/TQMB	16.2.3.2-1	DSER-OI		Action W	Inactive	
				The use of the RTNSS process as the primary source for identifying risk-significant SSCs and their critical failure modes is unacceptable.			
				Action W - SSAR section 16.2 will be updated to provide a method for determining risk-significant SSCs for RAP as determined by probablistic, deterministic or other methods. An example will also be provided.			
1296	NRR/TQMB	16.2.3.2-2	DSER-OI		Action W	Inactive	
				Westinghouse should specify the method used to prioritize the risk-significant SSCs in Section 16.2.3.2 of the SSAR.			
				Action W - The prioritization will be by risk-increase measure (based on the PRA). Industry experience, engineering judgement, and deterministic methods will be employed to enhance the breadth and ranking of the prioritized list. This process will be detailed in the revision to Section 16.2.3.2.			
1297	NRR/TQMB	16.2.4-1	DSER-OI		Progress	Inactive	
				Westinghouse should revise Section 16.2.4 of the SSAR to state that the COL applicant can provide this assurance through implementation of reliability performance monitoring, problem and failure identification, and a comprehensive corrective action program.			
				Action W - COL Applicant action item will be included as part of the submittal of the revised 16.2.			
1298	NRR/TQMB	16.2.6-1	DSER-OI		Action W	Inactive	
				Westinghouse should provide an example of how the D-RAP will be implemented.			
				Action W - An example RAP implementation for the automatic depressurization system will be included in the revision to SSAR 16.2.			
1970	NRR/OTSB	16.1-1	DSER-COL		Action W	Action W	
				16.1-1 The COL applicant should provide the plant specific values or alternate text into the brackets where information should be included in the technical specifications on detailed design information, equipment selection, allowable values, or other information.			
				Action W- The next revision of 16.1 will include this action item.			
1971	NRR/TQMB	16.2.3.1-1	DSER-COL		Action W	Inactive	
				16.2.3.1-1 The COL applicant should submit its specific D-RAP organization for staff review.			
				Action W - The next revision of 16.2 will include this COL item.			

Open Item Status - Chapter 17 (QA)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	0	0	1	0	0	2	3
DSER-Confirmatory	0	0	0	0	0	0	0	0	0
DSER-COL	0	0	0	0	0	0	0	1	1
Subtotal	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**4**
Follow-on Items									
RAI-OI	1	0	0	0	0	0	0	1	2
Meeting-OI	0	0	0	0	0	0	0	0	0
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**
Total	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**4**	**6**

Westinghouse Status as of 29-May-95

AP600 Open Item Tracking System Database: Executive Summary

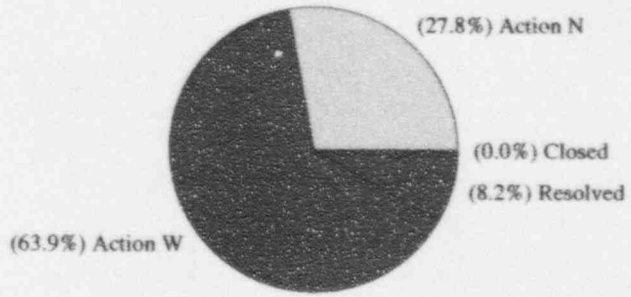
Date: 5/27/95

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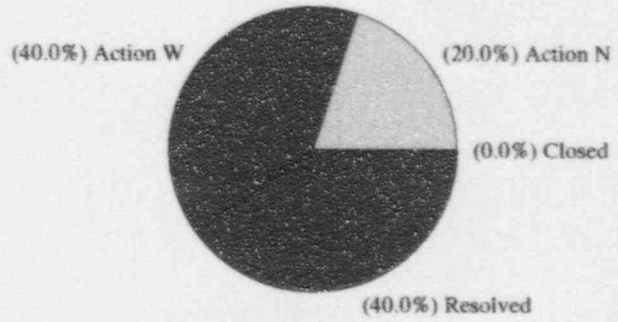
Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1299	NRR/TQMB	17.1.1-1	DSER-OI		Closed	Action N		
				Westinghouse should provide the staff with a copy of WCAP-12600, "AP600 Quality Assurance Program Plan," dated December 1993, a project-specific quality plan that supplements the topical report for the AP600 application.				
				Closed - WCAP-12600 provided to NRC and implementation of program has been demonstrated through NRC inspections.				
1300	NRR/TQMB	17.1.3-1	DSER-OI		Action W	Active		
				The QA applied to RTNSS should be comparable to that described in Generic Letter 85-06 for ATWS, as well as Regulatory Position 3.5 and Appendix A of RG 1.155 for non-safety-related station blackout equipment.				
				Action W - Quality Assurance requirements are graded based on the safety classification of the item or service, as described in WCAP-8370. Appropriate industry quality assurance requirements will be applied to non-safety-related items and services, comparable to the requirements of Reg Guide 1.26.				
1301	NRR/TQMB	17.1.3-2	DSER-OI		Closed	Active	NTD-NRC-95-4464	
				Westinghouse should add COL Action Item 17.1.3-1 to the SSAR. (When completing the detailed design during the COL design phase, a COL applicant will be responsible to submit its design phase QA program for staff review. This will be in addition to the staff review of the COL applicant's QA program for construction of the facility.)				
				Closed - Included in SSAR Revision 3.				
1972	NRR/TQMB	17.1.3-1	DSER-COL		Closed	Inactive	NTD-NRC-95-4464	
				17.1.3-1 The COL applicant should submit its design phase QA program for staff review.				
				Closed - COL item added to section 17.4 of the SSAR (Revision 3).				

Open Item Status - Chapter 18 (Human Factors)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	0	0	27	62	0	8	0	97
DSER-Confirmatory	0	0	0	0	0	0	0	0	0
DSER-COL	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**0**	**0**	**27**	**62**	**0**	**8**	**0**	**97**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	0	0
Meeting-OI	0	0	0	1	2	0	2	0	5
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**0**	**0**	**1**	**2**	**0**	**2**	**0**	**5**
Total	**0**	**0**	**0**	**28**	**64**	**0**	**10**	**0**	**102**

Westinghouse Status as of 29-May-95

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1302	NRR/HHFB	18.2.3.1-1	DSER-OI		Action W	Active		

Westinghouse should identify the starting points for each human factor engineering (HFE) activity (i.e., those aspects of the analysis or design that are inputs to the HFE program, rather than the result of HFE analyses and evaluations). For example, if functions have been allocated to plant personnel, not as part of the HFE analysis, the allocations should be identified.

Per conference call with NRC (J.Bongarra, G.Galletti, J.O'Hara, J.Higgins) of 2/23/95:

Action W -- Send a draft of the associated document and/or revision to the applicable SSAR sections.

Action W

Per conference call with NRC (J.Bongarra, G.Galletti, J.O'Hara, J.Higgins) of 2/23/95: Action W -- Revise SSAR section 18.8.2.1 (MMIS Design Process) to reference section 18.8.2.1.1.3 (Plant-Specific Design Inputs) for details of initial assumptions and starting points for the HFE design process. Revise section 18.8.2.1.1.3 to clarify inputs to the HFE design process, any assumptions and the initial function allocations and control room resource selections (URD forms input to the HFE process and basis for these assumptions). Draft of these revised SSAR sections will be sent to the NRC. Revision to MMIS Development Plan will be needed to ensure consistency.

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1303	NRR/HHFB	18.2.3.2-1	DSER-OI		Action N	Action N		

Westinghouse should provide information regarding the human system interface (HSI) team composition. Westinghouse should

* identify team members with procedures background
* identify team memebers with safety system engineering background
* identify team memebers with RAMI background
* provide the specific qualifications of the team members

Per conference call with NRC (J.Bongarra, G.Galletti, J.O'Hara, J.Higgins) of 2/23/95:

Action N -- Send clarification on the requirement to have a safety system engineer on the HFE design team. Clarification on the qualification requirements of the safty system engineer (Certificate from the Board of Certified Safety Professionals in System safety???).

Action N

Per conference call with NRC (J.Bongarra, G.Galletti, J.O'Hara, J.Higgins) of 2/23/95: Action N -- Send clarification on the requirement to have a safety system engineer on the HFE design team. Clarification on the qualification requirements of the safety system engineer (Certificate from the Board of Certified Safety Professionals in System safety???).

Westinghouse has prepared a draft revision to SSAR section 18.4 that addresses the DSER open items, except for the clarification information needed from the NRC on the System Safety Engineer. As soon as this information is provided, it will be added to the draft SSAR section 18.4 and the draft section will be sent to the NRC.

Action N -- Send clarification on the requirement to have a safety system engineer on the HFE design team.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1304	NRR/HHFB	18.2.3.2-2	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the job descrip- tions and assignments of HSI personnel.

Per conference call with NRC (J.Bongarra, G.Galletti, J.O'Hara, J.Higgins) of 2/23/95:

Action W -- Names of assigned personnel are not needed. Send a draft of the associated document and/or revision to the applicable SSAR sections.

Action W

Per conference call with NRC (J.Bongarra, G.Galletti, J.O'Hara, J.Higgins) of 2/23/95: Action W -- Names of assigned personnel are not needed. Send a draft of revision to the applicable SSAR sections. . A revision ot the MMIS Development Plan will be needed for consistency (post 5/31, pre 8/1).

Action W: Westinghouse will send (via fax) a draft revision to SSAR 18.4 to the NRC HHFB. NRC action is to review and provide feedback.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1305	NRR/HHFB	18.2.3.3-1	DSER-OI		Action N	Action N		

Westinghouse should provide information regarding the HFE process and procedures. Westinghouse should provide WCAP-12601, WCAP-9817, OCS-GES-011, and any additional documents that describe the aspects of the HFE design process identified in this criterion, such as the "Design Reviews and Configuration Control Documents" identified in Westinghouse's response to Q620.51.

Meeting of 3/9/95:

Westinghouse will make available (place in the Rockville office) to the NRC an example of a system that went through the process (design process) such as the one we passed around at the meeting (AWARE Intermediate Design Review Report). The AP600 MMIS Development Plan will also be made available after it is revised.

Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, 9817 and the MMIS Development Plan and provide us feedback.

Action N

Meeting of 3/9/95: Westinghouse will make available (place in the Rockville office) to the NRC an example of a system that went through the process (design process) such as the one we passed around at the meeting (AWARE Intermediate Design Review Report). The AP600 MMIS Development Plan will also be made available after it is revised. Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, 9817 and the MMIS Development Plan and provide us feedback.

4/18/95 -- NRC Conference call (J.Bongarra, J.O'Hara, J.Higgins,S.Kerch, J.Easter, K.Kloes): NRC had reviewed WCAP 12601 and 9817 which was made available in the Rockville office. NRC questions as transmitted by 4/10/95 fax were addressed. Action N: NRC action to re-evaluate based on the 4/18/95 discussions. NRC stated that additional information will likely be needed to eventually close open items 18.2.3.3-n. In the case of 18.2.3.3-1, the first four bullets under the criteria may require additional information, although the NRC would provide further feedback. Solution may be to revise Q620.14 and or Q620.15 (map to respective procedure in WCAP 12601) to address these first four bullets and then to revise the MMIS Development Plan to be consistent.

Action N: NRC action to re-evaluate based on the 4/18/95 discussions. Following NRC feedback/clarification, Westinghouse will send a draft of document addressing this open item.

Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1306	NRR/HHFB	18.2.3.3-2	DSER-OI		Action N	Action N		

Westinghouse should provide information regarding the HFE process management tools. Westinghouse should provide WCAP-12601, WCAP-9817, OCS-GES-011, and any additional documents that describe the tools and techniques to be used by the team during the HFE design process as identified in this criterion.

Meeting of 3/9/95:

Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, 9817 and the MMIS Development Plan and provide us feedback.

Action N

Meeting of 3/9/95: Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, 9817 and the MMIS Development Plan and provide us feedback.

4/18/95 -- NRC Conference call (J.Bongarra, J.O'Hara, J.Higgins,S.Kerch, J.Easter, K.Kloes): NRC had reviewed WCAP 12601 and 9817 which was made available in the Rockville office. NRC questions as transmitted by 4/10/95 fax were adressed. Action N: NRC action to re-evaluate based on the 4/18 discussions. NRC stated that additional information may be needed to eventually close open items 18.2.3.3-n; NRC to provide further feedback. In the case of 18.2.3.3-2, solution may be to revise Q620.15 to provide additional details on the tools and techniques (e.g., review forms) that are used by the HFE design team to ensure they fullfill their responsibilities. Revise the MMIS Development Plan to be consistent.

Action N: NRC action to re-evaluate based on the 4/18/95 discussions. Following NRC feedback/clarification, Westinghouse will send a draft of document addressing this open item.

Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1307	NRR/HHFB	18.2.3.3-3	DSER-OI		Action N	Action N		

Westinghouse should provide information regarding the integration of design activities. Westinghouse should provide WCAP-12601, WCAP-9817, OCS-GES-011, and any additional documents that describe the integration of the design activities of the HFE design process as identified in this criterion.

Meeting of 3/9/95:

Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, 9817 and the MMIS Development Plan and provide us feedback.

Action N

Meeting of 3/9/95: Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, 9817 and the MMIS Development Plan and provide us feedback.

4/18/95 -- NRC Conference call (J.Bongarra, J.O'Hara, J.Higgins,S.Kerch, J.Easter, K.Kloes): NRC had reviewed WCAP 12601 and 9817 which was made available in the Rockville office. NRC questions as transmitted by 4/10/95 fax were adressed. Action N: NRC action to re-evaluate based on the discussions. NRC stated that additional information may be needed to eventually close open items 18.2.3.3-n. In the case of 18.2.3.3-3, solution may be to revise the MMIS Development Plan by adding a section 4.5 titled "Integration of HFE and Other Plant Design Activities" and describe examples of integration and how it is done (e.g., SSD sections 7, 8; allocations; FBTA output and verification of I & C needs; ERG's, ERG I & C task analysis;). Another option would be to include this info in Q620.15 revision and then later in the development plan for consistency.

Action N: NRC action to re-evaluate based on the 4/18/95 discussions. Following NRC feedback/clarification, Westinghouse will send a draft of document addressing this open item by 6/23/95.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1308	NRR/HHFB	18.2.3.3-4	DSER-OI		Action N	Action N		

Westinghouse should provide information regarding the HFE program milestones. Westinghouse should provide WCAP-12601, WCAP-9817, OCS-GES-011, and any additional documents that describe the HFE program milestones as identified in this criterion.

Meeting of 3/9/95:

Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, 9817 and the MMIS Development Plan and provide us feedback.

Action N

Meeting of 3/9/95: Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, 9817 and the MMIS Development Plan and provide us feedback.

4/18/95 -- NRC Conference call (J.Bongarra, J.O'Hara, J.Higgins,S.Kerch, J.Easter, K.Kloes): NRC had reviewed WCAP 12601 and 9817 which was made available in the Rockville office. NRC questions as transmitted by 4/10/95 fax were adressed. Action N: NRC action to re-evaluate based on the discussions. NRC stated that additional information may be needed to eventually close open items 18.2.3.3-n. In the case of 18.2.3.3-4, solution may be to revise the MMIS Development Plan by adding a subsection to section 3.0 titled "Relative Schedule of HFE Program Milestones" (use the simplified MMIS Design block diagram that was presented during March 9 meeting.) and revise the Scheduled FOAKE Tasks and Committments subsection to reflect the current FOAKE schedule (use the high level bar graph schedule.)

Action N: NRC action to re-evaluate based on the 4/18/95 discussions. Following NRC feedback/clarification, Westinghouse will send a draft of document addressing this open item by 6/23/95.

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1309	NRR/HHFB	18.2.3.3-5	DSER-OI		Action N	Action N		

Westinghouse should provide HFE documentation. Westinghouse should provide WCAP-12601, WCAP-9817, OCS-GES-011, and any additional documents that describe the HFE documentation and associated procedures as identified in this criterion.

Meeting of 3/9/95:

Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, 9817 and the MMIS Development Plan and provide us feedback.

Action N

Meeting of 3/9/95: Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, 9817 and the MMIS Development Plan and provide us feedback.

4/18/95 -- NRC Conference call (J.Bongarra, J.O'Hara, J.Higgins,S.Kerch, J.Easter, K.Kloes): NRC had reviewed WCAP 12601 and 9817 which was made available in the Rockville office. NRC questions as transmitted by 4/10/95 fax were adressed. Action N: NRC action to re-evaluate based on the discussions. NRC stated that additional information may be needed to eventually close open items 18.2.3.3-n. In the case of 18.2.3.3-5, further clarification is needed from NRC.

Action N: NRC action to re-evaluate based on the 4/18/95 discussions. Following NRC feedback/clarification, Westinghouse will send a draft of document addressing this open item by 6/23/95.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1310	NRR/HHFB	18.2.3.3-6	DSER-OI		Action N	Action N		

Westinghouse should provide information regarding the compliance of the HFE subcontractor with HFE requirements. Westinghouse should provide WCAP-12601, WCAP-9817, OCS-GES-011, and any additional documents that describe how the subcontractor's compliance with HFE requirements is verified as identified in this criterion.

Meeting of 3/9/95:

Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, 9817 and the MMIS Development Plan and provide us feedback.

Action N

Meeting of 3/9/95: Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, 9817 and the MMIS Development Plan and provide us feedback.

4/18/95 -- NRC Conference call (J.Bongarra, J.O'Hara, J.Higgins,S.Kerch, J.Easter, K.Kloes): NRC had reviewed WCAP 12601 and 9817 which was made available in the Rockville office. NRC questions as transmitted by 4/10/95 fax were adressed. We stated that HFE considerations were given to subcontractors through (1) the fact that WCAP 12601 is given to all subcontractors and all must follow its procedures in content and format. Ex. AP3.1 sections 2g, 5, 6b and 7 are examples of HF considerations.; and (2) through the fact that general design criteria are given to all subcontractors that are effected by them - Ex. I & C General Design Criteria, section 7. The technical document control procedures govern the distribution and release of AP600 documents (AP 6.1, 6.2 and 6.3). Provide this answer in revision to Q620.15 as Jim suggested or add a subsection to section 4.0 of the MMIS Development Plan.

Action W is to make the I & C General Design Criteria Document available in the Rockville office for their review and also proof that it went to applicable subcontractors.

4/25/95 -- Fax sent to J.Bongarra and J.O'Hara that provides a response to this open item. The I&C General Design Criteria document was placed in the Rockville office (by A.Sterdis, attending an NRC meeting in Rockville).

Action N: The NRC to review the response and determine whether it is acceptable/provide feedback.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1311	NRR/HHFB	18.2.3.4-1	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the HFE issues tracking system availability. Westinghouse should submit WCAPs-9565, 12601, and 9817, as well as any additional documents that describe the tracking system and checklists as identified in this criterion.

Meeting of 3/9/95:

Westinghouse described our design issues tracking system. Tracking of HFE related design issues is not a separate entitiy but is part of the overall AP600 design process and design issues tracking. Processes for tracking design issues, including HFE issues, are (1.) the DCP process as described in WCAP 12601, AP3.2; (2.) the design review process as described in WCAP 12601, AP 3.5 and WCAP 9817 (human factors checklist); (3.) Use of SSDs - AP 3.1 ansd AP3.14 of WCAP 12601. Also a writers guide exists for SSDs. The Interface Requirements or the Human Factors Requirements of the SSDs will be used to document and track HFE related issues not currently addressed by the design and identified prior to DCP or design review. Final closure of these issues is verified in the validation of the HSI versuses their functional requirements. (This description also applies to open items 18.2.3.4-2 thru 4-4.)

Action W:

Meeting of 3/9/95: Westinghouse described our design issues tracking system. Tracking of HFE related design issues is not a separate entitiy but is part of the overall AP600 design process and design issues tracking. Processes for tracking design issues, including HFE issues, are (1.) the DCP process as described in WCAP 12601, AP3.2; (2.) the design review process as described in WCAP 12601, AP 3.5 and WCAP 9817 (human factors checklist); (3.) Use of SSDs - AP 3.1 ansd AP3.14 of WCAP 12601. Also a writers guide exists for SSDs. The Interface Requirements or the Human Factors Requirements of the SSDs will be used to document and track HFE related issues not currently addressed by the design and identified prior to DCP or design review. Final closure of these issues is verified in the validation of the HSI versuses their functional requirements. (This description also applies to open items 18.2.3.4-2 thru 4-4.) Also consider using the URD compliance database as another method used to track design issues.

4/18/95 -- NRC Conference call (J.Bongarra, J.O'Hara, J.Higgins,S.Kerch, J.Easter, K.Kloes): NRC had reviewed WCAP 12601 and 9817 which was made available in the Rockville office. NRC questions as transmitted by 4/10/95 fax were adressed. NRC stated to be sure to include in the revision to Q620.15 a description of the cutoff point for closure of design review action item chits (shipment of the product -- if any oustanding chits, then per NQA-1 the customer must be informed.)

Action W: Instead of revision 2 to Q620.15, Westinghouse will send a draft of SSAR section 18.4.4 (HFE Issues Tracking) to the NRC HHFB. NRC action will then be to review this draft and provide feedback.

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No / Date
1312	NRR/HHFB	18.2.3.4-2	DSER-OI		Action W	Active	

Westinghouse should provide information regarding the HFE issues tracking system method. Westinghouse should submit WCAPs-9565, 12601, and 9817, as well as any additional documents that describe the method for handling HFE issues as identified in this criterion.

Action W

Meeting of 3/9/95: Westinghouse described our design issues tracking system. Tracking of HFE related design issues is not a separate entitiy but is part of the overall AP600 design process and design issues tracking. Processes for tracking design issues, including HFE issues, are (1.) the DCP process as described in WCAP 12601, AP3.2; (2.) the design review process as described in WCAP 12601, AP 3.5 and WCAP 9817 (human factors checklist); (3.) Use of SSDs - AP 3.1 ansd AP3.14 of WCAP 12601. Also a writers guide exists for SSDs. The Interface Requirements or the Human Factors Requirements of the SSDs will be used to document and track HFE related issues not currently addressed by the design and identified prior to DCP or design review. Final closure of these issues is verified in the validation of the HSI versuses their functional requirements. (This description also applies to open items 18.2.3.4-2 thru 4-4.) Also consider using the URD compliance database as another method used to track design issues.

4/18/95 -- NRC Conference call (J.Bongarra, J.O'Hara, J.Higgins,S.Kerch, J.Easter, K.Kloes): NRC had reviewed WCAP 12601 and 9817 which was made available in the Rockville office. NRC questions as transmitted by 4/10/95 fax were adressed. NRC stated to be sure to include in the revision to Q620.15 a description of the cutoff point for closure of design review action item chits (shipment of the product -- if any oustanding chits, then per NQA-1 the customer must be informed.)

Action W: Instead of revision 2 to Q620.15, Westinghouse will send a draft of SSAR section 18.4.4 (HFE Issues Tracking) to the NRC HHFB. NRC action will then be to review this draft and provide feedback.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No / Date
1313	NRR/HHFB	18.2.3.4-3	DSER-OI		Action W	Active	

Westinghouse should provide information regarding the HFE issues tracking system documentation. Westinghouse should submit WCAPs-9565, 12601, and 9817, as well as any additional documents that describe the method for documenting HFE issues as identified in this criterion.

Action W

Meeting of 3/9/95: Westinghouse described our design issues tracking system. Tracking of HFE related design issues is not a separate entitiy but is part of the overall AP600 design process and design issues tracking. Processes for tracking design issues, including HFE issues, are (1.) the DCP process as described in WCAP 12601, AP3.2; (2.) the design review process as described in WCAP 12601, AP 3.5 and WCAP 9817 (human factors checklist); (3.) Use of SSDs - AP 3.1 ansd AP3.14 of WCAP 12601. Also a writers guide exists for SSDs. The Interface Requirements or the Human Factors Requirements of the SSDs will be used to document and track HFE related issues not currently addressed by the design and identified prior to DCP or design review. Final closure of these issues is verified in the validation of the HSI versuses their functional requirements. (This description also applies to open items 18.2.3.4-2 thru 4-4.) Also consider using the URD compliance database as another method used to track design issues.

4/18/95 -- NRC Conference call (J.Bongarra, J.O'Hara, J.Higgins,S.Kerch, J.Easter, K.Kloes): NRC had reviewed WCAP 12601 and 9817 which was made available in the Rockville office. NRC questions as transmitted by 4/10/95 fax were adressed. NRC stated to be sure to include in the revision to Q620.15 a description of the cutoff point for closure of design review action item chits (shipment of the product -- if any oustanding chits, then per NQA-1 the customer must be informed.)

Action W: Instead of revision 2 to Q620.15, Westinghouse will send a draft of SSAR section 18.4.4 (HFE Issues Tracking) to the NRC HHFB. NRC action will then be to review this draft and provide feedback.

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1314	NRR/HHFB	18.2.3.4-4	DSER-OI		Action W	Active		

Westinghouse should provide information regarding responsibility for the HFE issues tracking system. Westinghouse should submit WCAPs-9565, 12601, and 9817, as well as any additional documents that describe the responsibilities of personnel involved in the tracking and resolution of HFE issues as identified in this criterion.

Action W

Meeting of 3/9/95: Westinghouse described our design issues tracking system. Tracking of HFE related design issues is not a separate entitiy but is part of the overall AP600 design process and design issues tracking. Processes for tracking design issues, including HFE issues, are (1.) the DCP process as described in WCAP 12601, AP3.2; (2.) the design review process as described in WCAP 12601, AP 3.5 and WCAP 9817 (human factors checklist); (3.) Use of SSDs - AP 3.1 ansd AP3.14 of WCAP 12601. Also a writers guide exists for SSDs. The Interface Requirements or the Human Factors Requirements of the SSDs will be used to document and track HFE related issues not currently addressed by the design and identified prior to DCP or design review. Final closure of these issues is verified in the validation of the HSI versuses their functional requirements. (This description also applies to open items 18.2.3.4-2 thru 4-4.) Also consider using the URD compliance database as another method used to track design issues.

4/18/95 -- NRC Conference call (J.Bongarra, J.O'Hara, J.Higgins,S.Kerch, J.Easter, K.Kloes): NRC had reviewed WCAP 12601 and 9817 which was made available in the Rockville office. NRC questions as transmitted by 4/10/95 fax were adressed. NRC stated to be sure to include in the revision to Q620.15 a description of the cutoff point for closure of design review action item chits (shipment of the product -- if any oustanding chits, then per NQA-1 the customer must be informed.)

Action W: Instead of revision 2 to Q620.15, Westinghouse will send a draft of SSAR section 18.4.4 (HFE Issues Tracking) to the NRC HHFB. NRC action will then be to review this draft and provide feedback.

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1315	NRR/HHFB	18.2.3.5-1	DSER-OI		Action W	Inactive		

Westinghouse should provide information regarding the HFE program elements and documentation. Westinghouse should describe the programmatic relationship between the HFE program and PRA/HRA related activities, as well as the HFE program documentation for OER, HRA, and T&E activities.

Action W: Revise SSAR section 18.8.2.1 (MMIS Design Process) to reference section 18.8.2.1.1.3 (Plant-Specific Design Inputs) for details of initial assumptions and starting points for the HFE design process. Revise section 18.8.2.1.1.3 to clarify the initial function allocations and control room resource selections (URD forms input to the HFE process and basis for these assumptions). Include HRA, OER, and test & evaluation results as an input to the design process (refer to DSER eval section for this open item). Reference the HRA-HFE Integration Implementation Plan document in the SSAR section. Draft of these revised SSAR sections will be sent to the NRC. Revision to MMIS Development Plan will be needed to ensure consistency.

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1316	NRR/HHFB	18.3.3.1-1	DSER-OI		Action W	Active		

Westinghouse should provide a comparison to predecessor plants and systems. Westinghouse should describe how they will apply the low-pressure reference plant concept to the OER, and then apply it appropriately in the performance of a review of operating experience.

Per conference call with NRC (J.Bongarra, G.Galletti, J.O'Hara, J.Higgins) of 2/23/95:

Action W -- NRC says that rev. 1 to RAI Q620.9 does not completely clarify. Westinghouse to review "HFE Insights For Advanced Reactors Based Upon Operating Experience" transmitted to Westinghouse on 2/13/95. Place this item on 3/8 agenda.

Meeting of 3/9/95:

Action W: Westinghouse to perform an OER that addresses open items 18.3.3.1-1 thru 1-3, 2-1 thru 2-3. In the OER report we will clarify that OER did not reflect the low-pressure plant as the predecessor reference plant. We will describe the scope of the plant experience reviewed. The low pressure reference plant was used as the starting point for AP600 ERG development, but is not the predecessor plant for the OER. In general, Westinghouse PWR experience will be reviewed.

Also refer to Meeting Open Item, dbase item number 2063.

Action W

Meeting of 3/9/95: Action W - Westinghouse to p... OER and issue report that addresses all element 2 OER open items at which time this will become Action-N (NRC to review and provide feedb... Chapter 18, section 18.3 of the SSAR to be revised to reference this document.

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1317	NRR/HHFB	18.3.3.1-2	DSER-OI		Action W	Active		

Westinghouse should provide information regarding industry HFE issues. Before preparing the final SSAR, Westinghouse should ensure that the OER addresses the human factors aspects of all issues identified in Appendix B of the PRM and additional HFE-related operating experience issues (e.g., NRC Bulletins and Generic Letters) identified in Chapter 20 of this report.

Meeting of 3/9/95:

Action W: Westinghouse to perform an OER that addresses open items 18.3.3.1-1 thru 1-3, 2-1 thru 2-3.

Action W

Meeting of 3/9/95: Action W - We will provide a plant Operating Experience Review (OER) report that addresses the human factor aspects of issues identified in Appendix B of the PRM and the 2/13/95 NRC letter/document as representative of the reviews that we conduct. OER report to be sent to NRC, at which time this will become Action-N to review and provide feedback. Chapter 18, section 18.3 of the SSAR to be revised to reference this document.

Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1318	NRR/HHFB	18.3.3.1-3	DSER-OI		Action W	Active		

Westinghouse should describe how they have included related HSI technologies in the OER.

Meeting of 3/9/95:

Action W: Westinghouse to perform an OER that addresses open items 18.3.3.1-1 thru 1-3, 2-1 thru 2-3. In the OER report, where there is no nuclear plant experience for the HSI technology being applied to AP600, reference the reports that document research performed for operating experience in other industries. Reference to be done by title, author, date. (The committment to perform these reviews for areas where we are intending to apply new technologies is in revision 1 to RAI 620.9).

Action W

Meeting of 3/9/95: Action W - We will provide the information and references as required in the OER report. OER report to be delivered at which time this will become Action-N to review and provide feedback. Chapter 18, section 18.3 of the SSAR to be revised to reference this document.

1319	NRR/HHFB	18.3.3.1-4	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the results of operator interviews. Westinghouse should provide the content and results of the operator interviews to the staff and demonstrate how they address this criterion.

Meeting of 3/9/95:

Action W: Westinghouse to perform an OER that addresses open items 18.3.3.1-1 thru 1-3, 2-1 thru 2-3.

Action W

Meeting of 3/9/95: Action W - In the OER report, we will reference/describe the documents that provide examples of operator interviews. The OER report will be delivered to the NRC at which time this will become Action N to review and provide feedback. Chapter 18, section 18.3 of the SSAR to be revised to reference this document.

1320	NRR/HHFB	18.3.3.2-1	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the operating event report (OER) issue analysis. Westinghouse should describe how the OER will address issues related to human performance and problems and sources of human error. In addition, Westinghouse should describe how the HFE design addresses the issues raised by the OER.

Meeting of 3/9/95:

Action W: Westinghouse to perform an OER that addresses open items 18.3.3.1-1 thru 1-3, 2-1 thru 2-3.

Action W

Meeting of 3/9/95: Action W - Include in the OER report. OER report to be delivered to the NRC 5, at which time this becomes Action-N to review and provide feedback. Chapter 18, section 18.3 of the SSAR to be revised to reference this document.

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1321	NRR/HHFB	18.3.3.2-2	DSER-OI		Action W	Active		

Westinghouse should provide documentation of its analysis of operating experience. Westinghouse should provide an OER report that adequately documents the results of the reviews and how the findings are (or will be) addressed by the AP600 design.

Meeting of 3/9/95:

Action W: Westinghouse to perform an OER that addresses open items 18.3.3.1-1 thru 1-3, 2-1 thru 2-3. The OER report needs to discuss the HSI OER relative to SPDS, AWARE, COMPRO.

Action W

Meeting of 3/9/95: Westinghouse to perform OER and issue report. The OER report will be sent to NRC at which time this becomes Action-N to review and provide feedback. Chapter 18, section 18.3 of the SSAR to be revised to reference this document.

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1322	NRR/HHFB	18.3.3.2-3	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the incorpora- tion of issues into the tracking system. Westinghouse should describe how each operating experience issue determined to be appropriate for incorporation into the design is entered into the system.

Meeting of 3/9/95:

Action W: Westinghouse to perform an OER that addresses open items 18.3.3.1-1 thru 1-3, 2-1 thru 2-3. Westinghouse needs to provide a discussion (at end of OER report) of how we continue to address OER committment). Informal day to day communications summarizing Generic Letters, Information Notices, daily Site Sevice manager reports, etc. Formal proce:s would require a review and disposition of those that are issued between design certification and plant order. Also, describe how those OER HFE issues not currently addressed by the AP600 design are entered into the tracking system.

Action W

Meeting of 3/9/95: Westinghouse to perform OER and issue report, including information as described in the above Item Description field. OER report to be delivered at which time this will become Action-N to review and provide feedback. Chapter 18, section 18.3 of the SSAR to be revised to reference this document.

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1323	NRR/HHFB	18.4.3.1-1	DSER-OI		Action W	Action N		

Westinghouse should provide information regarding the source materials for the requirements analysis methodology. Westinghouse should identify the industry standards, guidelines, or practices used to perform the functional requirements analysis.

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95: Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1324	NRR/HHFB	18.4.3.2-1	DSER-OI		Action W	Action N		

Westinghouse should provide information regarding the functional analysis methods. Westinghouse should describe the process for addressing function analysis completeness and accuracy.

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95: Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1325	NRR/HHFB	18.4.3.2-2	DSER-OI		Action W	Action N		

Westinghouse should provide a detailed description of modified functions. Westinghouse should expand the comparison between the predecessor plant and the AP600 to include an analysis of plant safety functions and processes.

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95: Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1326	NRR/HHFB	18.4.3.2-3	DSER-OI		Action W	Action N		

Westinghouse should identify and describe the basis for the modified functions and processes.

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1327	NRR/HHFB	18.4.3.2-4	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the method- ological concerns with plant process descriptions. Westinghouse should address methodological concerns to provide assurance that there are no generic problems with the analysis method. Specifically, (a) the RCS mass inventory FBTA should be completed, (b) the topical report referenced on page 4 should be included, (c) the basic goal for high mass inventory should be addressed, (d) omission of the "ultimate cooling" injection supply should be explained and justified, and (e) the function of listed valves should be provided.

Per conference call with NRC (J.Bongarra, G.Galletti, J.O'Hara, J.Higgins) of 2/23/95:

Action W -- Send the revised RCS Mass Inventory FBTA and send the RCS Pressure Control FBTA.

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1328	NRR/HHFB	18.4.3.2-5	DSER-OI		Action W	Active		

Westinghouse should provide detailed descriptions for all modified plant processes.

Per conference call with NRC (J.Bongarra, G.Galletti, J.O'Hara, J.Higgins) of 2/23/95:

Action N -- NRC to review the material presented on 2/2/95 by Terry Schulz (AP600 functions and associated processes, comparison with current Westinghouse PWRs) and provide feedback (new status).

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

1329	NRR/HHFB	18.4.3.2-6	DSER-OI		Action W	Active		

Westinghouse should provide a commitment for updating the functional analysis as part of the function analysis methodology.

Per conference call with NRC (J.Bongarra, G.Galletti, J.O'Hara, J.Higgins) of 2/23/95:

Action W -- Send a draft of the associated document and/or revision to the applicable SSAR sections.

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1330	NRR/HHFB	18.4.3.2-7	DSER-OI		Action W	Action N		

Westinghouse should provide information regarding the function requirements verification. Westinghouse should verify that all of the processes necessary for achieving safe operation are identified and all of the requirements of each process are identified.

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1331	NRR/HHFB	18.4.3.3-1	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the basis for initial function allocations Westinghouse should describe the basis for the initial allocations, as well as the process that will address the level of automation (e.g., fully automatic, fully manual, or automatic with manual backup) for each unchanged function with unchanged allocation.

Per conference call with NRC (J.Bongarra, G.Galletti, J.O'Hara, J.Higgins) of 2/23/95:

Action W -- Send a draft of the associated document and/or revision to the applicable SSAR sections. Place on 3/8 agenda to discuss further with NRC.

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1332	NRR/HHFB	18.4.3.3-2	DSER-OI		Action W	Active		

Westinghouse should describe how the program will develop the rationale and level of automation for each unchanged function or process with modified allocation.

Per conference call with NRC (J.Bongarra, G.Galletti, J.O'Hara, J.Higgins) of 2/23/95:

Action W -- Send a draft of the associated document and/or revision to the applicable SSAR sections. Place on 3/8 agenda to discuss further with NRC.

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1333	NRR/HHFB	18.4.3.3-3	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the function allocation for modified processes. Westinghouse should describe the process that will address the rationale, allocation, and level of automation for modified plant processes.

Per conference call with NRC (J.Bongarra, G.Galletti, J.O'Hara, J.Higgins) of 2/23/95:

Action W -- Send a draft of the associated document and/or revision to the applicable SSAR sections. Place on 3/8 agenda to discuss further with NRC.

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1334	NRR/HHFB	18.4.3.3-4	DSER-OI		Action W	Active		

Westinghouse should provide the function allocation results. Westinghouse should describe the analyses that will confirmthat the personnel can properly perform tasks allocated to them while maintaining operator situation awareness, workload, and vigilance.

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1335	NRR/HHFB	18.4.3.3-5	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the use of the OER for modified process function allocation. Westinghouse should describe the use of the OER in the identification and evaluation of function allocations for those modified processes that have been identified as problematic, based on operating experience and how past problems will be addressed.

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1336	NRR/HHFB	18.4.3.3-6	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the use of the OER for unchanged process function allocation. Westinghouse should describe how unchanged functions with unchanged function allocations that have been identified as problematic based on operating experience will be addressed.

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1337	NRR/HHFB	18.4.3.3-7	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the effect of new control function allocations. Westinghouse should describe how function allocations will be reviewed to evaluate the effect of new control function allocations on unchanged control function allocations.

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W

Meeting of 3/9/95:

Action N --- Westinghouse has asked that element three be reviewed at the complete element level. NRC to revisit the criteria for element 3 (15 open items; 18.4...) and re-propose a focused set of issues based on our discussion. Refer to new meeting open item which is dabase Item Number 2064.

Action W: Document (sent by the NRC on 5/15/95) that refocuses the element 3 open items was received on 5/22. Westinghouse will provide a draft response to this document.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1338	NRR/HHFB	18.5.3-1	DSER-OI		Action N	Active		

Westinghouse should provide information regarding the scope of task analysis. Westinghouse should identify the threshold for defining critical or high-risk tasks, how the PRA will be used to identify the tasks, and the PRA levels to be included (e.g., Levels 1 and 2).

Conference call with NRC 3/21/95 (J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch):

Westinghouse explained that there are no critical/high-risk tasks that have been identified in the AP600 PRA. A sensitivity study was done where all operator actions in the PRA cutsets were set to 1 (ie., operator actions fail or no operator actions occur). The results still produced acceptable core damage frequencies (Ref. RAI Q720.133).

Action W: Applicable section(s) of chapter of the SSAR will be revised to state this. We will define threshold criteria for "Risk Important Tasks". This criteria will be consistent with the D-RAP criteria.

The information addressing this open item will be included in the AP600 HRA-HFE Integration Implementation Plan.

Action N

Conference call with NRC 3/21/95 (J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch):

The NRC asked us what we meant by "deleting all manual actions". We explained that we meant that there were no operator actions (ie., that all operator actions in the PRA cutsets were set to 1.) The information addressing this open item will be included in the AP600 HRA-HFE Integration Implementation Plan.

4/19/95 - Fax of draft response to 18.7.3-2 and 18.5.3-1 was sent to J.Bongarra, G.Galletti, J.O'Hara, & J.Higgins. If acceptable, this response will be incorporated into the HRA-HFE Integration Implementation Plan.

Action N: To review this draft proposed response and determine if it adequately addresses the open items.
The NRC HHFB to coordinate a conference call with the NRC Risk Analysis (PRA) people and Westinghouse to discuss questions on our response.

Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1339	NRR/HHFB	18.5.3-2	DSER-OI		Action N	Active		

Westinghouse should provide information regarding the critical task evaluation. Westinghouse should identify all critical human actions as discussed in their response to Q720.133, and describe how task analysis will be used in the evaluation of the critical tasks in operational sequences.

Conference call with NRC 3/21/95:
(J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch)

Action W: Westinghouse explained that there are no critical/high-risk tasks that have been identified in the AP600 PRA. A sensitivity study was done where all operator actions in the PRA cutsets were set to 1 (ie., operator actions fail or no operator actions occur). The results still produced acceptable core damage frequencies (Ref. RAI Q720.133). Applicable section(s) of chapter of the SSAR will be revised to state this. We will define threshold criteria for "Risk Important Tasks". This criteria will be consistent with the D-RAP criteria. The Risk Important Tasks and our plan to deal with them will be identified in the AP600 HRA-HFE Integration Implementation Plan.

The information addressing this open item will be included in the AP600 HRA-HFE Integration Implementation Plan.

Action N

Conference call with NRC 3/21/95: (J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch) Action W: Westinghouse explained that there are no critical/high-risk tasks that have been identified in the AP600 PRA. A sensitivity study was done where all operator actions in the PRA cutsets were set to 1 (ie., operator actions fail or no operator actions occur). The results still produced acceptable core damage frequencies (Ref. RAI Q720.133). Applicable section(s) of chapter of the SSAR will be revised to state this. We will define threshold criteria for "Risk Important Tasks". This criteria will be consistent with the D-RAP criteria. The Risk Important Tasks and our plan to deal with them will be identified in the AP600 HRA-HFE Integration Implementation Plan.

Action N: Westinghouse sent (via a fax) a draft of the HRA/HFE Integration Implementation Plan and a draft of the Task Analysis Description to the NRC HHFB on 5/24/95. The NRC action is to review the documents and provide feedback.

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1340	NRR/HHFB	18.5.3-3	DSER-OI		Action N	Active		

Westinghouse should provide information regarding the task analysis methods. Westinghouse should indicate how time factors, workload, task support requirements, workplace factors, staffing, and communication will be addressed in the task analysis. Westinghouse should also describe how the cognitive task analyses and "traditional" methods will be integrated to analyze crew tasks, what decision criteria will be used to judge whether tasks need the cognitive task analysis, and the total set of task analysis data that will result from the completion of all task analysis methods.

Conference call with NRC 3/21/95:
(J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch)

Action W: Westinghouse's response to include the description of Operational Sequence Analyses (OSAs). The OSAs will focus on time available versus time estimates. We will rely on the HFE V&V fro realistic estimate of workload. We will evaluate how best to incorporate this information; ie., revise applicable sections of chapter 18 of the SSAR or write a document that is referenced in the SSAR.

Action N

Conference call with NRC 3/21/95: (J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch) Action W: Westinghouse's response to include the description of Operational Sequence Analyses (OSAs) and workload analysis. The OSAs will focus on time available versus time estimates. We will evaluate how best to incorporate this information; ie., revise applicable sections of chapter 18 of the SSAR or write a document that is referenced in the SSAR.

Action N: Westinghouse sent (via a fax) a draft of a Task Analysis Description document to the NRC HHFB on 5/24/95. The NRC action is to review the document and provide feedback. Final closure will require a revision to SSAR section 18.8.2.1.2.

1341	NRR/HHFB	18.5.3-4	DSER-OI		Action N	Active		

Westinghouse should provide information regarding the task analysis job design. Westinghouse should identify the relevant job design factors (such as the number of crew member skills), and indicate how they will be addressed in the task analysis.

Conference call with NRC 3/21/95:
(J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch)

Action W: Westinghouse will write a COL Action Item (Information Item) that states that the identification of "job design factors", such as crew member skills, is a COL applicant responsibility. This information is used to develop an operator training program.

Westinghouse will clearly state the assumptions used in the Operational Sequence Analyses.

Action N

Conference call with NRC 3/21/95: (J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch) Action W: Westinghouse will write a COL Action Item (Information Item) that states that the identification of "job design factors", such as crew member skills, is a COL applicant responsibility. This information is used to develop an operator training program. Westinghouse will clearly state the assumptions used in the Operational Sequence Analyses.

Action N: Westinghouse sent (via a fax) a draft of a Task Analysis Description document to the NRC HHFB on 5/24/95. The NRC action is to review the document and provide feedback. Final closure will require a revision to SSAR section 18.8.2.1.2.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1342	NRR/HHFB	18.5.3-5	DSER-OI		Action N	Active		

Westinghouse should provide information regarding the task analysis methodology source materials. Westinghouse should identify source documents to serve as the basis for determining the types of information previously identified in Criterion 3 (Refer to open item 18.5.3-3).

Conference call with NRC 3/21/95:
(J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch)

Action W: A clear statement of the documents that were considered is needed in chapter 18 of the SSAR.

Action N

Conference call with NRC 3/21/95: (J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch) Action W: A clear statement of the documents that were considered is needed in chapter 18 of the SSAR. Rev. 4 to SSAR.

Action N: Westinghouse sent (via a fax) a draft of a Task Analysis Description document to the NRC HHFB on 5/24/95. The NRC action is to review the document and provide feedback. Final closure will require a revision to SSAR section 18.8.2.1.2.

1343	NRR/HHFB	18.6.3-1	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the number and qualifications of personnel. Westinghouse should provide additional information on how the HFE design and implementation process will address the number and qualifications of personnel required during the full range of plant conditions and tasks, including operational tasks, plant maintenance, and plant surveillance and testing.

Conference call with NRC 3/21/95:
(J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch)

Action W: Westinghouse to revise the applicable chapter 18 SSAR sections to reflect the statements and process described in the closure path. State that staffing levels outside of the operations staff, such as maintenance, is the responsibility of the COL applicant (COL Information Item needed). The same approach will be applied to all the staffing open items. Westinghouse is to clearly identify to the NRC where in the draft revision each open item is addressed. This will be done by utilizing this database, ie., in the database for each open item provide the map of the open item to the parragraph(s) in the draft revision where the open item is addressed.

Action W

Conference call with NRC 3/21/95: (J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch) Action W: Westinghouse to revise the applicable chapter 18 SSAR sections (Revision 4 to SSAR) to reflect the statements and process described in the closure path. State that staffing levels outside of the operations staff, such as maintenance, is the responsibility of the COL applicant (COL Information Item needed). The same approach will be applied to all the staffing open items. Westinghouse is to clearly identify to the NRC where in the draft revision each open item is addressed.

Action W: A draft revision to SSAR section 18.7 (Staffing) needs to be sent to NRC, addressing all element 5 open items. The NRC action will then be to review and provide feedback.

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1344	NRR/HHFB	18.6.3-2	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the staffing level analysis. Westinghouse should discuss how the staffing design meets the requirements of 10 CFR 50.54(m), and describe the analyses conducted to determine whether these requirements were appropriate for the AP600. Westinghouse should also describe the process that will be used to validate staffing requirements against the task analysis and against the physical design of the AP600 operations and control centers, as well as how the availability of plant information from individual operator workstations will be used in the analysis of staffing levels. Westinghouse should also discuss the availability of operators considering other ongoing activities, and how that relates to staffing. In addition, Westinghouse should provide more information on the required interaction between operators for diagnosis, planning,and control activities, and interaction between personnel for administrative, communcations, and reporting activities. Finally, Westinghouse should discuss how the actions required in 10 CFR 50.47 (and NUREG-0654) and staffing requirements in Sections 13.1.2 and 13.1.3 of NUREG-0800 and 10 CFR 50.54 will be taken into account in the staffing level decisions made for the AP600.

Conference call with NRC 3/21/95:
(J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch)

Action W: Westinghouse to revise the applicable chapter 18 SSAR sections to reflect the statements and process described in the closure path. State that staffing levels outside of the operations staff, such as maintenance, is the responsibility of the COL applicant (COL Information Item needed). The same approach will be applied to all the staffing open items. Westinghouse is to clearly identify to the NRC where in the draft revision each open item is addressed. This will be done by utilizing this database; ie., in the database for each open item provide the map of the open item to the parragraph(s) in the draft revision where the open item is addressed.

Action W

Conference call with NRC 3/21/95: (J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch) Action W: Westinghouse to revise the applicable chapter 18 SSAR sections to reflect the statements and process described in the closure path. State that staffing levels outside of the operations staff, such as maintenance, is the responsibility of the COL applicant (COL Information Item needed). The same approach will be applied to all the staffing open items. Westinghouse is to clearly identify to the NRC where in the draft revision each open item is addressed.

Action W: A draft revision to SSAR section 18.7 (Staffing) needs to be sent to NRC, addressing all element 5 open items. The NRC action will then be to review and provide feedback.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1345	NRR/HHFB	18.6.3-3	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the staffing analysis iteration. Westinghouse should escribe in more detail the iterative nature of the staffing level analysis. Inaddition, Westinghouse should discuss how the task analysis will be modified if a determination is made that the staffing level is inadequate or if meeting the staffing level requirement adds substantial specialized automatic control of equipment, agiven that it is not clear that the task analysis is crew member-based.

Conference call with NRC 3/21/95:
(J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch)

Acvtion W: Westinghouse to revise the applicable chapter 18 SSAR sections to reflect the statements and process described in the closure path.

Action W

Conference call with NRC 3/21/95: (J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch) Action W: Westinghouse to revise the applicable chapter 18 SSAR sections to reflect the statements and process described in the closure path.

Action W: A draft revision to SSAR section 18.7 (Staffing) needs to be sent to NRC, addressing all element 5 open items. The NRC action will then be to review and provide feedback.

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Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1346	NRR/HHFB	18.6.3-4	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the compliance of staffing with the HFE PRM elements. Westinghouse should provide additional information, particularly for those elements of Criterion 4, "Basis for Staffing," of this section, that are not specifically addressed for operations personnel, and for all the elements of Criterion 4, "Basis for Staffing," of this seciton as they relate to non-operations personnel.

Conference call with NRC 3/21/95:
(J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch)

Action W: Westinghouse to revise the applicable chapter 18 SSAR sections to reflect the statements and process described in the closure path.

Action W

Conference call with NRC 3/21/95: (J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch) Action W: Westinghouse to revise the applicable chapter 18 SSAR sections to reflect the statements and process described in the closure path.

Action W: A draft revision to SSAR section 18.7 (Staffing) needs to be sent to NRC, addressing all element 5 open items. The NRC action will then be to review and provide feedback.

1347	NRR/HHFB	18.6.3-5	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the staffing methodology source materials. Westinghouse should identify the industry standards, guidelines, and practices on which the staffing implementation plan is based.

Conference call with NRC 3/21/95:
(J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch)

Action W: Westinghouse to revise the applicable chapter 18 SSAR sections to reflect the statements and process described in the closure path. Based on the discussions with the NRC on staffing and the information to be provided to address each staffing open item, this item will be covered. We need to ensure that the staffing COL Action Item identifies the COL applicant responsibility and states the staffing assumptions that were made in design certification.

Action W

Conference call with NRC 3/21/95: (J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch) Action W: Westinghouse to revise the applicable chapter 18 SSAR sections to reflect the statements and process described in the closure path. Based on the discussions with the NRC on staffing and the information to be provided to address each staffing open item, this item will be covered. We need to ensure that the staffing COL Action Item identifies the COL applicant responsibility and states the staffing assumptions that were made in design certification.

Action W: A draft revision to SSAR section 18.7 (Staffing) needs to be sent to NRC, addressing all element 5 open items. The NRC action will then be to review and provide feedback.

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Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1348	NRR/HHFB	18.7.3-1	DSER-OI		Action N	Inactive		

Westinghouse should provide information regarding the human reliability analysis (HRA)-HFE integration implementation plan.

Action N

3/31/95 - Phone conversation between Westinghouse and J.Bongarra: Jim stated that generally speaking the resolution paths for all element 6 open items are acceptable. Action W: To develop and submit a draft of the HRA-HFE Integration Implementation Plan by May 31. The appropriate section of the SSAR will also be revised (Revision 4) , referencing this implementation plan.

Action N: The draft HRA/HFE Integration Implementation Plan was sent (via fax) to the NRC HHFB on 5/24/95. All element 6 (HRA) open items are addressed by this document. The NRC action is to review the document and provide feedback.

1349	NRR/HHFB	18.7.3-2	DSER-OI		Action N	Inactive		

Westinghouse should provide information regarding the process used for identifying critical human actions. Westinghouse should describe the process that will identify critical human actions for the Level 1 and Level 2 PRA, including both internal and external events, following the completion of sensitivity analyses.

Action N

3/31/95 - Phone conversation between Westinghouse and J.Bongarra: Jim stated that generally speaking the resolution paths for all element 6 open items are acceptable. Action W: To develop and submit a draft of the HRA-HFE Integration Implementation Plan by May 31. The appropriate section of the SSAR will also be revised (REv. 4), referencing this implementation plan.

4/19/95 - Fax of draft response to 18.7.3-2 and 18.5.3-1 was sent to J.Bongarra, G.Galletti, J.O'Hara, & J.Higgins. If acceptable, this response will be incorporated into the HRA-HFE Integration Implementation Plan.

Action N: To review this draft proposed response and determine if it adequately addresses the open items.
The NRC HHFB to coordinate a conference call with the NRC Risk Analysis (PRA) people and Westinghouse to discuss questions on our response.

1350	NRR/HHFB	18.7.3-3	DSER-OI		Action N	Inactive		

Westinghouse should describe the process they will use to address the task analyses for critical human actions.

Action N

3/31/95 - Phone conversation between Westinghouse and J.Bongarra: Jim stated that generally speaking the resolution paths for all element 6 open items are acceptable. Action W: To develop and submit a draft of the HRA-HFE Integration Implementation Plan by May 31. The appropriate section of the SSAR will also be revised, referencing this implementation plan.

Action N: The draft HRA/HFE Integration Implementation Plan was sent (via fax) to the NRC HHFB on 5/24/95. All element 6 (HRA) open items are addressed by this document. The NRC action is to review the document and provide feedback.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1351	NRR/HHFB	18.7.3-4	DSER-OI		Action N	Inactive		

Westinghouse should provide information regarding the detailed examination of critical actions. Westinghouse should describe the process that will (a) provide additional information on the impact of HFE function allocations yet to be performed on the HRA, (b) provide detailed evaluations of critical actions to reduce or eliminate sources of error, and (c) clarify the possible inconsistency between the operator role assumptions in the HFE design and the HRA.

Action N

3/31/95 - Phone conversation between Westinghouse and J Bongarra: Jim stated that generally speaking the resolution paths for all element 6 open items are acceptable. Action W: To develop and submit a draft of the HRA-HFE Integration Implementation Plan by May 31. The appropriate section of the SSAR will also be revised, referencing this implementation plan.

Action N: The draft HRA/HFE Integration Implementation Plan was sent (via fax) to the NRC HHFB on 5/24/95. All element 6 (HRA) open items are addressed by this document. The NRC action is to review the document and provide feedback.

1352	NRR/HHFB	18.7.3-5	DSER-OI		Action N	Inactive		

Westinghouse should provide information regarding the use of PRA/HRA insights. Westinghouse should provide examples of how the HRA/PRA insights were used to improve design and limit risk to human actions and errors and describe the process whereby this effort will continue as part of the HFE design.

Action N

3/31/95 - Phone conversation between Westinghouse and J.Bongarra: Jim stated that generally speaking the resolution paths for all element 6 open items are acceptable, however, the closure path to this one does not answer the question. Jim said that we need to provide specific examples. Also, he said to refer to the specific PRM criteria, RAI Q720.117 and the Evaluation section of the DSER for this open item for further guidance. (Ex. of influence on the MMI design?) Action W: To develop and submit a draft of the HRA-HFE Integration Implementation Plan by May 31. The appropriate section of the SSAR will also be revised, referencing this implementation plan.

Action N: The draft HRA/HFE Integration Implementation Plan was sent (via fax) to the NRC HHFB on 5/24/95. All element 6 (HRA) open items are addressed by this document. The NRC action is to review the document and provide feedback.

1353	NRR/HHFB	18.7.3-6	DSER-OI		Action N	Inactive		

Westinghouse should provide information regarding the HRA validation. Westinghouse should describe the process for validation of HRA assumptions and possible revision of the HRA if necessary.

Action N

3/31/95 - Phone conversation between Westinghouse and J.Bongarra: Jim stated that generally speaking the resolution paths for all element 6 open items are acceptable. Action W: To develop and submit a draft of the HRA-HFE Integration Implementation Plan by May 31. The appropriate section of the SSAR will also be revised (Revision 4), referencing this implementation plan.

Action N: The draft HRA/HFE Integration Implementation Plan was sent (via fax) to the NRC HHFB on 5/24/95. All element 6 (HRA) open items are addressed by this document. The NRC action is to review the document and provide feedback.

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Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1354	NRR/HHFB	18.8.1.3-1	DSER-OI		Action N	Action N		

Westinghouse should provide information regarding the HSI design process guidance. Westinghouse should describe how evaluation results will be communicated to designers, incorporated into design guidance, and reflected in final design documentation. The process by which implementation guidance will be developed must also be described.

Meeting of 3/10/95:

Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, and WCAP 9817 and provide us feedback. The NRC will review the SSD procedures of WCAP 12601 to determine if they cover issues like "providing guidance to HSI designers for addressing / utilizing design inputs such as the FBTA results". Note that the procedures will be at a higher level, not specifically referring to the FBTA or other specific HFE analyses or reports. The staff will also review the Alarm System Design Guidelines and the Interim Report on Technical Principles for Computer Based Displays of Data (both on file in Rockville office). Informal feedback from NRC was that the display document does provide the intended guidance.

Action N

Meeting of 3/10/95: Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, and WCAP 9817 and provide us feedback. The NRC will review the SSD procedures of WCAP 12601 to determine if they cover issues like "providing guidance to HSI designers for addressing / utilizing design inputs such as the FBTA results". Note that the procedures will be at a higher level, not specifically referring to the FBTA or other specific HFE analyses or reports. The staff will also review the Alarm System Design Guidelines and the Interim Report on Technical Principles for Computer Based Displays of Data (both on file in Rockville office). Informal feedback from NRC was that the display document does provide the intended guidance.

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1355	NRR/HHFB	18.8.1.3-2	DSER-OI		Action N	Action N		

Westinghouse should provide information regarding the task-related HSI requirements. Westinghouse should describe the process by which possible omissions in controls and displays are eliminated form the final design. The means by which features of controls and displays are initially defined must also be described.

Meeting of 3/10/95:

Same as the "Action N" note in the open item description field for dbase item number 1354.

Action N

Meeting of 3/10/95: Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, and WCAP 9817 and provide us feedback. The NRC will review the SSD procedures of WCAP 12601 to determine if they cover issues like "providing guidance to HSI designers for addressing / utilizing design inputs such as the FBTA results". Note that the procedures will be at a higher level, not specifically referring to the FBTA or other specific HFE analyses or reports. The staff will also review the Alarm System Design Guidelines and the Interim Report on Technical Principles for Computer Based Displays of Data (both on file in Rockville office). Informal feedback from NRC was that the display document does provide the intended guidance.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1356	NRR/HHFB	18.8.1.3-3	DSER-OI		Action N	Action N		

Westinghouse should provide information regarding HSI characteristics. Westinghouse should describe how potential problems associated with high workload will be identified early in the design process, and how the concerns noted in the evaluation above will be addressed. Westinghouse should also describe how the design of workstations (inside and outside the MCR) ensure support of optimal operator performance under a range of conditions.

Meeting of 3/10/95:

Same as the "Action N" note in the open item description field for dbase item number 1354.

Action N

Meeting of 3/10/95: Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, and WCAP 9817 and provide us feedback. The NRC will review the SSD procedures of WCAP 12601 to determine if they cover issues like "providing guidance to HSI designers for addressing / utilizing design inputs such as the FBTA results". Note that the procedures will be at a higher level, not specifically referring to the FBTA or other specific HFE analyses or reports. The staff will also review the Alarm System Design Guidelines and the Interim Report on Technical Principles for Computer Based Displays of Data (both on file in Rockville office). Informal feedback from NRC was that the display document does provide the intended guidance.

1357	NRR/HHFB	18.8.1.3-4	DSER-OI		Action N	Active		

Westinghouse should provide information regarding design feature selection. Westinghouse should describe the process used to evaluate design alternatives identified in the staff's evaluation.

Meeting of 3/10/95:

Action W: Westinghouse to review the level of detail for design certification relative to the MMI key features. Specifically need to address whether or not the "mission statements" or pupose(s) are worth certifying. If mission statements are not certified then the key features aren't certified even from a conceptual level. Will need to clearly identify those missions that we are covering. We will indicate those key features that we do not want certified and their mission statements. Schedule will need to be quick because it will impact NRC scope of review.

5/11: Phoncon with J.Bongarra --- I told Jim that we wanted the HSI design reviewed at the implementation plan level (as they have done) and that there were no design features that we wanted reviewed at a more detailed or complete level.

Action N

Meeting of 3/10/95: Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, and WCAP 9817 and provide us feedback. The NRC will review the SSD procedures of WCAP 12601 to determine if they cover issues like "providing guidance to HSI designers for addressing / utilizing design inputs such as the FBTA results". Note that the procedures will be at a higher level, not specifically referring to the FBTA or other specific HFE analyses or reports. The staff will also review the Alarm System Design Guidelines and the Interim Report on Technical Principles for Computer Based Displays of Data (both on file in Rockville office). Informal feedback from NRC was that the display document does provide the intended guidance.

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Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1358	NRR/HHFB	18.8.1.3-5	DSER-OI		Action N	Action N		

Westinghouse should provide information regarding the detailed guidelines for HSI design. Westinghouse should provide the requested handbook and guidelines as samples of the results of the process.

Meeting of 3/10/95:

Same as the "Action N" note in the open item description field for dbase item number 1354.

Action N

Meeting of 3/10/95: Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, and WCAP 9817 and provide us feedback. The NRC will review the SSD procedures of WCAP 12601 to determine if they cover issues like "providing guidance to HSI designers for addressing / utilizing design inputs such as the FBTA results". Note that the procedures will be at a higher level, not specifically referring to the FBTA or other specific HFE analyses or reports. The staff will also review the Alarm System Design Guidelines and the Interim Report on Technical Principles for Computer Based Displays of Data (both on file in Rockville office). Informal feedback from NRC was that the display document does provide the intended guidance.

1359	NRR/HHFB	18.8.1.3-6	DSER-OI		Action N	Action N		

Westinghouse should provide information regarding the detailed HSI design analysis. Westinghouse should describe in more detail the analysis methods by which design issues not covered by available guidance are identified and resolved. In particular, Westinghouse should describe the means by which evaluaiton results are translated into design guidance (see Criterion 1, "HSI Design Process Guidance," in this section.

Meeting of 3/10/95:

Same as the "Action N" note in the open item description field for dbase item number 1354.

Action N

Meeting of 3/10/95: Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, and WCAP 9817 and provide us feedback. The NRC will review the SSD procedures of WCAP 12601 to determine if they cover issues like "providing guidance to HSI designers for addressing / utilizing design inputs such as the FBTA results". Note that the procedures will be at a higher level, not specifically referring to the FBTA or other specific HFE analyses or reports. The staff will also review the Alarm System Design Guidelines and the Interim Report on Technical Principles for Computer Based Displays of Data (both on file in Rockville office). Informal feedback from NRC was that the display document does provide the intended guidance.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1360	NRR/HHFB	18.8.1.3-7	DSER-OI		Action N	Action N		

Westinghouse should provide information regarding the HSI evaluation. Westinghouse should describe the rationale for the HSIs, design elements, and procedures selected for evaluation, and for the points in the design process at which the evaluations are to occur. Westinghouse should also describe the process for identifying and resolving conflicts in guidance, as well as the rationale for design decisions that conflict with guidance.

Meeting of 3/10/95:

Same as the "Action N" note in the open item description field for dbase item number 1354.

Action N

Meeting of 3/10/95: Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, and WCAP 9817 and provide us feedback. The NRC will review the SSD procedures of WCAP 12601 to determine if they cover issues like "providing guidance to HSI designers for addressing / utilizing design inputs such as the FBTA results". Note that the procedures will be at a higher level, not specifically referring to the FBTA or other specific HFE analyses or reports. The staff will also review the Alarm System Design Guidelines and the Interim Report on Technical Principles for Computer Based Displays of Data (both on file in Rockville office). Informal feedback from NRC was that the display document does provide the intended guidance.

1361	NRR/HHFB	18.8.1.3-8	DSER-OI		Action N	Action N		

Westinghouse should describe how the HSI design will be documented. Westinghouse should describe how the final HSI design will be documented, incorporating the bases given in the criterion.

Meeting of 3/10/95:

Same as the "Action N" note in the open item description field for dbase item number 1354.

Action N

Meeting of 3/10/95: Action N: NRC will review our design process as described in the SSAR, RAIs and in WCAP 12601, and WCAP 9817 and provide us feedback. The NRC will review the SSD procedures of WCAP 12601 to determine if they cover issues like "providing guidance to HSI designers for addressing / utilizing design inputs such as the FBTA results". Note that the procedures will be at a higher level, not specifically referring to the FBTA or other specific HFE analyses or reports. The staff will also review the Alarm System Design Guidelines and the Interim Report on Technical Principles for Computer Based Displays of Data (both on file in Rockville office). Informal feedback from NRC was that the display document does provide the intended guidance.

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Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1362	NRR/HHFB	18.8.2.3-1	DSER-OI		Action W	Active		

Westinghouse should describe how the safety parameter display system (SPDS) design will be implemented to meet all pertinent HSI design criteria. Westinghouse should provide assurance that the SPDS design will meet all of the pertinent criteria as part of the HSI. Westinghouse should describe how the SPDS will privide a rapid and concise display of critical plant variables to control room operators. Westinghouse should describe how the SPDS implementation will be convenient to control room personnel. Westinghouse should describe how the SPDS function will continuously display plant safety information. Westinghouse should describe how the SPDS will achieve a high degree of reliability. Westinghouse should describe how the SPDS will be suitably isolated from electrical or electronic interference with safety systems. Westinghouse should describe how human factors principles will be incorporated into the SPDS. Westinghouse should describe how the SPDS will display sufficient information to determine plant safety status with respect to safety functions. Westinghouse should describe how procedures and operator training, addressing actions both with and without the SPDS, will be implemented.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action N -- Send us any further shortcomings from a review of our rev. 1 response to RAI 620.48 compared against the DSER issue 18.8.2.3 criteria (3/8 meeting in Monroeville).

Action W -- After receiveing the deficiency list from NRC, respond to it

Meeting of 3/8/95:

Action W --- Westinghouse to adress the comments provided by the NRC staff during 3/8 meeting. Refer to meeting notes/minutes for the details. In general, one word answers (yes or no) as found in RAI 620.48 were insufficient. Each of the 10 CFR 50.34 requirements (1a - 1e, 2 - 9) and the additional information that was needed was discussed. Westinghouse to justify difference between our critical safety function parameters on the SPDS and those specified by NUREG 1342 and the generic letter. Need to address the critical safety functions listed on page 8 of NUREG 0737. Refer to meeting notes/minutes for further detail.

Action W

Meeting of 3/8/95: Action W --- Westinghouse to address the comments provided by the NRC staff during 3/8 meeting. Refer to meeting notes/minutes for the details. In general, one word answers (yes or no) as found in RAI 620.48 were insufficient. Each of the 10 CFR 50.34 requirements (1a - 1e, 2 - 9) and the additional information that was needed was discussed. Westinghouse to justify difference between our critical safety function parameters on the SPDS and those specified by NUREG 1342 and the generic letter. Need to address the critical safety functions listed on page 8 of NUREG 0737. Refer to meeting notes/minutes for further detail. Westinghouse will fax to the NRC HHFB a response to this open item. This response will be sent as a draft RAI revision 2 to Q620.48. The NRC action will be to review the response and provide feedback. The formal documentation to close this item will be a revision to SSAR section 18.9.2.2.6 or the formal revision 2 to RAI Q620.48, both of which would incorporate NRC feedback as result of reviewing the draft RAI revision.

1363	NRR/HHFB	18.9.3-1	DSER-OI		Action W	Active		

Westinghouse should clarify the scope of the procedure development program.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- Send the revised writeup to applicable section of SSAR chapter 18

Action W

Action W: Westinghouse will send a draft revision of SSAR section 18.9.8 to the NRC. This section will reference 13.5.3 which will state that the development of procedures is a combined license applicant responsibility. The revised 13.5.3 will be sent as part of the formal revision 3 to the SSAR.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. / Date
1364	NRR/HHFB	18.9.3-2	DSER-OI		Action W	Active	

Westinghouse should provide the technical basis for procedure development. Westinghouse should describe how (or whether) methods, in addition to LP ERG comparison, will be used for procedure development.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action N -- Jim Bongarra will interface with NRC Rx systems branch who attended the 2/2/95 meeting in Rockville (AP600 ERG presentation) and decide what the NRC status is; ie. CLOSED or give us feedback on what our action needs to be. Feedback given to Westinghouse in 2/23 conference call was that the material presented at 2/2 meeting (basis of ERG development) was acceptable and the action-W is to deliver the ERGs and documents by May 31.

Action W

Feedback given to Westinghouse in 2/23 conference call was that the material presented at 2/2 meeting (basis of ERG development) was acceptable and the action-W is to deliver the ERGs and documents by May 31, 1995.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. / Date
1365	NRR/HHFB	18.9.3-3	DSER-OI		Action W	Active	

Westinghouse should provide information regarding the writer's guide. Westinghouse should describe how the writer's guide will address the unique features of a paper- and computer-based presentation of procedures.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to send revision to SSAR section.

Action W

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw: Action W -- NRC agreed to resolution path "in principle" and we need to send revision to SSAR section.

Action W: Westinghouse will send (via fax or fedex) to the NRC a draft revision to SSAR 18.9.8 which will provide the response to this open item. The NRC action will then be to review this draft and provide feedback.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. / Date
1366	NRR/HHFB	18.9.3-4	DSER-OI		Action W	Active	

Westinghouse should provide information regarding the contents of procedures. Westinghouse should describe and provide a rationale for the differences, if any, between the paper- and computer-based presentations of the items in this criterion (or in NUREG-0899).

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to send revision to SSAR section.

Action W

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw: Action W -- NRC agreed to resolution path "in principle" and we need to send revision to SSAR section.

Action W: Westinghouse will send (via fax or fedex) to the NRC a draft revision to SSAR 18.9.8 which will provide the response to this open item. The NRC action will then be to review this draft and provide feedback.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

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Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1367	NRR/HHFB	18.9.3-5	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the symptom- based emergency operating procedures (EOPs). Westinghouse should submit the AP600-specific ERGs so that the staff can verify that the EOPs will be symptom-based.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to send the ERGs and background documents to NRC.

Action W

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to send the ERGs and background documents to NRC. These will be sent via a phased approach with phase 1 ERGs to be sent 5/31/95.

1368	NRR/HHFB	18.9.3-6	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the V&V procedure. Westinghouse should clarify the relationship of the EOP V&V to the M-MIS evaluation issues. The V&V process for hardcopy procedures should also be described.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to send revision to SSAR section.

Action W

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw: Action W -- NRC agreed to resolution path "in principle" and we need to send revision to SSAR section.

Action W: Westinghouse will send (via fax or fedex) to the NRC a draft revision to SSAR 18.9.8 which will provide the response to this open item. The NRC action will then be to review this draft and provide feedback.

1369	NRR/HHFB	18.9.3-7	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the computer- based procedures. Westinghouse should describe the process by which human engineering issues associated with computer-based procedures will be resolved (e.g., concept testing, and other analyses).

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to send revision to SSAR section.

Action W

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw: Action W -- NRC agreed to resolution path "in principle" and we need to send revision to SSAR section.

Action W: Westinghouse will send (via fax or fedex) to the NRC a draft revision to SSAR 18.9.8 which will provide the response to this open item. The NRC action will then be to review this draft and provide feedback.

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Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1370	NRR/HHFB	18.9.3-8	DSER-OI		Action W	Active		

Westinghouse should provide information regarding procedure maintenance. Westinghouse should describe the administrative procedures that will ensure that hardcopy procedures remain current and consistent with the computer-based procedures.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to send revision to SSAR section.

Action W

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw: Action W -- NRC agreed to resolution path "in principle" and we need to send revision to SSAR section.

Action W: Westinghouse will send (via fax or fedex) to the NRC a draft revision to SSAR 18.9.8 which will provide the response to this open item. The NRC action will then be to review this draft and provide feedback.

Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1371	NRR/HHFB	18.9.3-9	DSER-OI		Action W	Active		

Westinghouse should provide information regarding procedure use. Westinghouse should describe provisions for access to, and use of, hardcopy procedures, as backups either in the control room or at locations outside the control room. Westinghouse should also describe how disruption of ongoing activity by automatically accessed procedures will be minimized.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to send revision to SSAR section.

Action W

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw: Action W -- NRC agreed to resolution path "in principle" and we need to send revision to SSAR section.

Action W: Westinghouse will send (via fax or fedex) to the NRC a draft revision to SSAR 18.9.8 which will provide the response to this open item. The NRC action will then be to review this draft and provide feedback.

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1372	NRR/HHFB	18.9.3-10	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the source material for procedure development. Westinghouse should describe the sources or experience drawn upon in developing guidance for the design of the computer-based procedures.

Conference call with NRC 3/21/95:
(J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch)

Action W: Westinghouse to revise the applicable chapter 18 SSAR sections to reflect the statements and process described in the closure path. The NRC's intent of this open item is limited to the computerization of procedures.

Action W

Conference call with NRC 3/21/95: (J.Bongarra, G.Galletti, T.Kenyon, J.O'Hara, J.Higgins, A.Sterdis, J.Easter, E.Roth, S.Kerch) Action W: Westinghouse to revise the applicable chapter 18 SSAR sections to reflect the statements and process described in the closure path. The NRC's intent of this open item is limited to the computerization of procedures.

Action W: Westinghouse will send (via fax or fedex) to the NRC a draft revision to SSAR 18.9.8 which will provide the response to this open item. The NRC action will then be to review this draft and provide feedback.

1373	NRR/HHFB	18.10.3-1	DSER-OI		Action W	Active		

Westinghouse should provide information regarding the training program mission. Westinghouse should provide additional information regarding the process that will address the rationale behind the selection of the identified positions for developing training programs, as well as information on the other related areas identified in this criterion.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document, 2. prepare for March NRC meeting by list of COL applicant responsibility, and 3. revise SSAR section.

Meeting of 3/8/95:

Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062

Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

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Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1374	NRR/HHFB	18.10.3-2	DSER-OI		Action W	Active		

Westinghouse should describe training requirements. Westinghouse should describe how the AP600 training program development will ensure consistency with the regulatory documents cited in this criterion.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document & SSAR revision, 2. prepare for March NRC meeting by list of COL applicant responsibility, and 3. revise SSAR section.

Meeting of 3/8/95:

Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1375	NRR/HHFB	18.10.3-3	DSER-OI		Action W	Active		

Westinghouse should describe the SAT training approach. Westinghouse should provide additonal information on the SAT approach that it is using, particularly with regard to the evaluation elements of the SAT process. Additionally, Westinghouse should provide information on how cognitive task analysis will supplement the information obtained using a traditional SAT approach.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document & SSAR revision, 2. prepare for March NRC meeting by list of COL applicant responsibility, and 3. revise SSAR section.

Meeting of 3/8/95:

Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W, refer to dbase item number 2061 and 2062.

Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

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Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1376	NRR/HHFB	18.10.3-4	DSER-OI		Action W	Active		

Westinghouse should discuss organizational roles related to training. Westinghouse should specifically define the roles of all organizations in developing and implementing the AP600 training programs.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document & SSAR revision, 2. prepare for March NRC meeting by list of COL applicant responsibility, and 3. revise SSAR section.

Meeting of 3/8/95:

Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1377	NRR/HHFB	18.10.3-5	DSER-OI		Action W	Active		

Westinghouse should discuss the qualifications of training personnel. Westinghouse should provide additional invormation on the qualifications of organizations and personnel to be involved in the development and conduct of training.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document & SSAR revision, 2. prepare for March NRC meeting by list of COL applicant responsibility, and 3. revise SSAR section.

Meeting of 3/8/95:

Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

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Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1378	NRR/HHFB	18.10.3-6	DSER-OI		Action W	Active		

Westinghouse should describe the training scope. Westinghouse should provide additional information on how the AP600 training program will address the scope of training. This information should include categories of personnel (e.g., senior reactor operator) to be trained, as well as specific plant conditions (normal, upset, and emergency), operational activities (e.g., operations, maintenance, testing, and surveillance), and HSI components (e.g., MCR, emergency operations facility, remote shutdown panel, local control stations).

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document & SSAR revision, 2. prepare for March NRC meeting by proving list of COL applicant responsibility (1378, 1381, 1383, 1384?), and 3. revise SSAR section.

Meeting of 3/8/95:

Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

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Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1379	NRR/HHFB	18.10.3-7	DSER-OI		Action W	Active		

Westinghouse should describe how Human Factors Engineering Program Review Model (HFE PRM) elements are incorporated into the training planning objectives. Westinghouse should describe how training issues will be identified from the seven elements for use in deriving learning objectives, namely, Operating Experience Review, Function Analysis and Allocation, Task Analysis, Human Reliability Assessment, HSI Design, Plant Procedures, and Verification and Validation.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document & SSAR revision, 2. prepare for March NRC meeting by proving list of COL applicant responsibility (1378, 1381, 1383, 1384?), and 3. revise SSAR section.

Meeting of 3/8/95:

Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1380	NRR/HHFB	18.10.3-8	DSER-OI		Action W	Active		

Westinghouse should describe how information from other sources is incorporated into the training learning objectives. Westinghouse should describe how the trianing development process will allow a determination to be made of whether learning objectives will be derived from the final safety analysis report, system description manuals and operating procedures, facility license and license amendments, licensee event reports, and other documents identified by the staff as being important to training.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document & SSAR revision, 2. prepare for March NRC meeting by proving list of COL applicant responsibility (1378, 1381, 1383, 1384?), and 3. revise SSAR section.

Meeting of 3/8/95:

Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1381	NRR/HHFB	18.10.3-9	DSER-OI		Action W	Active		

Westinghouse should describe details for training presentation techniques. Westinghouse should describe how learning objectives will be conveyed to the trainee, and how the other items of this criterion are addressed.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document & SSAR revision, 2. prepare for March NRC meeting by proving list of COL applicant responsibility (1378, 1381, 1383, 1384?), and 3. revise SSAR section.

Meeting of 3/8/95:

Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1382	NRR/HHFB	18.10.3-10	DSER-OI		Action W	Active		

Westinghouse should describe training resources. Westinghouse should discuss how the various facilities and resources needed to satisfy training design requirements will be identified.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document & SSAR revision, 2. prepare for March NRC meeting by proving list of COL applicant responsibility (1378, 1381, 1383, 1384?), and 3. revise SSAR section.

Meeting of 3/8/95:

Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1383	NRR/HHFB	18.10.3-11	DSER-OI		Action W	Active		

Westinghouse should describe how training is evaluated. Westinghouse should define the processes by which to identify methods for evaluating trainee mastery of trianing objectives, as well as overall trainee proficiency. In addition, Westinghouse should specify how evaluation criteria will be defined.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document & SSAR revision, 2. prepare for March NRC meeting by proving list of COL applicant responsibility (1378, 1381, 1383, 1384?), and 3. revise SSAR section.

Meeting of 3/8/95:

Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1384	NRR/HHFB	18.10.3-12	DSER-OI		Action W	Active		

Westinghouse should discuss verification of the adequacy of training materials. Westinghouse should provide additional information on the methods that will be used to verify the accuracy and completeness of training course materials.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document & SSAR revision, 2. prepare for March NRC meeting by proving list of COL applicant responsibility (1378, 1381, 1383, 1384?), and 3. revise SSAR section.

Meeting of 3/8/95:

Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1385	NRR/HHFB	18.10.3-14	DSER-OI		Action W	Active		

Westinghouse should discuss how the training program will be updated. Westinghouse should describe how the identified training program configuration management computer systems will be used to refine and update the content and conduct of training.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document & SSAR revision, 2. prepare for March NRC meeting by proving list of COL applicant responsibility (1378, 1381, 1383, 1384?), and 3. revise SSAR section.

Meeting of 3/8/95:

Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1386	NRR/HHFB	18.10.3-15	DSER-OI		Action W	Active		

Westinghouse should describe training source materials. Westinghouse should describe how the training program is developedusing the requirements and guidance of 10 CFR 50.120, "Training and Qualification of Nuclear Power Plant Personnel"; 10 CFR Part 55, "Operators', Licenses," and ANSI/ANS 3.1-1981, "Selection, Qualfication, and Training of Personnel for Nuclear Power Plants."

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document & SSAR revision, 2. prepare for March NRC meeting by proving list of COL applicant responsibility (1378, 1381, 1383, 1384?), and 3. revise SSAR section.

Meeting of 3/8/95:

Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created, both Action W; refer to dbase item number 2061 and 2062.

Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

1387	NRR/HHFB	18.11.3.1-1	DSER-OI		Resolved	Active		

Westinghouse should clarify the general V&V scope regarding the TSC. Westinghouse should clarify the role of the TSC in Evaluation Issues 16 and 17.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to issue document & SSAR revision.

Resolved

4/13/95 - Fax of the "Programmatic Level Descr'ption of the AP600 Human Factors Verification and Validation Plan" was sent to J.Bongarra and J.O'Hara. A mapping of each element 10 open item to its response/answer was also provided. Action N: Review the document and determine whether the element 10 open items 18.11's are adequately addressed.

Resolved: 5/17 phoncon with Jim Bongarra; Jim considers all the element 10 V&V open items resolved. Need to submit the revised 18.8.2.3 of chapter 18 of the SSAR as part of the formal SSAR revision.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1388	NRR/HHFB	18.11.3.1-2	DSER-OI		Resolved	Active	

Westinghouse should describe V&V activities and sequences. Westinghouse should clarify (a) the role of human factors issue resolution, HSI task support verification, and final plant HFE/HSI design verification in the V&V activities, and (b) the sequence of V&V activities.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to issue document & SSAR revision.

Resolved

4/13/95 - Fax of the "Programmatic Level Description of the AP600 Human Factors Verification and Validation Plan" was sent to J.Bongarra and J.O'Hara. A mapping of each element 10 open item to its response/answer was provided. Action N: Review the document and determine whether the element 10 open items 18.11's are adequately addressed.

Resolved: 5/17 phoncon with Jim Bongarra; Jim considers all the element 10 V&V open items resolved. Need to submit the revised 18.8.2.3 of chapter 18 of the SSAR as part of the formal SSAR revision.

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1389	NRR/HHFB	18.11.3.1-3	DSER-OI		Resolved	Active	

Westinghouse should describe the V&V technical methodology source materials. Westinghouse should describe the guidance documentation used to develop the V&V program.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to issue document & SSAR revision.

Resolved

4/13/95 - Fax of the "Programmatic Level Description of the AP600 Human Factors Verification and Validation Plan" was sent to J.Bongarra and J.O'Hara. A mapping of each element 10 open item to its response/answer was provided. Action N: Review the document and determine whether the element 10 open items 18.11's are adequately addressed.

Resolved: 5/17 phoncon with Jim Bongarra; Jim considers all the element 10 V&V open items resolved. Need to submit the revised 18.8.2.3 of chapter 18 of the SSAR as part of the formal SSAR revision.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1390	NRR/HHFB	18.11.3.2-1	DSER-OI		Resolved	Active		

Westinghouse should develop an implementation plan for HSI task support verification. The implementation plan should describe how all aspects of the HSI required to accomplish the human tasks and actions demanded by the AP600 design will be verified. Westinghouse should describe how the V&V methodology will verify that the HSI does not include information, displays, controls, etc., that do not support operator tasks.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to issue document & SSAR revision.

Resolved

4/13/95 - Fax of the "Programmatic Level Description of the AP600 Human Factors Verification and Validation Plan" was sent to J.Bongarra and J.O'Hara. A mapping of each element 10 open item to its response/answer was provided. Action N: Review the document and determine whether the element 10 open items 18.11's are adequately addressed.

Resolved: 5/17 phoncon with Jim Bongarra; Jim considers all the element 10 V&V open items resolved. Need to submit the revised 18.8.2.3 of chapter 18 of the SSAR as part of the formal SSAR revision.

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1391	NRR/HHFB	18.11.3.3-1	DSER-OI		Resolved	Active		

Westinghouse should describe HFE design verification methods. Westinghouse should commit to developing a methodology for HFE design verification and related criteria, taking into consideration the concerns identified in the staff's evaluation of this criterion. Westinghouse should describe how deviations identified in the criterion will be addressed in the V&V methodology.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to issue document & SSAR revision.

Resolved

4/13/95 - Fax of the "Programmatic Level Description of the AP600 Human Factors Verification and Validation Plan" was sent to J.Bongarra and J.O'Hara. A mapping of each element 10 open item to its response/answer was provided. Action N: Review the document and determine whether the element 10 open items 18.11's are adequately addressed.

Resolved: 5/17 phoncon with Jim Bongarra; Jim considers all the element 10 V&V open items resolved. Need to submit the revised 18.8.2.3 of chapter 18 of the SSAR as part of the formal SSAR revision.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1392	NRR/HHFB	18.11.3.4-1	DSER-OI		Resolved	Active		

Westinghouse should commit to developing a methodology for integrated system validation and related criteria. Westinghouse should describe the tools to be used in evaluating dynamic task performance in the V&V methodology. Westinghouse should describe how the V&V methodology will address the objectives listed as part of this criterion. Westinghouse should describe how the testing of critical human actions will be addressed in the V&V methodology. Westinghouse should describe how the V&V methodology will address the categories identified in Appendix A to RG 1.33 regarding procedure-related activities. Westinghouse should describe how the V&V methodology will evaluate performance under a range of operational conditions and upsets, and provide additional information about the Evaluation 17 test scenarios. Westinghouse should describe how the validation scenarios will be made realistic as part of the V&V methodology. Westinghouse should describe how the V&V methodology will address performance measures to test the achievement of all objectives, design goals, and performance requirements.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to issue document & SSAR revision.

Action N -- NRC to provide clarification on which procedures per RG 1.33 should be covered by V&V.

Meeting of 3/10/95:

Clarification provided (in writing) by NRC to Westinghouse (Emilie). Brief discussion followed. Westinghouse to issue SSAR revision and document.

Resolved

4/13/95 - Fax of the "Programmatic Level Description of the AP600 Human Factors Verification and Validation Plan" was sent to J.Bongarra and J.O'Hara. A mapping of each element 10 open item to its response/answer was provided. Action N: Review the document and determine whether the element 10 open items 18.11's are adequately addressed.

Resolved: 5/17 phoncon with Jim Bongarra; Jim considers all the element 10 V&V open items resolved. Need to submit the revised 18.8.2.3 of chapter 18 of the SSAR as part of the formal SSAR revision.

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1393	NRR/HHFB	18.11.3.5-1	DSER-OI		Resolved	Active		

Westinghouse should develop an issue resolution verification methodology. Westinghouse should commit to developing a methodology for human factors issue resolution verification and related criteria. Westinghouse should describe how the V&V methodology will address issues that cannot be resolved until a plant is built, and how such issues will be incorporated into the process for final plant HFE/HSI design verification.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to issue document & SSAR revision.

Resolved

4/13/95 - Fax of the "Programmatic Level Description of the AP600 Human Factors Verification and Validation Plan" was sent to J.Bongarra and J.O'Hara. A mapping of each element 10 open item to its response/answer was provided. Action N: Review the document and determine whether the element 10 open items 18.11's are adequately addressed.

Resolved: 5/17 phoncon with Jim Bongarra; Jim considers all the element 10 V&V open items resolved. Need to submit the revised 18.8.2.3 of chapter 18 of the SSAR as part of the formal SSAR revision.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1394	NRR/HHFB	18.11.3.6-1	DSER-OI		Resolved	Active		

Westinghouse should develop a final plant HFE/HSI design verification methodology. Westinghouse should commit to developing a methodology for final plant HFE/HSI design verification and related criteria. Westinghouse should describe how the V&V methodology will address aspects of the design that cannot be addressed in design process V&V, and how they will be addressed as part of the final plant HFE/HSI design verification. Westinghouse should describe how the V&V methodology will address conformance of the in-plant HFE to the design that resulted from the HFE design process and V&V activities.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to issue document & SSAR revision.

Resolved

4/13/95 - Fax of the "Programmatic Level Description of the AP600 Human Factors Verification and Validation Plan" was sent to J.Bongarra and J.O'Hara. A mapping of each element 10 open item to its response/answer was provided. Action N: Review the document and determine whether the element 10 open items 18.11's are adequately addressed.

Resolved: 5/17 phoncon with Jim Bongarra; Jim considers all the element 10 V&V open items resolved. Need to submit the revised 18.8.2.3 of chapter 18 of the SSAR as part of the formal SSAR revision.

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1395	NRR/HHFB	18.12.3-1	DSER-OI		Action N	Active		

Westinghouse should submit an acceptable minimum inventory of fixed-position controls, displays, and alarms for transient mitigation. Westinghouse should describe how the task analysis will define a minimum inventoryof alarms, displays, and controls necessary to perform crew tasks. Westinghouse should describe the technical basis for the minimum inventory. Westinghouse should describe how an inventory will be identified of fixed-position controls, displays, and alarms necessary to permit execution of the operator tesks to place and maintain the plant in a safe-shutdown condition. Westinghouse should describe how additional detailed characteristics of these controls, displays, and alarms (e g., ranges, scales, physical dimensions, and actual information presentation) will be identified, defined, and implemented.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Westinghouse to include this on the March meeting agenda.

Action N -- Give Westinghouse feedback on our proposed resolution (proposed during 2/2/95 meeting in Rockville).

3/8/95 meeting:

NRC requested Westinghouse consider that the detailed list remain completely in Tier 2. Tier 1 would include the process to select the final inventory.

ACTION W: If the inventory list is provided in chapter 7, then make the cross reference strong from chapter 18. Also, the list should include the process / criteria that was used to generate the list. Westinghouse position is that this list is an expansion of the RG 1.97 critieria and philosophy to address controls and displays. Should a Tier 1 list be required we will pursue use of critieria presented at the Feb 2 meeting versus the NRC criteria used on evolutionary plants. Also prepare a draft Tier 1 list. Need to take a stab at defining acceptable ITAAC and supporting SSAR information as to how the final inventory will be defined (Use PRA, EOPs, ERGs, FBTA). Caution from A. Sterdis -- There will be a strong push to be specific in defining these design ITAAC.

ACTION N: NRC staff to prepare a position paper for NRC senior management, proposing Tier 1 include the process / critieria. Goal is to produce the paper to support the next scheduled Senior management meeting of April 4.

Action N

2/2/95: Presentation of above made in Rockville, NRC staff to discuss and provide feedback.
2/9/95: Discussed during NRC/Westinghouse senior management meeting as one of the top 50 open items. Action N -- to provide feedback on Westinghouse proposal for resolution.

2/27/95: Conference call with NRC (J. Bongarra, G. Galletti, J. O'Hara, J.Easter, A.Sterdis & S.Kerch). 1. Agreed to following definition of "fixed position" -- unique location in the control room/control panel for alarms, displays, controls where present information from the minimum inventory; continuously available not continously displayed; doesn't have to be class 1E; always displayed at the same location; dedicated location where the operator can retrieve information that is part of the minimum inventory. 2. Scope of min. inv. -- failed to reach a mutual understanding on th:.; NRC stated that scope includes those controls and indications needed to execute the ERG high level operator actions including nonsafety system actions; disagreed on this. 3. Use of FBTA & ERG development task analysis I & C list. 4. When completed where does this go tier 1 or tier 2? Agreed to discuss at 3/8 meeting.

3/8/95 meeting: NRC requested Westinghouse consider that the detailed list remain completely in Tier 2. Tier 1 would include the process to select the final inventory. ACTION W: If the inventory list is provided in chapter 7, then make the cross reference strong from chapter 18. Also, the list should include the process / criteria that was used to generate the list. Westinghouse position is that this list is an expansion of the RG 1.97 critieria and philosophy to address controls and displays. Should a Tier 1 list be required we will pursue use of critieria presented at the Feb 2 meeting versus the NRC criteria used on evolutionary plants. Also prepare a draft Tier 1 list. Need to take a stab at defining acceptable ITAAC and supporting SSAR information as to how the final inventory will be defined (Use PRA, EOPs, ERGs, FBTA).

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
				ACTION N: NRC staff to prepare a position paper for NRC senior management, proposing Tier 1 include the process / critieria. Goal is to produce the paper to support the next scheduled Senior management meeting of April 4. 4/19/95 - Fax sent to J.Bongarra and G.Galletti of NRC that provided a preliminary (draft) description of how the total inventory list was developed and where in the tier 2 (SSAR) document it was found. A description of how the minimum inventory would be selected from the total inventory list (the criteria to be used) was also provided. This would be placed in the Tier 1 document. A very preliminary draft of a minimum inventory list, using this criteria, was provided for the NRC's information and use as backup to their position paper. The NRC (G.Galletti) has submitted the position paper for NRC management review. Action N: Determine whether the position paper is acceptable and the proposed Westinghouse appraoch is acceptable.				
1396	NRR/HHFB	18.13.3-1	DSER-OI		Action W	Inactive		
				Westinghouse should develop the ITAAC/DAC for certain elements of the HFE PRM. In each of the following areas, Westinghouse should provide ITAAC/DAC addressing a commitment to comp[illegible]e implementation plan and provide the results to the staff for review: * Element 3 - Functional Requirements Analysis/Allo[illegible] * Element 4 - Task Analysis * Element 5 - Staffing * Element 6 - Human Reliability Analysis * Element 7 - Human-System Interface Design * Element 8 - Procedure Development * Element 9 - Training Program Development Westinghouse should also provide ITAAC/DAC addressing a V&V commitment to (a) develop a detailed implementation plan, and (b) complete the implementation plan and provide the results to the staff for review. ITAAC identifying the minimum inventory must also be developed.				
				Action W: Westinghouse will discuss with the NRC HHFB our approach to ITAACS/ Tier 1 document for chapter 18.				
1397	NRR/HHFB	18.13.3-2	DSER-OI		Action W	Inactive		
				Westinghouse should provide the specified level of detail for the DCD, ITAAC, and DAC. Westinghouse should: 1. Provide a complete set of ITAAC/DAC describing the (a) design commitments; (b) inspections, test, and analyses; and (c) acceptance criteria for Element 3, "Functional Requirements Analysis and Allocation"; Element 4, "Task Analysis"; Element 5, "Staffing", Element 6, "Human Reliability Analysis" Element 7, "Human-System Interace Design", Element 8, "Procedure Development", and Element 9, "Training Program Development 2. Provide a complete set of ITAAC/DAC for all V&V activities, including HSI task support verification, human factors issue resolution verification, and final plant HFE/SHI design verification 3. Resolve the staff's concern regarding the use of HFE guidelines for verification 4. Provide ITAAC/DAC for the minimum inventory				
				Action W: Westinghouse will discuss with the NRC HHFB our approach to ITAACS/ Tier 1 document for chapter 18.				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '18*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1650	NRR/HHFB	18.10.3-13	DSER-OI		Action W	Active		

Westinghouse should discuss how the effectiveness of training will be demonstrated. Westinghouse should identify the process by which appropriate methods will be developed and used to evaluate the overall effectiveness of the training programs.

Per 2/16/95 conference call between Jim Bongarra, John O'Hara & Kerch, Easter, Roth, Mumaw:

Action W -- NRC agreed to resolution path "in principle" and we need to 1. issue document & SSAR revision, 2. prepare for March NRC meeting by proving list of COL applicant responsibility (1378, 1381, 1383, 1384?), and 3. revise SSAR section.

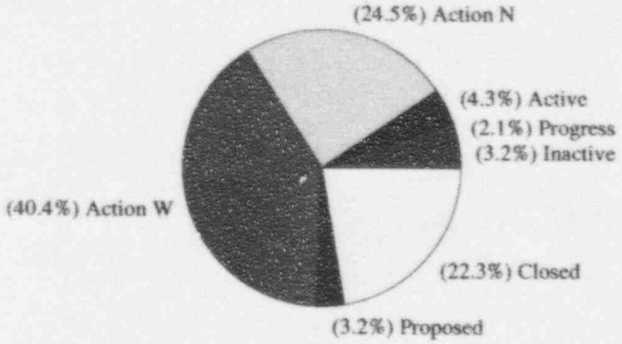
Action W

Meeting of 3/8/95: Action W: Draft COL Action Item. Training program development is the responsibility of the COL applicant. Creation of this COL item will close all 15 DSER items (18.10.3-1 thru 3-15) that it addresses. Consider existing words in chapter 13 SSAR and DSER. Action item should be in chapter 13 and cross referenced from chapter 18. Two new MEETING Open Items were created; both Action W; refer to dbase item number 2061 and 2062.

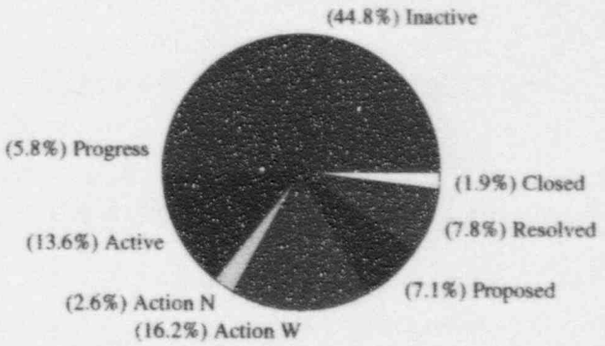
Action W: Draft SSAR revision for section 18.9.9 will be sent to the NRC HHFB. Closure will occur when formal revision 4 is delivered.

Open Item Status - Chapter 19 (SA/PRA)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	3	2	4	22	38	2	0	20	91
DSER-Confirmatory	0	0	0	0	0	0	0	0	0
DSER-COL	0	0	0	1	0	1	0	1	3
Subtotal	**3**	**2**	**4**	**23**	**38**	**3**	**0**	**21**	**94**
Follow-on Items									
RAI-OI	68	7	8	0	3	3	2	0	91
Meeting-OI	1	2	13	4	22	8	10	3	63
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**69**	**9**	**21**	**4**	**25**	**11**	**12**	**3**	**154**
Total	**72**	**11**	**25**	**27**	**63**	**14**	**12**	**24**	**248**

Westinghouse Status as of 29-May-95

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Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '19*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1398	NRR/SPSB	19.1.3.1-1	DSER-OI		Action N	Inactive		
				Westinghouse should justify assumptions and data used in calculating the pipe break contribution to the LOCA initiating event frequencies.				
				Action N - At 4/20/95 NRC meeting, provided detailed list to NRC of where in PRA Rev. 2/3 this information is discussed. Waiting for NRC review.				
1399	NRR/SPSB	19.1.3.1-2	DSER-OI		Action N	Inactive		
				Westinghouse should address the contribution to the LOCA frequencies associated with non-break failures that lead to LOCA.				
				Action N - At 4/20/95 NRC meeting, Westinghouse provided detailed list to NRC of where in PRA Rev. 2/3 this information is discussed. Waiting for NRC review.				
1400	NRR/SPSB	19.1.3.1-3	DSER-OI		Active	Action N		
				Westinghouse should address the success criteria assumed for the systems and operator actions modeled in the event trees.				
				Active - This OI relates to passive system reliability. Currently working with NRC on resolution path for this topic.				
1401	NRR/SPSB	19.1.3.1-4	DSER-OI		Closed	Action W		
				Westinghouse should assess the core damage frequency of LOCA sequences with impaired containment.				
				Closed - At 4/20/95 NRC meeting, Westinghouse provided detailed list to NRC of where in PRA Rev. 2/3 this information is discussed. Appendix A.8.2 explains why this is not an issue anymore.				
1402	NRR/SPSB	19.1.3.1-5	DSER-OI		Closed	Action W		
				Westinghouse should address inconsistencies associated with several sequence transfers between event trees.				
				Closed - In Rev. 3 PRA, Section 33.3.3 discusses consequential events and explains how Westinghouse addressed sequence transfers between event trees.				
1403	NRR/SPSB	19.1.3.1-6	DSER-OI		Closed	Action W		
				Westinghouse should extend the mission time (24 hours) used for long-term core cooling in sequences where the reactor is initially maintained at high pressure.				
				Closed - In PRA Rev. 2/3, section 6.3.1 discussed general success criteria and justification for a 24 hour mission time for all core damage sequences. Westinghouse is following standard PRA conventions when assessing success criteria and mission times. Westinghouse does not agree that the mission time should be extended for the conditions stated in this DSER OI.				
1404	NRR/SPSB	19.1.3.1-7	DSER-OI		Closed	Action W	NTD-NRC-95-4418	3/15/95
				Westinghouse should document the support system fault trees.				
				Closed - The Rev. 2/3 PRA fault trees are provided in WCAP-13275, Rev. 1. Transmitted via letter NTD-NRC-95-4418 dated March 15, 1995.				
1405	NRR/SPSB	19.1.3.1-8	DSER-OI		Action N	Action W		
				Westinghouse should clarify the nomenclature of modularized fault trees used for different failure modes.				
				Action N - Nomenclature is discussed in section 7.5 of Rev. 2/3 PRA. At 4/20/95 NRC meeting, Westinghouse provided detailed list to NRC of where in PRA Rev. 2/3 this information is discussed. Waiting for NRC review.				

AP600 Open Item Tracking System Database: Executive Summary

Date: 5/27/95

Selection: [type] like 'dser*' And [DSER Section] like '19*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1406	NRR/SPSB	19.1.3.1-9	DSER-OI		Action W	Action W	
				Westinghouse should verify that the PRA models are representative of the AP600 design.			
				Action W - It is Westinghouse's intention that the final PRA models represent the AP600 design. However, as design changes may continue (mainly due to changes initiated to address NRC questions/concerns), a table may be provided in the final PRA report that identifies design changes not included in the model and the expected impact on the overall core damage frequency for internal events based on a qualitative assessment.			
1407	NRR/SPSB	19.1.3.1-10	DSER-OI		Action N	Inactive	
				Westinghouse should address the applicability of generic failure data to risk-important AP600 components.			
				Action N - Rev. 2/3 of PRA contains explanations for why generic data is acceptable for use on passive system equipment (i.e., IRWST CVs). Waiting for NRC review.			
1408	NRR/SPSB	19.1.3.1-11	DSER-OI		Action N	Inactive	
				Westinghouse should address the logic and instrumentation failure data for the microprocessor-based components derived from Westinghouse data.			
				Action N - I&C failure data is discussed in Chapters 26-28 of Rev. 3 PRA.			
1409	NRR/SPSB	19.1.3.1-12	DSER-OI		Progress	Inactive	
				Westinghouse should justify the assumed error factors associated with risk-important events.			
				Progress - Phone calls with NRC have taken place to further define what is needed to close this DSER OI.			
1410	NRR/SPSB	19.1.3.1-13	DSER-OI		Closed	Inactive	
				Westinghouse should justify the assumed multiple Greek letter (MGL) factors used in calculating the common-cause failure (CCF) probability of the IRWST gravity injection line check valves.			
				Closed - At 4/20/95 meeting with NRC, Westinghouse provided detailed list of where in PRA Rev. 2/3 this information is presented.			
1411	NRR/SPSB	19.1.3.1-14	DSER-OI		Action N	Inactive	
				Westinghouse should justify the assumed beta factor used in calculating CCF probabilities for several hardware I&C components of the PMS.			
				Action N - Chapter 28 of Rev. 3 PRA discuss PMS I&C common cause failures. Waiting for NRC review.			
1412	NRR/SPSB	19.1.3.1-15	DSER-OI		Action N	Inactive	
				Westinghouse should justify the assumed probability for I&C software components.			
				Action N - PRA Rev. 3 Chapters 26 & 28 discuss I&C software failure probabilities. Waiting for NRC review.			
1413	NRR/SPSB	19.1.3.1-16	DSER-OI		Proposed	Inactive	
				Westinghouse should justify the frequency of unscheduled maintenance, the assumed or allowed outage times, and the assumed error factors (or distribution parameters) for maintenance duration and component unavailability associated with maintenance.			
				Proposed - Maintenance assumptions are provided in each PRA system chapter. Error factors for maintenance unavailabilities will be provided, as applicable, in the uncertainty analysis.			
1414	NRR/SPSB	19.1.3.1-17	DSER-OI		Action N	Inactive	
				Westinghouse should revise the human reliability analysis.			
				Action N - At 4/20/95 meeting with NRC, Westinghouse provided a detailed list of where in PRA Rev. 2/3 this information is presented. Waiting for NRC review.			

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Selection: [type] like 'dser*' And [DSER Section] like '19*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1415	NRR/SPSB	19.1.3.1-18	DSER-OI		Action N	Inactive		
				Westinghouse should identify assumptions made in the HRA about the control room design and about the emergency operating procedures for all risk-important human actions modeled in the PRA.				
				Action N - At 4/20/95 meeting with NRC, Westinghouse provided a detailed list to NRC of where in PRA Rev. 2/3 this info is presented. Waiting for NRC review.				
1416	NRR/SPSB	19.1.3.1-19	DSER-OI		Action N	Inactive		
				Westinghouse should demonstrate that it has considered the current understanding of crew responses during a common-cause failure of several I&C hardware and software components.				
				Action N - At 4/20/95 meeting with NRC, Westinghouse provided a detailed list to NRC of where in PRA Rev. 2/3 this information is presented. Waiting for NRC review.				
1417	NRR/SPSB	19.1.3.1-20	DSER-OI		Action N	Inactive		
				Westinghouse should justify the operator stress level used in calculating the probability for the operator action to scram the reactor within 1 minute during an ATWS.				
				Action N - At 4/20/95 meeting with NRC, Westinghouse provided a detailed list to NRC of where this information is discussed in PRA Rev. 2/3. Waiting for NRC review.				
1418	NRR/SPSB	19.1.3.1-21	DSER-OI		Closed	Inactive		
				Westinghouse should discuss the dominant cutsets (by accident sequence) for each of the top accident sequences that cumulatively contribute at least 90 percent to the total core damage frequency (CDF) from internal events.				
				Closed - Information is provided in Chapter 59 of PRA Rev. 3 (Top 13 sequences cummulatively equal 90% of internal events CDF).				
1419	NRR/SPSB	19.1.3.1-22	DSER-OI		Closed	Inactive		
				Westinghouse should verify that the dominant cutsets do not contain correlated events.				
				Closed - If "correlated events" means common cause or dependent failures, this is addressed in Section 29.2 of Rev. 3 PRA.				
1420	NRR/SPSB	19.1.3.1-23	DSER-OI		Progress	Inactive		
				Westinghouse should identify the major contributors in the uncertainty of the CDF estimate for the plant.				
				Progress - Phone calls with NRC have taken place to further define what is needed to close this DSER OI.				
1421	NRR/SPSB	19.1.3.1-24	DSER-OI		Action W	Inactive		
				Westinghouse should expand the importance analysis to provide proper interpretation of the results.				
				Action W - Importance analysis will be provided in Rev. 4 PRA.				
1422	NRR/SPSB	19.1.3.1-25	DSER-OI		Action W	Inactive		
				Westinghouse should perform additional sensitivity analyses to determine (1) the sensitivity of the estimated CDF to potential biases in numerical values, (2) the impact of potential lack of modeling details on the estimated CDF, and (3) the sensitivity of the estimated CDF to previously raised issues.				
				Action W - Sensitivity analyses will be provided as part of Rev. 4 PRA.				

Total Records: 94

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Selection: [type] like 'dser*' And [DSER Section] like '19*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1423	NRR/SPSB	19.1.3.1-26	DSER-OI		Action W	Action W		
				Westinghouse should use insights from the sensitivity, uncertainty, and importance analyses in conjunction with assumptions from the entire PRA to identify design certification and operational requirements, as well as COL and interface requirements.				
				Action W - Westinghouse is currently working on this.				
1424	NRR/SPSB	19.1.3.1-27	DSER-OI		Action N	Action N		
				The staff has not yet completed its review of Revision 1 to Levels 2 and 3 of the PRA.				
				Action N - NRC needs to complete their review of Rev. 1 (and Rev. 3) of the Level 2 & 3 PRA.				
1425	NRR/SPSB	19.1.3.2-1	DSER-OI		Action W	Action W		
				The staff has not yet completed its review of the revised seismic margins analysis.				
				Action W - NRC audited Westinghouse calcnotes on HCLPF calculations. Westinghouse responding to NRC meeting action items.				
1426	NRR/SPSB	19.1.3.2-2	DSER-OI		Action W	Action W		
				Westinghouse should provide specific references to SSAR information used in the fire PRA.				
				Action W - Fire PRA will include specific references to SSAR information used in the analysis.				
1427	NRR/SPSB	19.1.3.2-3	DSER-OI		Action W	Action W		
				Westinghouse should provide information on fire areas and fire zones considered in the PRA.				
				Action W - Fire PRA will include information on fire areas and fire zones as used in the PRA analysis.				
1428	NRR/SPSB	19.1.3.2-4	DSER-OI		Action W	Action W		
				Westinghouse should address the use of the 3-hour fire-rated barriers.				
				Action W - Fire PRA will address the use of fire-rated barriers as used in the analysis.				
1429	NRR/SPSB	19.1.3.2-5	DSER-OI		Action W	Action W		
				Westinghouse should quantitatively evaluate control room fires.				
				Action W - Fire PRA will address control room fires.				
1430	NRR/SPSB	19.1.3.2-6	DSER-OI		Action W	Action W		
				Westinghouse should assess the risk of a fire-induced loss of systems during shutdown conditions.				
				Action W - Fire PRA will include an evaluation of loss of systems during shutdown conditions.				
1431	NRR/SPSB	19.1.3.2-7	DSER-OI		Action W	Action W		
				Westinghouse should assess fire-induced opening of the ADS valves in the PRA.				
				Action W - To be addressed as part of Fire PRA.				
1432	NRR/SPSB	19.1.3.2-8	DSER-OI		Action W	Action W		
				Westinghouse should evaluate lube oil fires in the PRA.				
				Action W - To be discussed in the Fire PRA.				

Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. / Date
1433	NRR/SPSB	19.1.3.2-9	DSER-OI		Action W	Action W	
				Westinghouse should evaluate events involving fire-induced loss of offsite power in the PRA.			
				Action W - to be discussed in the Fire PRA.			
1434	NRR/SPSB	19.1.3.2-10	DSER-OI		Action W	Action W	
				Westinghouse should list all human actions that were credited in the fire analysis.			
				Acton W - List will be provided in Fire PRA.			
1435	NRR/SPSB	19.1.3.2-11	DSER-OI		Action W	Action W	
				Westinghouse should identify the risk dominant fire minimal cutsets in the fire PRA.			
				Action W - Cutsets will be provided as part of the fire PRA chapter.			
1436	NRR/SPSB	19.1.3.2-12	DSER-OI		Action W	Action W	
				Westinghouse should identify the "focused PRA" results regarding fires.			
				Action W - Focused PRA sensitivity study results pertaining to fire PRA will be provided as part of the RTNSS focused PRA sensitivity study.			
1437	NRR/SPSB	19.1.3.2-13	DSER-OI		Action W	Action W	
				Westinghouse should provide sensitivity and importance analyses in the fire PRA.			
				Action W - Since the fire PRA is a "scoping" analysis with various conservative assumptions, it is not appropriate to perform sensitivity and importance analyses since it could produce biased insights.			
1438	NRR/SPSB	19.1.3.2-14	DSER-OI		Action W	Action W	
				Westinghouse should include all specific references to the SSAR in the flooding PRA.			
				Action W - Flood PRA will include specific references to SSAR information used in the analysis.			
1439	NRR/SPSB	19.1.3.2-15	DSER-OI		Action W	Action W	
				Westinghouse should provide additional information for each flooding area credited in the flooding PRA.			
				Action W - Flood PRA will provide information on flooding areas credited in the analysis.			
1440	NRR/SPSB	19.1.3.2-16	DSER-OI		Action W	Action W	
				Westinghouse should evaluate flooding areas that contain safe-shutdown equipment.			
				Action W - Flood PRA will evaluate areas that contain safe-shutdown equipment as modeled in the PRA.			
1441	NRR/SPSB	19.1.3.2-17	DSER-OI		Action W	Action W	
				Westinghouse should document how the flooding initiating event frequencies for each flooding area were estimated.			
				Action W - Flood PRA will document the flood initiating event frequencies.			
1442	NRR/SPSB	19.1.3.2-18	DSER-OI		Action W	Action W	
				Westinghouse should list all human actions that were credited in the flooding PRA.			
				Action W - Flood PRA will provide the requested list of human actions modeled in the analysis.			

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1443	NRR/SPSB	19.1.3.2-19	DSER-OI		Action W	Action W		
				Westinghouse should identify all risk dominant flood minimal cutsets in the flooding PRA.				
				Action W - Flood PRA will provide the necessary cutsets.				
1444	NRR/SPSB	19.1.3.2-20	DSER-OI		Action W	Action W		
				Westinghouse should provide details of the normal RHR pipe rupture analysis in the flooding PRA.				
				Action W - Pipe rupture will be discussed in the flood PRA.				
1445	NRR/SPSB	19.1.3.2-21	DSER-OI		Action W	Action W		
				Westinghouse should report its Focused PRA results in the AP600 flooding PRA.				
				Action W - It is anticipated that the focused PRA sensitivity study results pertaining to flood PRA will be provided as part of the RTNSS focused PRA sensitivity study.				
1446	NRR/SPSB	19.1.3.2-22	DSER-OI		Action W	Action W		
				Westinghouse should provide sensitivity and importance analyses in the AP600 flooding PRA.				
				Action W - Since the flood PRA is a "scoping" analysis with various conservative assumptions, it is not appropriate to perform sensitivity and importance analyses since it could produce biased insights.				
1447	NRR/SPSB	19.1.3.3-1	DSER-OI		Action W	Action W		
				Westinghouse should submit a detailed task analysis justifying the value assumed for operator error during shutdown that would inadvertently drain the reactor vessel level inventory through the normal RHR system.				
				Action W - Will be discussed in Rev. 4 PRA.				
1448	NRR/SPSB	19.1.3.3-2	DSER-OI		Action W	Action W		
				Westinghouse should evaluate the risk for safe shutdown operations when the RCS temperature is greater than 177 øC (350 øF).				
				Action W - Will be resolved in Rev. 4 PRA (shutdown PRA chapter).				
1449	NRR/SPSB	19.1.3.3-3	DSER-OI		Action W	Action W		
				Westinghouse should using a separate event tree to assess the risk associated with overdraining during shutdown.				
				Action W - Shutdown PRA (Rev. 4) will provide overdraining shutdown evaluation.				
1450	NRR/SPSB	19.1.3.3-4	DSER-OI		Action W	Action W		
				Westinghouse should document the functions of the plant monitoring system, diverse actuation system, and diverse indication system during safe shutdown, cold shutdown, and midloop/vessel flange operation.				
				Action W - Rev. 4 shutdown PRA will include information on PLS, PMS, and DAS.				
1451	NRR/SPSB	19.1.3.3-5	DSER-OI		Action W	Action W		
				Westinghouse should develop separate event trees for loss of normal RHR and loss of offsite power (LOOP) during safe/cold shutdown and midloop/vessel flange operation.				
				Action W - Will be done as part of shutdown PRA (Rev. 4 PRA).				
1452	NRR/SPSB	19.1.3.3-6	DSER-OI		Action W	Action W		
				Westinghouse should document the maintenance unavailabilities and related assumptions used in the shutdown PRA.				
				Action W - Maintenance information / assumptions at shutdown is presented in Rev. 4 PRA (shutdown PRA chapter).				

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Selection: [type] like 'dser*' And [DSER Section] like '19*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1453	NRR/SPSB	19.1.3.3-7	DSER-OI		Action W	Action W		
				Westinghouse should justify the mission time used in the shutdown PRA for normal RHR operation, for both hot/cold shutdown and midloop/vessel flange operation.				
				Action W - Mission times are discussed in shutdown PRA, which is part of Rev. 4 PRA.				
1454	NRR/SPSB	19.1.3.3-8	DSER-OI		Action W	Action W		
				Westinghouse should document the dominant shutdown sequences and cutsets, assuming that no safety-related systems are available.				
				Action W - Shutdown focused PRA evaluates the case with no credit for nonsafety-related system mitigation.				
1455	NRR/SPSB	19.2.2.1-1	DSER-OI		Action N	Action W		
				Westinghouse should address the resolution of ATWS concerns.				
				Action N - Westinghouse response to ATWS concerns is provided in revision 1 response to RAI 440.26 (provided early 1994).				
1456	NRR/SCSB	19.2.2.1-2	DSER-OI		Action N	Inactive		
				Westinghouse should address the resolution of mid-loop operation concerns. (In SECY-93-087, the staff indicates that all passive plants must have a reliable means of maintaining decay heat removal capability during all phases of shutdown activities, including refueling and maintenance. The staff is still evaluating the adequacy of the AP600 relative to this criteria.)				
				Action N - NRC complete review and accept or provide specific questions on reduced inventory conditions. The AP600 PXS provided for core cooling during reduced inventory (mid-loop) operations. Availability during reduced inventory operations is an RTNSS important mission for the RNS, SWS, and CCS.				
1457	NRR/SCSB	19.2.2.1-3	DSER-OI		Action N	Inactive		
				Westinghouse should address the resolution of station blackout concerns.				
				Action N - This is part of RTNSS. Current Westinghouse position is that no additional regulatory oversight beyond that described in WCAP-13856 is not required. AP600 does not require nonsafety-related systems, including the diesels, to comply with 10CFR50.63 (SBO Rule) or SECY-93-087.				
1458	NRR/SCSB	19.2.2.1-4	DSER-OI		Active	Inactive		
				Westinghouse should address the resolution of fire protection concerns.				
				Active - There have been several meetings with NRC on fire protection issues.				
1459	NRR/SCSB	19.2.2.1-5	DSER-OI		Action W	Inactive		
				Westinghouse should address the resolution of intersystem LOCA concerns.				
				Action W - NRC is looking for an ISLOCA evaluation that systematically evaluates all systems including systems connected to interfacing systems. Westinghouse is developing the report, which will be Appendix 5A of the SSAR.				
1460	NRR/SCSB	19.2.3.3-1	DSER-OI		Active	Inactive		
				Westinghouse should address the resolution of external reactor vessel cooling concerns.				
				Active - Kickoff meeting with NRC on 4/27/95 to discuss IVR topics. Includes discussion of follow-on questions 480.80 through 480.115.				
1461	NRR/SCSB	19.2.3.3-2	DSER-OI		Active	Inactive		
				Westinghouse should address the resolution of hydrogen generation and control concerns.				
				Active - Meeting with NRC on April 10 & 11, 1995 to discuss hydrogen issues. Also discussed follow-on questions 480.116 through 480.136.				

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Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1462	NRR/SCSB	19.2.3.3-3	DSER-OI		Inactive	Inactive	
				Westinghouse should address the resolution of core-concrete interaction concerns.			
				Inactive - This OI is on hold until IVR issues are resolved. This issue may be dropped depending on the outcome of IVR topics.			
1463	NRR/SCSB	19.2.3.3-4	DSER-OI		Action N	Inactive	
				Westinghouse should address the resolution of high-pressure core melt ejection and direct containment heating concerns.			
				Action N - NRC needs to provide their concerns to Westinghouse.			
1464	NRR/SCSB	19.2.3.3-5	DSER-OI		Action N	Inactive	
				Westinghouse should address the resolution of in-vessel steam explosion concerns.			
				Action N - NRC needs to provide to Westinghouse what the concerns are. (Possibly waiting until ARSAP ROAAM report?)			
1465	NRR/SCSB	19.2.3.3-7	DSER-OI		Inactive	Inactive	
				Westinghouse should address the impulsive load capacity of the reactor cavity.			
				Inactive - This OI is on hold until IVR issues are resolved. This issue may be dropped depending on the outcome on IVR topics.			
1466	NRR/SCSB	19.2.3.3-8	DSER-OI		Action N	Inactive	
				Westinghouse should address containment bypass resulting from SGTR as described in SECY-93-087.			
				ACTION N - Several discussions with NRC have occurred on this topic. Westinghouse has provided the revised multiple SGTR paper.			
1467	NRR/SCSB	19.2.3.3-9	DSER-OI		Closed	Inactive	
				Westinghouse should identify the equipment needed to perform various functions during a severe accident, as well as the environmental conditions under which the equipment must function.			
				Closed - The requested information is discussed in Section 34.2.6 of PRA Rev. 3.			
1468	NRR/SCSB	19.2.3.3-10	DSER-OI		Action N	Inactive	
				The staff is evaluating the need for a containment vent.			
				Action N - NRC needs to address this OI.			
1469	NRR/SCSB	19.2.4-1	DSER-OI		Action N	Inactive	
				The staff is evaluating compliance with the containment performance goal.			
				Action N - NRC currently reviewing Level 2 PRA (quantification updated as part of PRA Rev. 3).			
1470	NRR/ECGB	19.2.6.2-1	DSER-OI		Closed	Inactive	
				Westinghouse should provide the basis for ignoring the effect of initial imperfections and residual stresses in determining the buckling pressure.			
				Closed - See DSER OI 3.8.2.4-17 for details.			
1471	NRR/ECGB	19.2.6.2-2	DSER-OI		Closed	Inactive	
				Westinghouse should provide the technical basis for the apparent difference in pressure-stress relationship between the meridional and hoop stresses.			
				Closed - See DSER OI 3.8.2.4-18 for details.			

Selection: [type] like 'dser*' And [DSER Section] like '19*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1472	NRR/ECGB	19.2.6.2-3	DSER-OI		Closed	Inactive	
				Westinghouse should address the criteria used to determine the best-estimate failure pressure.			
				Closed - See DSER OI 3.8.2.4-19 for details.			
1473	NRR/ECGB	19.2.6.2-4	DSER-OI		Closed	Inactive	
				Westinghouse should provide the estimate of leakage through penetrations.			
				Closed - This is same question as DSER OI 3.8.2.4-20. See that OI for status detail.			
1474	NRR/ECGB	19.2.6.3-1	DSER-OI		Action W	Inactive	
				Westinghouse should consider the modeling uncertainties and realistic material uncertainties in the calculation of the containment failure probability distribution.			
				Action W - See also DSER OI 3.8.2.4-21.			
1475	NRR/ECGB	19.2.6.3-2	DSER-OI		Action W	Inactive	
				Westinghouse should provide information regarding the development of values for the probability distribution function.			
				Action W - See also DSER OI 3.8.2.4-22.			
1476	NRR/ECGB	19.2.6.3-3	DSER-OI		Closed	Inactive	
				Westinghouse should clarify the temperature at the mean failure pressure.			
				Closed - See DSER OI 3.8.2.4-23 for details.			
1477	NRR/ECGB	19.2.6.3-4	DSER-OI		Closed	Inactive	
				Westinghouse should revise the best estimate yield pressure.			
				Closed - See DSER OI 3.8.2.4-24 for details.			
1478	NRR/ECGB	19.2.6.3-5	DSER-OI		Closed	Inactive	
				Westinghouse should revise the mean failure pressure.			
				Closed - See DSER OI 3.8.2.4-25 for details.			
1479	NRR/ECGB	19.2.6.3-6	DSER-OI		Closed	Inactive	
				Westinghouse should address the applicability of test data to the AP600 equipment hatches.			
				Closed - See DSER OI 3.8.2.4-26 for details.			
1480	NRR/ECGB	19.2.6.3-7	DSER-OI		Action W	Inactive	
				Westinghouse should provide information regarding the mathematical construction of the overall cumulative failure probability curve, as well as a tabulation of cumulative failure probability versus pressure.			
				Action W - See also DSER OI 3.8.2.4-27.			
1481	NRR/ECGB	19.2.6.3-8	DSER-OI		Action N	Inactive	
				The staff has not yet determined the acceptability of the internal containment pressure.			
				Action N - Text of DSER OI states acceptance will be determined based on the resolution of other DSER OIs in 19.2.6.			

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Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1482	NRR/ECGB	19.2.6.3-9	DSER-OI		Closed	Inactive	
				Westinghouse should provide an assessment of the pressure capability of the main steamline and main feedwater line bellows, a corresponding failure probability distribution curve, and the impact on the overall cumulative failure probability curve.			
				Closed - See DSER OI 3.8.2.4-28 for details.			
1483	NRR/ECGB	19.2.6.4-1	DSER-OI		Closed	Inactive	
				The staff has not yet determined the acceptability of the buckling analysis of the containment shell under the severe accident temperature loading.			
				Closed - See DSER OI 3.8.2.4-29 for details.			
1484	NRR/ECGB	19.2.6.4-2	DSER-OI		Closed	Inactive	
				The staff is reviewing the effect of asymmetric temperature distribution associated with thermal striping on the buckling behavior of the steel containment vessel.			
				Closed - This item is similar to DSER OIs 3.8.2.4-6 and 3.8.2.4-15. The thermal load distribution due to passive containment cooling was described in the response to the request for information dated 4/2/93.			
1485	NRR/ECGB	19.2.6.4-3	DSER-OI		Proposed	Inactive	
				Westinghouse should revise the design of the equipment hatch cover to address concerns regarding when it is under external pressure.			
				Proposed - See also DSER OI 3.8.2.4-30.			
1486	NRR/ECGB	19.2.6.4-4	DSER-OI		Closed	Inactive	
				Westinghouse should add COL Action Item 19.2.6.4-1 to the SSAR, requiring that the COL applicant use electrical penetration assemblies that are at least as strong as the steel containment vessel.			
				Closed - See DSER OI 3.8.2.4-31 for details.			
1647	NRR/SCSB	19.2.3.3-6	DSER-OI		Inactive	Inactive	
				Westinghouse should address the resolution of ex-vessel steam explosion concerns.			
				Inactive - This OI is on hold until IVR issues are resolved. This issue may be dropped depending on the outcome on IVR topics.			
1648	NRR/SCSB	19.2.5-1	DSER-OI		Action N	Inactive	
				The staff is evaluating the issue of accident management for the AP600 standard design.			
				Action N - Per the DSER OI, this is an NRC action. In January 1994, Westinghouse provided WCAP-13913 & 13914 to NRC. This WCAP provides the framework for AP600 severe accident management guidance.			
1973	NRR/SPSB	19.1.3.1-1	DSER-COL		Proposed	Inactive	
				19.1.3.1-1 The COL applicant should incorporate the list of important SSCs in the D-RAP and maintenance programs.			
				Proposed - There will be a COL item on D-RAP per DSER OI 16.2.1-2. Westinghouse recommends that DSER OI 19.1.3.1-1 be closed.			
1974	NRR/SPSB	19.1.3.1-2	DSER-COL		Action N	Inactive	
				19.1.3.1-2 The COL applicant should use the list of risk-important operator tasks to prevent or mitigate severe accidents in the control room design and fixed display panel, as well as to implement procedures and develop training programs.			
				Action N - See response to DSER OIs 18.5.3-1 and 18.5.3-2.			

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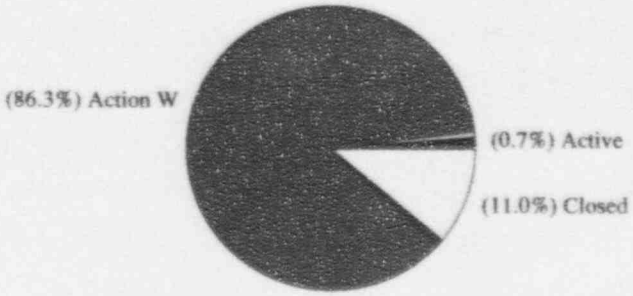
Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1975	NRR/ECGB	19.2.6.4-1	DSER-COL		Closed	Inactive		

19.2.6.4-1 The electrical penetration assemblies to be used shall be at least as strong as the steel containment vessel.

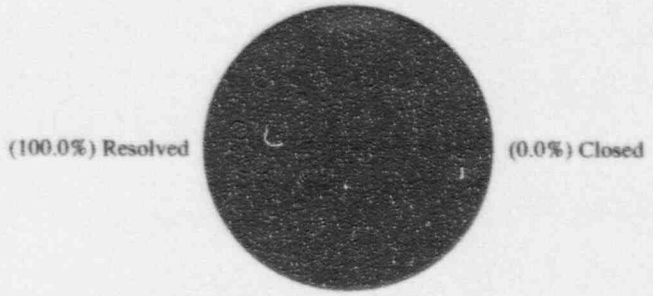
Closed - (This is the same as DSER COL action item 3.8.2.4-1).
The response to RAI 220.33, Rev 1 has been incorporated in SSAR Subsection 3.8.2.4.5, Rev 3.

Open Item Status - Chapter 20 (USI/GSI/Op. Exp.)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	1	1	1	110	0	1	11	125
DSER-Confirmatory	0	0	0	0	1	0	0	0	1
DSER-COL	0	0	0	0	15	0	0	5	20
Subtotal	**0**	**1**	**1**	**1**	**126**	**0**	**1**	**16**	**146**
Follow-on Items									
RAI-OI	0	0	0	0	0	0	0	0	0
Meeting-OI	0	0	0	0	0	0	1	0	1
Telecon-OI	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**
Total	**0**	**1**	**1**	**1**	**126**	**0**	**2**	**16**	**147**

Westinghouse Status as of 29-May-95

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Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1487	NRR/ADT	20.1-1	DSER-OI		Closed	Inactive	NTD-NRC-94-4039	1/13/94
				Westinghouse should incorporate into the SSAR the Section 1.9.4 that was submitted in the letter dated May 28, 1993.				
				Closed - The revision to section 1.9.4 referred to was included in Revision 1 of the SSAR.				
1488	NRR/ADT	20.1-2	DSER-OI		Action W	Inactive		
				Westinghouse should address Issues A-17, A-29, B-5, and 82 regarding the AP600 design and should provide an evaluation in Section 1.9.4 of the SSAR.				
				Action W - Section 1.9.4 of the SSAR will be revised to address the identified issues. This will be included in the revision of the SSAR scheduled for transmittal August 31, 1995.				
1489	NRR/ADT	20.1-3	DSER-OI		Action W	Inactive		
				The justification for why the following issues are not relevant to the AP600 design are not considered adequate, and Westinghouse should address these issues for the design in SSAR Section 1.9.4: 24, 67.3.3, 73, 75, 120, 143, 153, I.G.2, II.E.1.3, II.E.6.1, II.J.4.1, II.K.1(5), II.K.1(10), II.K.1(-13), II.K.1(17), III.A.3.3, and HF4.4.				
				Action W - Section 1.9.4 of the SSAR will be revised to adequately address the identified items. This will be included in the revision of the SSAR scheduled for transmittal August 31, 1995. See related open items for additional information on proposed resolution of specific issues.				
1490	NRR/ADT	20.2-1	DSER-OI		Action W	Inactive		
				Westinghouse should address the three exceptions, in Issue A-1, to its commitment to meet the guidelines of applicable SRP sections as well as the water hammer-related provisions in NUREG-0927. The staff concludes that the commitment to meet the guidelines of applicable SRP and water hammer related provisions in NUREG-0927 is acceptable with the following exceptions: SRP Sections 5.4.7, 6.3, 9.2.1, 9.2.2, 10.3, and 10.4.7 (including Branch technical position (BTP) 10-2) provide guidelines for minimizing the probability and effects of water hammer. The SSAR must incorporate relevant provisions to minimize and mitigate incidents in the AP600 design. SRP 3.9.3 states that the potential for water and steam hammer events should be given proper consideration in the development of design specifications. To comply with this guideline, the SSAR should address the methodology for consideration of dynamic loads on piping systems due to water hammer events. NUREG-0927 provides recommendations for minimizing and mitigating water hammer, including not only design features but also operating and maintenance procedures. Westinghouse has not provided guidelines for preparing plant operating and maintenance procedures to minimize the potential for water hammer. Westinghouse should provide sufficient guidelines for the AP600 design to the COL applicant for hot functional testing. The staff will review the acceptability of these guidelines against the recommendations in NUREG-0927.				
				Action W - This item will be addressed in the August revision to the AP600 SSAR.				
1491	NRR/ADT	20.2-2	DSER-OI		Action W	Inactive		
				Westinghouse has committed to implement water hammer provisions in the AP600 design. However, the preliminary results from a small-break LOCA test performed at Oregon State University indicated that rapid condensation events have the potential to cause unanticipated dynamic loads to occur in the reactor coolant system. Westinghouse should address whether design changes, or new measures not recommended in NUREG-0927, are required to prevent this water hammer load.				
				Action W - This item will be addressed in the August revision to the AP600 SSAR.				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1492	NRR/ADT	20.2-3	DSER-OI		Active	Inactive	

In Issue A-2, the staff evaluated the LBB methodology in Section 3.6.3 of this report, and identified a number of open items. Contingent on the resolution of these open items, the Westinghouse proposal is acceptable in addressing asymmetric blowdown loads for the AP600 design.

Active - This open item is awaiting closure of the open items on Section 3.6.3. Upon satisfactory resolution of the open items on Section 3.6.3 this item will be closed.

1493	NRR/ADT	20.2-4	DSER-OI		Action W	Inactive	

Westinghouse should address the role of the COL applicant in its resolution of Issue A-3 for the AP600 design.

As discussed in Sections 5.2.4 and 5.4.2 of this report, the development of the SG tube preservice inspection program (PSI) and inservice inspection (ISI) program is the responsibility of the COL applicant. The program is plant specific and will be reviewed by the staff individually for each license application referencing the AP600 design certification. Westinghouse should address the role of the COL applicant in its discussion of the resolution of this issue for the AP600 design. This is Open Item 20.2-4.

Action W - This open item requests that the writeup in section 1.9.4 for issue A-3 make reference to COL actions with respect to pre-service inspection and in-service inspection. Therefore, 1.9.4 will be revised to reflect appropriate COL actions. Completion of this action awaits resolution of open items 5.2.4-3 and 5.2.4-7 as well as COL action item 5.2.4-1 which address COL actions related to PSI and ISI. This resolution is expected to be completed in time to allow the revision to SSAR section 1.9.4 for this item in August, 1995.

1494	NRR/ADT	20.2-5	DSER-OI		Action W	Inactive	

Westinghouse did not address Issue A-17 in its May 28, 1993, letter. The staff requests that Westinghouse address how the AP600 is designed to prevent adverse systems interactions from water intrusion, internal floods, seismic events, and pipe ruptures.

Action W - SSAR section 1.9.4 will be revised (August 1995) to add a discussion on how the AP600 design prevents ASIs from water intrusion, internal floods, seismic events, and pipe ruptures. This revision will incorporate the discussion provided in response to RAI 440-95. In particular, the AP600 is designed to prevent ASIs resulting from water intrusion, internal floods, seismic events, and pipe ruptures. Examples will be provided. In general, the AP600 design precludes spatial interaction by separating safety-related and nonsafety-related equipment. For example, reactor coolant system makeup is provided by both the nonsafety-related chemical and volume control system and the safety-related passive core cooling system. The passive core cooling system is located inside the containment. As a result, it is designed to prevent adverse interactions related to flooding and adverse environments caused by LOCAs which are more severe than the conditions that could be caused by failures of nonsafety-related systems. The nonsafety-related portions of the chemical and volume control system are located outside of the containment.

1495	NRR/ADT	20.2-6	DSER-OI		Action W	Inactive	

For Issue A-17, the staff requested information regarding (1) the considerations, evaluations, testing and methods, including PRA, used to systematically search for and identify ASIs in the AP600 design, (2) the resolution actions including the design improvements, and well as operational and emergency procedure guidelines, to reduce these identified ASIs, and (3) items to be included in the AP600 ITAAC program for conducting walkdowns at "as built" plants as a resolution of the functionally- and spatially-coupled ASIs.

Action W - In response to requests for additional information from NRC staff (RAI 440.95 and 440.176) Westinghouse provided information regarding (1) the considerations, evaluations, testing and methods, including PRA, used to systemtically search for and identify ASIs in the AP600 design, (2) the resolution actions to reduce any identified ASIs and (3) items to be included in the AP600 ITAAC program for conducting walkdowns at "as built" plants as a [illegible]'ution of the functionally- and spatially-coupled ASIs. The information provided in the response to these RAIs will be incorporated in the nc[illegible]vision of section 1.9.4 (August SSAR revision) to specifically address the identified aspects of A-17.

Selection: [type] like 'dser*' And [DSER Section] like '20*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1496	NRR/ADT	20.2-7	DSER-OI		Action W	Inactive	
				Westinghouse did not address Issue A-29 in its May 28, 1993, letter. The staff requests that Westinghouse address how the AP600 is designed to prevent or mitigate plant vulnerabilities to sabotage.			
				Action W - Section 1.9.4 of the SSAR will be revised (SSAR August revision) to specifically address how the AP600 is designed to prevent or mitigate plant vulnerabilities to sabotage. The writeup in Section 1.9.4 will reference section 13.6 of the SSAR. Section 13.6 of the SSAR will be revised to reflect the ongoing review by NRC staff.			
1497	NRR/ADT	20.2-8	DSER-OI		Action W	Inactive	
				The staff does not agree that the AP600 Probablistic Risk Assessment Report (PRAR) addresses Issue A-33. Westinghouse should provide the appropriate PRAR sections and discuss the results of the review for the generic site that apply to the resolution of this issue. The conclusions drawn from the assessment of possible accident impacts should also be stated in the resolution of this issue.			
				Action W - As identified in the DSER (page 20-30), this issue is not required for the AP600 design to meet 52.47(a)(1)(ii) or (iv). Section 1.9.4 will be revised (SSAR August revision) to remove the current discussion of issue A-33.			
1498	NRR/ADT	20.2-9	DSER-OI		Action W	Inactive	
				For Issue A-47, Westinghouse should address the applicability of the plant TS to the design.			
				Action W - Section 1.9.4 of the SSAR (on issue A-47) will be revised (August SSAR revision) to include reference to the surveillance requirements of TS 3.3.1, "Reactor Trip System Instrumentation", and TS 3.7.3, "Main Feedwater Isolation and Control Valves"			
1499	NRR/ADT	20.2-10	DSER-OI		Action W	Inactive	
				Westinghouse did not address Issue B-5 in its May 28, 1993, letter. It should address how the AP600 is designed for the behavior of two-way, reinforced-concrete slabs loaded dynamically in biaxial tension, flexure, and shear, and to prevent buckling of the steel containment. In Section 3.8.2 of this report, the staff requests Westinghouse to consider the guideline issued by the staff and should address the staff's concerns about buckling of the steel containment.			
				Action W - A discussion of how the AP600 design addresses Issue B-5 will be added to Section 1.9.4 of the SSAR (August SSAR revision). This discussion will address how the AP600 is designed for the behavior of two-way reinforced-concrete slabs loaded dynamically in biaxial tension, flexure, and shear, and to prevent buckling of the steel containment. This writeup will incorporate the resolution of related open items in section 3.8.2 of the DSER.			
1500	NRR/ADT	20.2-11	DSER-OI		Action W	Inactive	
				For Issue B-61, although the allowable outage times are in the TS, most of these times are not specified in the current AP600 TS because Westinghouse has not completed its evaluations. Also, RTNSS has tentatively identified several non-safety- related systems for the AP600 design that may warrant outage times listed in the TS.			
				Action W - The AP600 Technical Specification are being revised to specify the allowable outage times. This open item will be closed upon completion of this revision. The revised Technical Specification will be in the August revision of the SSAR.			
1501	NRR/ADT	20.3-1	DSER-OI		Action W	Inactive	
				Westinghouse did not address Issue 14 in its May 28, 1993, letter. It should address pipe cracks for the AP600 design and the compliance with Section 6.6 of the SRP.			
				Action W - Section 1.9.4 of the SSAR will be revised (August revision) to include a discussion of how the AP600 design addresses Issue 14. This writeup will state that AP600 high energy secondary piping system will be designed, manufactured, constructed, tested and inspected in accordance with accepted industry codes and standards, and will meet the intent of the relevant guidance in SRP Chapters 3 and 10, Section 6.6 of the SRP and RG 1.26, "Quality Group Classifications and Standards for Water-, Steam-, and Radioactive Waste-Containing Components of Nuclear Power Plants as applied to non-safety systems.			

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1502	NRR/ADT	20.3-2	DSER-OI		Action W	Inactive		
				For Issue 22, Westinghouse did not address the issue; however, Section 15.4.6 of the SSAR provides a safety analysis that demonstrates that redundant alarms are available to enable operators to detect and terminate an inadvertent boron dilution event within the required time intervals before shutdown margin is lost. The staff requests that Westinghouse address for this issue how AP600 meets the requirements.				
				Action W - Section 15.4.6 of the SSAR provides safety analyses which demonstrate that redundant alarms are available to enable the operators to detect and terminate an inadvertent boron dilution event within the required time intervals, before shutdown margin is lost. Section 1.9.4 of the SSAR will be revised (August revision) to identify how the AP600 design addressess Issue 22 by referencing the analysis in Section 15.4.6 of the SSAR.				
1503	NRR/ADT	20.3-3	DSER-OI		Action W	Inactive		
				Westinghouse did not address Issue 24 in its May 28, 1993, letter. It should address automatic ECCS switchover to recirculation for the AP600 design.				
				Action W - Section 1.9.4 of the SSAR will be revised (August revision) to specifically address how the AP600 design addresses Issue 24. This revision will identify how the issue is not relevant to the AP600 due to design features which eliminate the need for "switchover to recirculation".				
1504	NRR/ADT	20.3-4	DSER-OI		Action W	Inactive		
				Westinghouse did not address Issue 43 in its May 28, 1993, letter. It should address this issue for the AP600 design because some of the recommendations in NUREG-1275, Volume 2, pertain to the quality of the air system design, as well as the adequacy and reliability of safety-related backup accumulators. In addition, Westinghouse should verify that equipment response to gradual losses of air do not result in events outside the accident analyses, which are not the responsibility of the COL applicant.				
				Action W - This item will be addressed in the August revision to the AP600 SSAR.				
1505	NRR/ADT	20.3-5	DSER-OI		Progress	Inactive		
				For Issue 67.3.3, Westinghouse should include a reference to the post-accident monitoring system and its capability in addressing this issue for the AP600 design.				
				Action W - Section 1.9.4 of the SSAR will be revised (August revision) to include a reference to the post-accident monitoring system and its capability in addressing Issue 67.3.3. The post accident monitoring system is discussed in Section 7.5 of the SSAR.				
1506	NRR/ADT	20.3-6	DSER-OI		Action W	Inactive		
				Westinghouse did not address Issue 73 in its May 28, 1993, letter. It should identify the design of the thermal sleeves, and should address whether the concerns regarding Generation "3" sleeves (raised in Issue 73) are applicable to the AP600 design.				
				Action W - Issue 73 is limited to problems associated with a particular thermal sleeve design which used two filet welds instead of a continuous 360 degree weld. SSAR section 1.9.4 will be revised to include a discussion of how the AP600 design addresses this issue. In particular the writeup will note that the thermal sleeve design to be used will incorporate design features that address the problems and concerns associated with generation "3" thermal sleeves.				

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1507	NRR/ADT	20.3-7	DSER-OI		Action W	Inactive	
				Westinghouse did not address Issue 75 in its May 28, 1993, letter. The staff believes Issue 75, related to recording and displaying all system parameters for subsequent use by plant personnel and on-line testing of the RTS, involves design issues and should be addressed by Westinghouse. In addition, Westinghouse should identify actions that are the responsibility of the COL applicant.			
				Action W - Issue 75 addressed the generic implications of two events at Salem Unit 1 where there were failures to scram automatically because of the failure of both reactor trip breakers to open on receipt of an actuation signal. This issue was expanded to include a number of issues raised by the staff that were closely related to the design and testing of the reactor protection system. The requirements for this issue were stated in GL 83-28, "Required Action Based on Generic Implications of Salem ATWS Event." Section 1.9.4 of the SSAR will be revised to include a discussion of the AP600 design features which address the GL 83-28 issues. In particular: 1. Capability of RTS to record and display parameters for subsequent use by plant personnel 2. Equipment Classification and Vendor Interface. 3. Post-Maintenance Testing. 4. RTS Reliability Improvements.			
1508	NRR/ADT	20.3-8	DSER-OI		Action W	Inactive	
				For Issue 79, an acceptable resolution of this issue would be to include an analysis of a natural convection cooldown (NCC) event from 100-percent reactor power to cold shutdown using the maximum allowable cooldown rate specified in the AP600 TS. Furthermore, Westinghouse should provide additional information to verify the number of NCC events applicable to the AP600 design over a 60-year operating life.			
				Action W - As identified in the DSER (page 20-73), this issue is not required for the AP600 design to meet 52.47(a)(1)(ii) or (iv). Section 1.9.4 will be revised (August SSAR revision) to remove the current discussion of issue 79.			
1509	NRR/ADT	20.3-9	DSER-OI		Closed	Inactive	
				For Issue 79, Generic Letter 92-02 did not impose any new requirements, but it did repeat the reporting requirements of 10 CFR Part 50.73(a)(2)(ii)(B). Westinghouse should acknowledge the responsibility of the COL applicant to report a NCC event that places the reactor vessel outside its design basis, and to confirm that no applicable regulatory design or fracture toughness criterion has been exceeded.			
				Closed - The COL applicant is responsible for implementing a Licensee Event Report System in conformance with the requirements of 10CFR50.73. This LER system will include NCC events which place the reactor vessel outside its design basis or applicable regulatory design or fracture toughness criteria. A separate COL action item to identify the COL requirement to implement an LER system per 10CFR50.73 is not necessary.			
1510	NRR/ADT	20.3-10	DSER-OI		Action W	Inactive	
				Westinghouse did not address Issue 82 in its May 28, 1993, letter. It should address PRA for accidents in the AP600 spent fuel pool.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1511	NRR/ADT	20.3-11	DSER-OI		Action W	Inactive	
				The staff could not find Issue 83 in Section 1.9.4 of the May 28, 1993, letter. Westinghouse should address control room habitability and Issue 83 for the AP600 design.			
				Action W - The writeup for Issue 83 was inadvertantly removed from Section 1.9.4. This writeup will be added back into Section 1.9.4 of the SSAR (August revision).			

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1512	NRR/ADT	20.3-12	DSER-OI		Resolved	Inactive		
				For Issue 94, Westinghouse should include appropriate low temperature over pressure TS addressing GL 90-06 (not GL 90-016) in the AP600 design TS.				
				Resolved - In the discussion of this issue in section 1.9.4 of the SSAR, Westinghouse incorrectly referred to GL-016 instead of GL 90-06. This reference will be corrected (August SSAR revision).				
1513	NRR/ADT	20.3-13	DSER-OI		Action W	Inactive		
				In its letter dated May 28, 1993, Westinghouse stated that information on Issue 105 is in Section 1.9.1.5 of that letter. The staff can not find this section, and Westinghouse should identify where the required information exists.				
				Action W - As identified in the DSER (page 20-82), this issue is not required for the AP600 design to meet 52.47(a)(1)(ii) or (iv). Section 1.9.4 will be revised (August SSAR revision) to remove the current discussion of issue 105. A discussion of ISLOCA is provided in Section 1.9.5.1 of the SSAR (not 1.9.1.5 as incorrectly noted in SSAR) and will be retained..				
1514	NRR/ADT	20.3-14	DSER-OI		Action W	Inactive		
				For the systems discussed in Issue 105, there is insufficient discussion regarding the design pressure of the components such as flanges, connectors, packings, valve stem seals, pump seals, valve bonnets, and the drain and venting lines. Westinghouse should provide this information.				
				Action W - As identified in the DSER (page 20-82), this issue is not required for the AP600 design to meet 52.47(a)(1)(ii) or (iv). Section 1.9.4 will be revised (August SSAR revision) to remove the current discussion of issue 105. A discussion of ISLOCA is provided in Section 1.9.5.1 of the SSAR (not 1.9.1.5 as incorrectly noted in SSAR) and will be retained. The discussion in section 1.9.5.1 will be revised to reflect ongoing discussions with NRC staff on ISLOCA (Open Item Tracking System items 2260-2263).				
1515	NRR/ADT	20.3-15	DSER-OI		Action W	Inactive		
				An acceptable resolution of Issue 113 should include a detailed discussion of how the AP600 design meets the recommendations in NUREG/CR-5416.				
				Action W - This item will be addressed in the August revision to the AP600 SSAR.				
1516	NRR/ADT	20.3-16	DSER-OI		Action W	Inactive		
				Westinghouse should address Issue 120 for the AP600 design.				
				Action W - The AP600 provides for on-line testability of protection systems in accordance with GDC 21. Section 1.9.4 will be revised (August revision) to include a writeup which identifies how issue 120 is resolved for the AP600 design.				
1517	NRR/ADT	20.3-17	DSER-OI		Action W	Inactive		
				For Issue 121, Westinghouse did not discuss the preoperational and operational testing of the identified systems, or the instructions in the emergency operating procedures. The staff is confused about the reference to analyses and the PRA evaluation report as to where the documentation is for the statements made on this issue. Westinghouse should address these concerns.				
				Action W - The writup for Issue 121 in Section 1.9.4 of the SSAR will revised (August SSAR revision) to discuss funtional and preoperational testing to be performed (Chapter 14) and periodic inspection, testing and calibration (Chapter 6.2.4.5). The writeup will also credit instructions to be provided in the EOPs.				
1518	NRR/ADT	20.3-18	DSER-OI		Action W	Inactive		
				For Issue 122.2, the staff requests that Westinghouse address this issue for the AP600 design in that it addresses the emergency operating guidelines, plant monitoring systems, and the instrumentation to guide the operators to initiate feed and bleed when it is needed.				
				Action W - The AP600 EOPs will provide guidance to the operators on initiation of feed and bleed based on ERGs and MMI design. Section 1.9.4 of the SSAR will be revised (August SSAR revision) to include a writeup on Issue 122.2. This writeup will address the ERG, MMI, emergency operating guidelines, plant monitoring systems and instrumentation to guide the operators to initiate feed and bleed when it is needed.				

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1519	NRR/ADT	20.3-19	DSER-OI		Action N	Inactive	
				For Issue 124, the staff established (in SECY 94-084) the RTNSS process for identifying risk significant non-safety-related active systems for regulatory treatment. The SFS reliability remains an open issue. as it will be subject to this RTNSS evaluation.			
				Action N - DSER page 20-96 states "The resolution of Issue 124 for the AP600 design will be addressed after the staff completes its review of the reliability of the SFS"			
1520	NRR/ADT	20.3-20	DSER-OI		Action W	Inactive	
				Although the startup feedwater system for the AP600 design is not a safety-related system, the staff requests that Westinghouse address Issue 125.II.7 and the question of automatic isolation of EFW for the AP600 design.			
				Action W - Section 1.9.4 of the SSAR will be revised (August revision) to specifically include how the AP600 design addresses the concerns identified in Issue 125.II.7. This writeup will note that the AP600 design does not require safety related secondary side decay heat removal and as such is not affected by an inadvertant automatic isolation of the startup feedwater system. The analysis of secondary side line breaks and the containment analysis also account for inventory from the SFS prior to isolation.			
1521	NRR/ADT	20.3-21	DSER-OI		Action W	Inactive	
				The staff introduced significant information concerning the resolution of Issue 142 which Westinghouse did not include in it response for the issue. In terms of the isolation devices and the design of the AP600 instrumentation and control architecture, Westinghouse did not address what happens if a communication error occurs, and did not identify the error messages generated and diagnostic tests applied to isolate the cause of the error. The question is would this include errors caused by leakage through an isolator. The staff requests that Westinghouse should also address these items in the resolution of Issue 120 for the AP600design			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1522	NRR/ADT	20.3-22	DSER-OI		Action W	Inactive	
				Westinghouse should address Issue 143 for the AP600 design.			
				Action W - In current plants, operability of some safety-related components is dependent upon operation of HVAC and chilled-water systems (CWSs) to remove heat from rooms containing the components. If chilled-water and HVAC systems are unavailable to remove heat, the ability of the safety equipment within the rooms to operate as intended cannot be assured. The AP600 design does not require safety related active heat removal systems to protect safety-related equipment. Section 1.9.4 of the SSAR will be revised (August revision) to include a writeup on Issue 143 to specify how the AP600 design addresses the concerns identified in Issue 143			
1523	NRR/ADT	20.3-23	DSER-OI		Action W	Inactive	
				Westinghouse should address Issue 153 for the AP600 design.			
				Action W - Issue 153 addresses the reliability of the ESW systems and related operating problems. In current plants the ESW system supplies cooling water to transfer heat from various safety-related and non-safety-related systems and equipment to the ultimate heat sink. In the resolution of Issue 130, the staff found that loss of ESW systems in current plants could be a significant contributor to core-damage frequency. The AP600 does not rely upon the service water system to transfer heat from safety related equipment to the ultimate heat sink. Section 1.9.4 of the SSAR will be revised (August revision) to include a writeup which specifically identified how the AP600 design addresses Issue 153.			

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Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1524	NRR/ADT	20.4-1	DSER-OI		Closed	Inactive		

Westinghouse did not address Issue I.A.1.4 in its May 28, 1993, letter. It should also address the responsibility of the COL applicant in this issue for the AP600 design.

(DSER page 20-108) As discussed in NUREG-0933, Issue I.A.1.4, addressed changes to 10 CFR 50.54, "Conditions of licensees," concerning shift staffing and working hours of licensed operators. The final rule that amended 10 CFR 50.54 was approved on April 28, 1983. This issue is resolved and new requirements were established.

The staff, however, considers this issue not relevant to the AP600 design because it is an operational issue outside the scope of AP600 design certification. The organizational structure of the site operator is duscssed in Section 13.1 of this report. The COL applicant will be responsible for addressing this issue as part of the licensing process and is COL Action Item 20.4-1.

Westinghouse did not address this issue in its May 28, 1993, letter. It concluded, in Table 1.9-2 of that letter, that this issue was not relavant to the AP600 design because this issue was issued [sic] with no new requirements. Although Westinghouse is correct as to the design of the plant, the responsiblity of the COL applicant should be identified. The staff requests that Westinghouse address this issue for the AP600 deisgn.

Closed - There is not a need to add a section to 1.9.4 for this issue since (as identified in DSER) this issue is an operational issue outside the scope of design certification. The requirement for a COL applicant to meet 10 CFR 50.54 (which was ammended in response to this issue) in combination with the COL action to describe its organizational structure (COL Action Item 13.1-1) satisfactorily resolve this issue.

1525	NRR/ADT	20.4-2	DSER-OI		Action W	Inactive		

For Issue I.C.1, the staff concludes that the AP600 specific ERGs are needed to satisfy these requirements. Supporting analyses necessary to demonstrate the effectiveness of operator actions in response to transients and accidents should also be provided by Westinghouse.

Action W - AP600 ERGs are scheduled for submittal to NRC staff.

1526	NRR/ADT	20.4-3	DSER-OI		Action W	Inactive		

For Issue I.C.5, Westinghouse addressed the responsibility of the plant designer; however, the COL applicant will, also, be responsible for the site-specific information at the COL and operational phases. Westinghouse should address this reponsibility as well as the methods and criteria for the development, verification and validation, implementation, maintenance, and revision of procedures.

Action W - The COL actions requested with this item are addressed via COL action items 13.5.1-1 and 13.5.2-1. COL action item 13.5.1-1 states the COL applicant should develop and describe its administrative procedures. COL action item 13.5.2-1 states the COL applicant should develop and describe the operating and maintenance procedures. See DSER Open items 13.5.1-1 and 13.5.2-1 for resolution. Westinghouse and COL applicant responsibilities with respect to methods and criteria for the development, verification and validation, implementation, maintenance, and revision of procedures are being addressed via Open Items and COL Action Items in Chapters 13 and 18. SSAR section 1.9.3 will be revised to reflect resolution of Chapter 13 and 18 open items relevant to Issue I.C.5.

1527	NRR/ADT	20.4-4	DSER-OI		Closed	Inactive		

Westinghouse did not address Issue I.C.9 in its May 28, 1993, letter. It should address the responsibility of the COL applicant in procedure development for this issue. The methods and criteria for the development, verification and validation, implementation, maintenance, and revision of procedures should be addressed.

Closed - The COL actions requested with this item are addressed via COL action items 13.5.1-1 and 13.5.2-1. COL action item 13.5.1-1 states the COL applicant should develop and describe its administrative procedures. COL action item 13.5.2-1 states the COL applicant should develop and describe the operating and maintenance procedures. See DSER Open items 13.5.1-1 and 13.5.2-1 for resolution. Westinghouse and COL applicant responsibilities with respect to methods and criteria for the development, verification and validation, implementation, maintenance, and revision of procedures are being addressed via Open Items and COL Action Items in Chapters 13 and 18.

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Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1528	NRR/ADT	20.4-5	DSER-OI		Closed	Inactive		
				The human factors details of Issue I.D.3 are beyond the scope of the AP600 design review and should be addressed by the COL applicant. Westinghouse should address the responsibility of the COL applicant in its response.				
				Closed - The AP600 HFE program discussed in Chapter 18 addresses the human factors issues associated with Issue I.D.3. The resolution of Chapter 18 open items and resulting COL action items in Chapter 18 will adequately address the HFE issues for Issue I.D.3. A separate COL action item in Chapter 20 is not required.				
1529	NRR/ADT	20.4-6	DSER-OI		Action W	Inactive		
				Westinghouse should address the classification of AP600 structures, systems, and components in its discussion of Issue I.F.1.				
				Action W - For AP600 the classification of structures, systems and components is provided in Section 3.2 of the SSAR, including their safety, seismic and quality class designations. Section 1.9.4 of the SSAR will be revised (August revision) to include a discussion of how the AP600 addresses Issue I.F.1. This discussion will make reference to Sections 3.1 and 3.2 of the SSAR.				
1530	NRR/ADT	20.4-7	DSER-OI		Closed	Inactive		
				For Issue I.F.2, Westinghouse should address the responsibility of the COL applicant.				
				Closed - The COL applicant responsibilities for this issue are addressed via COL Action Item 17.1.3-1, which states that the COL applicant should submit its design phase QA program for staff review. The closure of this COL action item is being tracked via DSER Open Item 17.1.3-2, "Westinghouse should add COL Action Item 17.1.3-1 to the SSAR."				
1531	NRR/ADT	20.4-8	DSER-OI		Action W	Inactive		
				For Issue I.G.2, Westinghouse should address the development of the initial test program, including test abstracts and acceptance criteria, even though this program will be finalized and implemented by the COL applicant. In addition, Westinghouse should explain the responsibility of the COL applicant.				
				Action W - Section 1.9.4 of the SSAR will be revised (August revision) to identify how the AP600 initial test program (Chapter 14) and attendant responsibilities of the COL applicant (COL action items 14/2/2-1, -2, -3, -4 and 14.2.8-1) address Issue I.G.2.				
1532	NRR/ADT	20.4-9	DSER-OI		Action W	Inactive		
				For Issue II.B.2, Westinghouse should explicitly discuss the relationship between shielding and the source term used for accident analysis in Chapter 15 of the SSAR. Also, Westinghouse should provide the SSAR sections that discuss shielding and source terms, and should define the related responsibilities of the COL applicant.				
				Action W - General design conditions to keep post-accident exposures as low as reasonably achievable (ALARA) are addressed in section 12.3.1.2 of the AP600 SSAR. The source term used in shielding analyses is discussed in section 12.2 of the SSAR. Section 1.9.3 of the SSAR will be revised to identify the relevant sections of the SSAR which address the issue II.B.2. This revision will also identify any responsibilities of the COL applicant (Chapter 12 COL action items) relevant to issue II.B.2.				
1533	NRR/ADT	20.4-10	DSER-OI		Action W	Inactive		
				For Issue II.B.8, Westinghouse should discuss the analyses in the SSAR of degraded core conditions in a design-specific PRA, as well as the reliability of core and containment heat removal systems for the AP600 design.				
				Action W - The relevant portions of SSAR Section 1.9.3 will be revised to identify the appropriate section of the AP600 PRA which includes a discussion of degraded core conditions and will identify the appropriate section of SSAR sections 6.2 and 6.3 which discuss the reliability of the core and containment heat removal systems.				

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1534	NRR/ADT	20.4-11	DSER-OI		Action W	Inactive	
				For Issue II.D.1, Westinghouse should address the two exceptions in the AP600 design to EPRI Report NP-2770-LD and the guidelines of Issue II.D.1 in NUREG-0737. The staff concludes that the reference to EPRI Report NP-2770-LD or the guidelines of Issue II.D.1 in NUREG-0737 is acceptable with the following exceptions: There appears to be an inconsistency regarding the documents identified as Reference 2 in Section 1.9.6 of the SSAR and the EPRI Report NP-2770-LD cited in Section 1.9.3 of the SSAR. Westinghouse should clarify which document(s) should be referenced for the AP600 design. Westinghouse should provide clear guidelines on how to define the "similar design" between the AP600 valves, and the EPRI test conditions and configurations.			
				Action W - The reference to EPRI Report NP-2770-LD will be clarified in a revision to section 1.9 of the SSAR.			
1535	NRR/ADT	20.4-12	DSER-OI		Action W	Inactive	
				Westinghouse did not address Issue II.E.1.3 in its May 28, 1993, letter. It should discuss how the AP600 design meets the Section 10.4.9 of the SRP and Regulatory Guide 1.26 for the emergency feedwater system.			
				Action W - Section 1.9.4 of the SSAR will be revised to identify how the AP600 design addresses issue II.E.1.3. Issue II.E.1.3 addresses improving the reliability of the Emergency Feedwater System. This writeup will specifically address that the AP600 design relies on passive means for decay heat removal. The AP600 startup feedwater system is a non-safety means of decay heat removal whose reliability is commensurate with its role as a diverse means of decay heat removal.			
1536	NRR/ADT	20.4-13	DSER-OI		Action W	Inactive	
				Westinghouse needs to provide a clearer explanation of how the AP600 design meets the requirements of Issue II.E.4.2. In addition, Westinghouse should also explain the use of the terms "automatically closed" and "safeguards" in the context of this issue.			
				Action W - Section 1.9.3 of the SSAR will be revised to provide a clearer explanation of how the AP600 design addresses Issue II.E.4.2. The response will be expanded to clearly address the accepance criteria for this issue.			
1537	NRR/ADT	20.4-14	DSER-OI		Action W	Inactive	
				Westinghouse needs to provide a clearer explanation of how the AP600 design meets the requirements of Issue II.E.4.4.			
				Action W - Section 1.9.3 of the SSAR will be revised to provide a clearer explanation of how the AP600 design addresses Issue II.E.4.4. The response will be expanded to clearly address the accepance criteria for this issue.			
1538	NRR/ADT	20.4-15	DSER-OI		Action W	Inactive	
				To address Issue II.E.5.1, Westinghouse should reference (in Table 1.9-2) its evaluation of this issue in Section 1.9.3 of the SSAR, as it does for other TMI Action Plan items.			
				Action W - Section 1.9.4, Table 1.9-2 will be revised by adding a notation in Table 1.9-2 of the SSAR for issue II.E.5.1 that notes the issue is discussed in section 1.9.3 under item "(2)(xvi) ECCS Actuation Cycles".			
1539	NRR/ADT	20.4-16	DSER-OI		Action W	Inactive	
				To address Issue II.F.1, Westinghouse should address the insufficient information for the noble gas effluent instrumentation and the primary sampling system, as well as the role of the COL applicant.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			

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1540	NRR/ADT	20.4-17	DSER-OI		Action W	Inactive	
				To address Issue II.F.3, Westinghouse should provide the ranges expected for plant variables during core damage events.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1541	NRR/ADT	20.4-18	DSER-OI		Action W	Inactive	
				In its discussion of Issue II.J.3.1 in SSAR Section 1.9.3, Westinghouse should explain what it means by "properly," "clearly defined," "well-coordinated," and "appropriate" used in Section 1.9.3 of the SSAR, and should discuss the QA standards and organization it used for the AP600 design.			
				Action W - The discussion of this Issue in SSAR section 1.9.3 will be revised to either remove ambiguous terminology or else clearly define its meaning. In addition, Table 1.9-2 will be revised to reference the discussion of this issue in section 1.9.3 of the SSAR.			
1542	NRR/ADT	20.4-19	DSER-OI		Closed	Inactive	
				To address Issue II.J.4.1, Westinghouse should address the responsibility of the COL applicant for procedure development.			
				Closed - The plant procedures for adequately reporting in accordance with 10 CFR Part 21 and 10 CFR 50.55(e) are outside the scope of AP600 design certification. The COL applicant will have the responsibility for having the proper reporting procedures and addressing this issue as part of the licensing process. This is considered a part of the plant procedures development by the COL applicant. Procedures development by the COL applicant are addressed by COL Action Items 13.5.1-1 and 13.5.2-1. These COL action items are addressed by DSER open items 13.5.1-1 and 13.5.2-1. This DSER open item is closed since the responsibility of the COL applicant for this issu is tracked by two other DSER open items.			
1543	NRR/ADT	20.4-20	DSER-OI		Action W	Inactive	
				Westinghouse did not address Issue II.K.1(13) in its letter dated May 28, 1993. It should address the plant TS that include requirements from the TMI Action Plan bulletins as well as the related responsibility of the COL applicant.			
				Action W - Section 1.9.4 of the AP600 SSAR will be revised to include a writeup on how the AP600 design addresses this issue. Specifically, the AP600 Technical Specifications are based upon (and are being reviewed against) the Westinghouse standard Technical Specifications. The Westinghouse standard Tech. Specs. incorporated all the requirements of the bulletins for the TMI Action Plan.			
1544	NRR/ADT	20.4-21	DSER-OI		Action W	Inactive	
				Issue II.K.1(16) required procedures for PORVs and the AP600 design does not include these valves. To provide functions equivalent to that of PORVs, Westinghouse includes the manually operated safety-related ADS discussed in Chapter 5 of the SSAR. The staff does not have adequate information regarding operational guidance and requirements of the ADS during severe accident events. The staff concludes that detailed operational strategies of the ADS should be included in the ERGs for the AP600 design for the severe mitigating accidents. ERGs are discussed in Issue I.C.1. Westinghouse should provide this information.			
				Action W - The AP600 ERGs address the use of ADS valves for accident mitigation. This open item will be closed upon submittal of the AP600 ERGs.			
1545	NRR/ADT	20.4-22	DSER-OI		Action W	Inactive	
				Westinghouse did not address Issue II.K.1(17) in its letter dated May 28, 1993. It should address what plant variables and setpoints initiate safety injection in a response to this issue.			
				Action W - Section 1.9.4 of the SSAR will be revised to include a writeup on how the AP600 design addresses this issue. Specifically, the writeup will identify the pressurizer variables which initiate SI and will note that actuation does not rely on coincident low pressurizer pressure and low pressurizer level.			

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1546	NRR/ADT	20.4-23	DSER-OI		Action W	Inactive		
				Westinghouse did not address Issue II.K.1(24) in its letter dated May 28, 1993. The final procedures are the responsibility of the COL applicant; however, the range of LOCA analyses for a range of time lapses and the specific information to go into the procedures are the responsibility of the designer (Westinghouse in the case of the AP600 design). Westinghouse should address this issue and the role of the COL applicant.				
				Action W - Chapter 15 of the AP600 SSAR includes analysis of a range of small break sizes. The AP600 design automatically trips the reactor coolant pumps following receipt of an SI signal, thus, the need to look at a range of time lapses between reactor trip and RCP trip is unnecessary. Section 1.9.4 of the SSAR will be revised to specifically address the above in a writeup which identifies how the AP600 design addresses the relevant issues for Issue II.K.1(24). Procedures development by the COL applicant are addressed by COL Action Items 13.5.1-1 and 13.5.2-1.				
1547	NRR/ADT	20.4-24	DSER-OI		Action W	Inactive		
				Westinghouse did not address Issue II.K.1(25) in its letter dated May 28, 1993. The final procedures are the responsibility of the COL applicant; however, the range of LOCA analyses for a range of time lapses and the specific information to go into the procedures are the responsibility of the designer (Westinghouse in the case of the AP600 design). Westinghouse should address this issue and the role of the COL applicant.				
				Action W - Procedures development by the COL applicant are addressed by COL Action Items 13.5.1-1 and 13.5.2-1. The AP600 ERGs are addressed by DSER Open Item 20.4-2. Upon submittal of the AP600 ERGs this open item will be closed.				
1548	NRR/ADT	20.4-25	DSER-OI		Action W	Inactive		
				Westinghouse should describe the analyses that it has performed concerning inadequate core cooling conditions for the AP600 design, as well as the guidelines that it has developed for the design as a result of these analyses in its response for Issue II.K.1(27).				
				Action W - The AP600 ERGs are addressed by DSER Open Item 20.4-2. Upon submittal of the AP600 ERGs this open item will be closed.				
1549	NRR/ADT	20.4-26	DSER-OI		Action W	Inactive		
				Issue II.K.3(5) required that PWR licensees address the design to provide an automatic reactor coolant pump (RCP) trip, such as during a LOCA. This is the responsibility of the designer (Westinghouse in the case of the AP600 design). Westinghouse should address the RCP trip in its response to Issue II.K.3(5).				
				Action W - Section 1.9.4 of the AP600 SSAR will be revised to include a writeup on how the AP600 design addresses Issue II.K.3(5). Specifically, the AP600 design provides for an automatic trip of the reactor coolant pumps.				
1550	NRR/ADT	20.4-27	DSER-OI		Closed	Inactive		
				For Issue II.k.3(8), Westinghouse should provide information regarding the diverse heat removal method independent of [illegible]am generators for the AP600 design.				
				Closed - A diverse decay heat removal method independent of the steam generators is provided in the AP600 design by the Passive Core Cooling System. This system and its functions are described in Section 6.3 of the AP600 SSAR.				
1551	NRR/ADT	20.4-28	DSER-OI		Action W	Inactive		
				For Issue II.K.3(18), Westinghouse should provide the PRA section that confirms the reliability of the automatic depre- ssurization system (ADS) actuation.				
				Action W - Section 1.9.3 of the SSAR, item (1) (vii) will be revised to identify the specific section of the AP600 PRA which addresses the reliability of automatic ADS actuation.				

Selection: [type] like 'dser*' And [DSER Section] like '20*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1552	NRR/ADT	20.4-29	DSER-OI		Action W	Inactive	
				For Issue II.K.3(28), Westinghouse should provide the number of cycles the ADS valves may be opened at design pressure. In addition, Westinghouse should provide the SSAR sections that discuss accident analyses to confirm the functionality of the ADS equipment and instrumentation during and after postulated accident conditions.			
				Action W - As identified in the DSER (page 20-179), this issue is not required for the AP600 design to meet 52.47(a)(1)(ii) or (iv). Section 1.9.4 Table 1.9-2 will be revised (August SSAR revision) to identify that this item is not required for the AP600 design to meet 52.47.			
1553	NRR/ADT	20.4-30	DSER-OI		Action W	Inactive	
				To address Issue III.A.1.2, Westinghouse should provide for the onsite support center (OSC) in the AP600 design because Section 18.2.1.1.2.6 of the SSAR describes the functions and location of the OSC. This should be reflected in Item (2)(xxv) of Section 1.9.3 of the SSAR to demonstrate resolution of this issue for the AP600 design.			
				Action W - Section 1.9.3 of the SSAR will be revised to identify designer responsibilities with respect to the onsite Tecnical Support Center. This revised writeup will identify the relevant sections of the AP600 SSAR which address the functions and locations of the TSC, along with COL responsibilities (COL Action Item 13.3-1).			
1554	NRR/ADT	20.4-31	DSER-OI		Action W	Inactive	
				Westinghouse should address the responsibility of the COL applicant in the resolution of Issue III.A.3.3.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1555	NRR/ADT	20.4-32	DSER-OI		Action W	Inactive	
				To address Issue III.D.1.1, Westinghouse should explain whether the non-safety-related systems are prevented from recirculating radioactive coolant outside containment during accidents by design, or by procedures and operator action.			
				Action W - Section 1.9.3 of the SSAR will be revised to clarify the manner in which the non-safety related systems are prevented from recirculating radioactive coolant outside containment during accidents (i.e., isolation on high containment radiation signal).			
1556	NRR/ADT	20.4-33	DSER-OI		Action W	Inactive	
				For Issue III.D.3.4, Westinghouse should address the possibility of toxic gases and substances onsite, and offsite, affecting control room habitability; the signals, or procedures and operator actions, for actuation of equipment for control room habitability; and the responsibility of the COL applicant. Westinghouse should also address the potential exposure of operators to radiation brought into the control room after the compressed air supply is exhausted, as well as the dose limits and the filtration provided by the HVAC system.			
				Action W - As stated in NUREG-0933, Generic Safety Issue III.D.3.4 was clarified in NUREG-0737 and requirements were issued. Acceptance criteria are provided in the US NRC Standard Review Plan, Section 6.4 and in Reg. Guides 1.78 and 1.95. The items associated with this issue are being resolved as part of the review of the Control Room habitability design summarized in Section 6.4.			
1557	NRR/ADT	20.5-1	DSER-OI		Action W	Inactive	
				For Issue HF4.1, Westinghouse should address the regulatory "guidance and standards" that it used to write the emergency operating procedures (EOPs) for the AP600 design.			
				Action W - As identified in the DSER (page 20-188), this issue is not required for the AP600 design to meet 52.47(a)(1)(ii) or (iv). Section 1.9.4 Table 1.9-2 will be revised (August SSAR revision) to identify that this item is not required for the AP600 design to meet 52.47.			

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1558	NRR/ADT	20.5-2	DSER-OI		Action W	Inactive		
				For Issue HF5.2, Westinghouse should identify and discuss the "current guidance and requirements on integrated human factors design" used to design the advanced alarm system. In addition, Westinghouse should explain the relationship of the computerized procedures and qualified display processing system to the alarm system.				
				Action W - SSAR section 1.9.4 will be revised to identify the guidance and requirements used to design the advanced alarm system and the SSAR section which explains the relationship of the computerized procedures and qualified display processing system to the advanced alarm system will be identified.				
1559	NRR/ADT	20.7-1	DSER-OI		Action W	Inactive		
				Westinghouse should revise WCAP-13559 to include the bulletins and generic letters that were issued after December 31, 1991. This inclusion of new bulletins and generic letters should continue until the draft FSER for the AP600 design is issued.				
				Action W - WCAP 13559 will be revised to incorporate bulletins and generic letters issued since the last revision of WCAP-13559.				
1560	NRR/ADT	20.7-2	DSER-OI		Action W	Inactive		
				Westinghouse should correct its comments in WCAP-13559 concerning Generic Letters 80-070, 81-037, and 82-030. In addition, Westinghouse should correct statements that Bulletins 83-04 and 90-01 applied only to BWR licensees.				
				Action W - WCAP-13559 will be revised to correct statements on GL 80-070, GL 81-037, GL 82-030, BL-83-04, and BL-90-01.				
1561	NRR/ADT	20.7-3	DSER-OI		Action W	Inactive		
				For Bulletin 80-01, Westinghouse should address the pneumatic operator for the automatic depressurization system.				
				Action W - This bulletin was issued to only BWR licensees to determine the operability of the pneumatic operator for the ADS, however, the AP600 design has an ADS similar to BWRs. WCAP-13559 will be revised to address this bulletin, specifically to state that the AP600 ADS does not rely upon pneumatic operators.				
1562	NRR/ADT	20.7-4	DSER-OI		Action W	Inactive		
				For Bulletin 80-02, Westinghouse should address the quality assurance program to identify contractor's quality control/quality assurance problems.				
				Action W - Westinghouse states in the current revision of WCAP-13559 that the bulletin is not applicable to the AP600 design because the bulletin was issued only for BWR plants; however, the bulletin concerned contractors (in this case a BWR supplier) having quality control/quality assurance problems and the licensee programs to identify these problems. WCAP-13559 will be revised to correct the rationale for why this bulletin is not applicable to the AP600 design.				
1563	NRR/ADT	20.7-5	DSER-OI		Action W	Inactive		
				For Bulletin 80-04, Westinghouse should address this bulletin in Section 6.2 of the SSAR, and consider the containment pressure and temperature response to the event.				
				Action W - Westinghouse states in the current revision of WCAP-13559 that this bulletin was addressed in Section 15.1.5 of the SSAR on steam system piping failures. WCAP-13559 will be revised to also identify that this issue is addressed in Section 6.2 of the SSAR which considers the containment pressure and temperature response to the event.				
1564	NRR/ADT	20.7-6	DSER-OI		Action W	Inactive		
				For Bulletin 80-05, Westinghouse should address the potential of having a partial vacuum in a tank important to safety in the AP600 design.				
				Action W - This bulletin addressed the collapse of CVCS tanks under partial vacuum. Westinghouse states in the current revision of WCAP-13559 that the bulletin is not applicable to the AP600 design because the design has no hold-up tanks in the CVCS. WCAP-13559 will be revised to identify the SSAR sections which address the design requirements for safety-related tanks with respect to the potential of having a partial vacuum.				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1565	NRR/ADT	20.7-7	DSER-OI		Action W	Inactive		
				For Bulletin 80-18, Westinghouse should address the design of mini-flow lines for safety-grade pumps.				
				Action W - Westinghouse states in the current revision of WCAP-13559 that this bulletin was not applicable to the AP600 design because the design has no safety related charging pumps. WCAP-13559 will be revised to clarify that there are no safety-related pumps and as such the bulletin is not applicable to the AP600 design.				
1566	NRR/ADT	20.7-8	DSER-OI		Action W	Inactive		
				Westinghouse should address the surveillance aspects of Bulletin 81-01.				
				Action W - WCAP-13559 will be revised to identify that inservice inspections in accordance with ASME Section XI are performed as identified in Section 3.9.6 of the AP600 SSAR.				
1567	NRR/ADT	20.7-9	DSER-OI		Action W	Inactive		
				For Bulletin 81-03, Westinghouse should address how the AP600 intake structure prevents flow blockage from potential sources.				
				Action W - The writeup in WCAP-13559 will be expanded to more fully explain that the AP600 design does not depend on site water intake structures for heat removal. The ultimate heat sink for the AP600 design is via the containment shell via the Passive Containment Cooling System. As such the site water intake structure has no safety related function.				
1568	NRR/ADT	20.7-10	DSER-OI		Action W	Inactive		
				For Bulletin 82-02, Westinghouse should address the use of molybdenum disulfide lubricant within the reactor coolant pressure boundary, reactor coolant pump internals, reactor vessel closure studs, and any other service for the AP600 design.				
				Action W - This item will be addressed in the August revision to the AP600 SSAR. Molybdenum disulfide not used (see SSAR section 5.2).				
1569	NRR/ADT	20.7-11	DSER-OI		Action W	Inactive		
				Bulletin 83-03 involved the inservice surveillance and testing of check valves and the location of check valves in diesel generators. Westinghouse should address these aspects of the bulletin.				
				Action W - Bulletin 83-03 involved the inservice surveillance and testing of check valves and the location of check valves in safety related diesel generators. WCAP-13559 will be revised to clarify that this issue is not relevant to the AP600 design since the DGs have no safety related function.				
1570	NRR/ADT	20.7-12	DSER-OI		Action W	Inactive		
				For Bulletin 84-03, Westinghouse should address the probability and consequences of failure of these seals.				
				Action W - This item will be addressed in the August revision to the AP600 SSAR.				
1571	NRR/ADT	20.7-13	DSER-OI		Closed	Inactive		
				For Bulletin 85-02, Westinghouse should provide more information on the operability and surveillance requirements for the reactor trip breakers.				
				Closed - Westinghouse states in the current revision of WCAP-13559 that this bulletin is addressed in Sections 3.3.1.6 and 7.1.2.2.4 of the SSAR, and Chapter 16. This bulletin (1) assured proper RTB testing in plants that had not yet installed the automatic shunt trip modification and (2) provided information about RTB reliability and TS operability. The AP600 design addresses this first part by providing automatic diverse trip actuation via the shunt trip attachment. Testing of the interface allows trip actuation of the breakers by either the undervoltage trip attachment or the shunt trip attachment. The DSER incorrectly states that Westinghouse has incorrectly referenced SSAR Chapter 16, Surveillance 3.3.1.6, which applies to RCPs. SR 3.3.1.6 is the correct SR for the Reactir Trip Break Undervoltage and Shunt Trip Mechanism (See Table 3.3.1-1 of AP600 TS). No revision necessary.				

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1572	NRR/ADT	20.7-14	DSER-OI		Action W	Inactive	
				For Bulletin 86-01, Westinghouse should address the loss of RHR pumps due to a single failure of the isolation valve in the mini-flow lines for the pumps.			
				Action W - WCAP-13559 will be revised to clarify that the issues identified in this bulletin are addressed in the AP600 design by 1) no valves in the miniflow lines for the RHR pumps and 2) the RHR pumps do not serve a safety related function.			
1573	NRR/ADT	20.7-15	DSER-OI		Action W	Inactive	
				For Bulletin 88-09, Westinghouse should address why the thimble tube design of the AP600 is acceptable.			
				Action W - WCAP-13559 will be revised to address why the thimble tube design used for the AP600 is not susceptable to the thinning phenomena discussed in bulletin 88-09.			
1574	NRR/ADT	20.7-16	DSER-OI		Closed	Inactive	
				For Bulletin 89-01, Westinghouse should address why the AP600 design should not have the problems with certain steam generator mechanical plugs supplied by Westinghouse discussed in the bulletin.			
				Closed - Westinghouse states in the current revision to WCAP-13559 that this bulletin is not applicable to the AP600 design because the issues involved procurement (i.e, procurement by a COL applicant of steam generator mechanical plugs). Procurement of SG mechanical plugs (regardless of vendor) are a COL applicant responsibility.			
1575	NRR/ADT	20.7-17	DSER-OI		Action W	Inactive	
				For Bulletin 89-03, the staff agrees that this bulletin involved procedures; however, these procedures involve movement and placement of highly reactive fuel during refueling within the core designed by Westinghouse. The staff requests Westinghouse to discuss what responsibility it has regarding this issue, including the core and control systems, as well as discuss the responsibility of the COL applicant.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1576	NRR/ADT	20.7-18	DSER-OI		Action W	Inactive	
				For Bulletin 90-01, Westinghouse should commit to use Rosemount transmitters manufactured after July 11, 1989 and address the on-line monitoring capability of the AP600 design, because this is an effective method to address the loss of fill-oil in the Rosemount transmitter issue.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1577	NRR/ADT	20.7-19	DSER-OI		Action W	Inactive	
				For Generic Letter 80-01, Westinghouse should address the clad swelling models (as described in NUREG-0630) that have been incorporated into evaluation models used for the AP600 design.			
				Action W - The LOCA evaluation models used in the design basis analyses for AP600 use clad swelling models which have been approved by the NRC. WCAP-13559 will be revised to address this GL by referencing the use of approved models.			
1578	NRR/ADT	20.7-20	DSER-OI		Action W	Inactive	
				Westinghouse should more specifically explain where in Section 1.9 of the SSAR that Generic Letter 80-02 is addressed.			
				Action W - WCAP-13559 will be revised to clarify the applicability of this GL to the AP600 design. The AP600 design does not have safety related Diesel Generators.			
1579	NRR/ADT	20.7-21	DSER-OI		Action W	Inactive	
				Westinghouse should more specifically explain where in Section 1.9 of the SSAR that Generic Letter 80-14 is addressed.			
				Action W - WCAP-13559 will be revised to provide a more specific SSAR reference. Specifically, the WCAP will be revised to identify that the issues identified in this GL are addressed through resolution of Issue B-63, "Isolation of Low-Pressure Systems Connected to the Reactor Coolant Pressure Boundary."			

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Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1580	NRR/ADT	20.7-22	DSER-OI		Action W	Inactive		
				Westinghouse should more specifically explain where in SSAR Section 1.9 that Generic Letter 80-16 is addressed.				
				Action W - WCAP-13559 will be revised to provide a more specific SSAR reference. Specifically, the WCAP will be revised to identify that the issues identified in this GL are addressed through resolution of Issue A-24, "Qualification of Class 1E Safety Related Equipment."				
1581	NRR/ADT	20.7-23	DSER-OI		Action W	Inactive		
				For Generic Letter 80-35, Westinghouse should adress the effect of dc power supply failure on ECCS performance.				
				Action W - WCAP-13559 will be revised to identify how this issue is addressed by the AP600 design. The WCAP will identify the SSAR sections which address the issues of this GL, specifically SSAR section 8.3.2, "DC Power Supplies," and Table 8.3.2-7, "Class 1E 125V DC and Class 1E uninerruptible Power Supplies Failure Modes and Effects Analysis."				
1582	NRR/ADT	20.7-24	DSER-OI		Action W	Inactive		
				For Generic Letter 80-77, Wes inghouse should address procedures to ensure that exposure of fuel assemblies and control rods can not occur during transfer while refueling.				
				Action W - WCAP-13559 will be revised to more specifically identify the responsibility of the COL applicant to develop procedures. This COL action is addressed via COL action items 13.5.1-1, "The COL applicant should develop and describe its administrative procedures", and 13.5.2-1, "The COL applicant should develop and describe the operating and maintenance procedures."				
1583	NRR/ADT	20.7-25	DSER-OI		Action W	Inactive		
				Although the COL applicant is responsible for the site-specific data, the buildings of the AP600 design were designed to some range of soil-structure criteria for potential sites. Westinghouse should address these design criteria in its response to Generic Letter 80-109.				
				Action W - WCAP-13559 will be revised to identify that the AP600 design has been designed for a range of soil conditions which is discussed in Section 3.7.2 of the SSAR.				
1584	NRR/ADT	20.7-26	DSER-OI		Action W	Inactive		
				For Generic Letter 81-21, Westinghouse should address the emergency procedure guidelines to prevent, recognize, and react to reactor vessel voiding during natural circulation cooldown.				
				Action W - WCAP-13559 will be revised to identify the role of the AP600 ERGs in addressing the issues in this GL.				
1585	NRR/ADT	20.7-27	DSER-OI		Action W	Inactive		
				As part of its description of the radwaste system for the AP600 design, Westinghouse should address Generic Letter 81-38, which is concerned with the onsite storage space.				
				Action W - WCAP-13559 will be revised to identify that design aspects of this GL are addressed in Chapter 11 of the AP600 SSAR.				
1586	NRR/ADT	20.7-28	DSER-OI		Action W	Inactive		
				For Generic Letter 82-04, Westinghouse should address the use of the SEE-IN program to include operational experience in the AP600 design.				
				Action W - WCAP-13559 will be revised to address incorporation of operational experience in the AP600.				
1587	NRR/ADT	20.7-29	DSER-OI		Action W	Inactive		
				For Generic Letter 82-08, Westinghouse should address how the AP600 design conforms to the findings in NUREG-0909 on the Ginna tube rupture event.				
				Action W - This item will be addressed in the August revision to the AP600 SSAR.				

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1588	NRR/ADT	20.7-30	DSER-OI		Action W	Inactive	
				For Generic Letter 83-11, Westinghouse should address the qualifications for performing safety analyses for the AP600 design.			
				Action W - WCAP-13559 will be revised to reflect that the AP600 design (including safety analyses) is performed under a QA program which is approved by the NRC. This QA program addresses the QA requirements with respect to qualifications of individuals performing safety analyses.			
1589	NRR/ADT	20.7-31	DSER-OI		Action W	Inactive	
				For Generic Letter 83-22, Westinghouse should address the emergency response guidelines program for the AP600 design.			
				Action W - WCAP-13559 will be revised to refelect the role of the AP600 ERGs in addressing the issues of this GL.			
1590	NRR/ADT	20.7-32	DSER-OI		Action W	Inactive	
				For Generic Letter 84-01, Westinghouse should identify the specific sections in Chapter 17 where the generic letter is discussed.			
				Action W - WCAP-13559 will be revised to provide a more specific reference to the portions of Chapter 17 which address the QA program as applied to safety related and non-safety related Defense in Depth equipment.			
1591	NRR/ADT	20.7-33	DSER-OI		Action W	Inactive	
				For Generic Letter 84-21, Westinghouse should address core peaking factors for extended low power operation followed by a return to full power operation.			
				Action W - This issue is an operational issue and within the scope of the COL applicant. Chapter 15 of the AP600 SSAR identifies the core peaking factors used in the AP600 safety analyses. WCAP-13559 will be revised to clarify the applicability of this issue to the AP600 design.			
1592	NRR/ADT	20.7-34	DSER-OI		Action W	Inactive	
				For Generic Letter 85-13, Westinghouse should address NUREG-1154 and the protection in the AP600 against the loss of main and auxiliary feedwater event.			
				Action W - WCAP-13559 will be revised to identify the portions of the AP600 SSAR which identify design features which minimize the potential and mitigate the effects of a total loss of secondary heat removal capability.			
1593	NRR/ADT	20.7-35	DSER-OI		Action W	Inactive	
				For Generic Letter 86-07, Westinghouse should address NUREG-1190 and the protection in the AP600 against this water hammer event.			
				Action W - WCAP-13559 will be revised to specifically identify the portions of the SSAR which address the AP600 design features to protect against water hammer events (e.g., Section 1.9.4, Issue A-1, "Water Hammer")			
1594	NRR/ADT	20.7-36	DSER-OI		Action W	Inactive	
				For Generic Letter 86-13, Westinghouse should address the consistency between plant safety analyses and the TS for the AP600.			
				Action W - The AP600 Technical Specifications are based upon the Westinghouse Standard Tech. Specs which adequately address the issues in GL 86-13. WCAP-13559 will be revised to reflect the role of the AP600 Technical Specifications in addressing this GL.			
1595	NRR/ADT	20.7-37	DSER-OI		Closed	Inactive	
				For Generic Letter 86-15, Westinghouse should address if AP600 meets the requirements in 10 CFR 50.49.			
				Closed - Section 3.11 of the AP600 SSAR addresses environmental qualification of Mechanical and Electrical equipment. The staff review of this chapter addresses conformance of the AP600 design to 10 CFR 50.49. This conformance is being tracked via open items on Chapter 3.11 of the AP600 SSAR.			

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1596	NRR/ADT	20.7-38	DSER-OI		Action W	Inactive	
				For Generic Letter 86-16, Westinghouse should discuss the ECCS evaluation models for the AP600 design, and should list the specific SSAR section(s) that address the issues in this generic letter.			
				Action W - WCAP-13559 will be revised to identify the specific SSAR sections which discuss the safety analysis evaluation models for the AP600 design.			
1597	NRR/ADT	20.7-39	DSER-OI		Action W	Inactive	
				Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR that address Generic Letter 87-09.			
				Action W - The AP600 technical specifications are based on the Westinghouse Standard Technical Specifications which address the issues in GL 87-09. WCAP-13559 will be revised to identify the appropriate references which address the issues in this GL.			
1598	NRR/ADT	20.7-40	DSER-OI		Action W	Inactive	
				Westinghouse should more specifically explain where in Section 1.9 of the SSAR that Generic Letter 88-07 is addressed.			
				Action W - WCAP-13559 will be revised to provide more specific references to sections in the AP600 SSAR which address the issues identified in this GL.			
1599	NRR/ADT	20.7-41	DSER-OI		Action W	Inactive	
				Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR where Generic Letter 88-12 is addressed.			
				Action W - WCAP-13559 will be revised to provide more specific references to sections in the AP600 SSAR which address the issues identified in this GL.			
1600	NRR/ADT	20.7-42	DSER-OI		Action W	Inactive	
				Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR where Generic Letter 88-16 is addressed.			
				Action W - WCAP-13559 will be revised to provide more specific references to sections in the AP600 SSAR which address the issues identified in this GL.			
1601	NRR/ADT	20.7-43	DSER-OI		Action W	Inactive	
				Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR where Generic Letter 89-01 is addressed.			
				Action W - WCAP-13559 will be revised to provide more specific references to sections in the AP600 SSAR which address the issues identified in this GL.			
1602	NRR/ADT	20.7-44	DSER-OI		Action W	Inactive	
				Westinghouse should address the issues raised on the GDC and quality assurance requirements in Generic Letter 89-13.			
				Action W - The Service Water System for the AP600 is a non-safety related system. WCAP-13559 will be revised to clarify the applicability of the AP600 Service Water System design and associated quality assurance requirements to this GL.			
1603	NRR/ADT	20.7-45	DSER-OI		Action W	Inactive	
				Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR where Generic Letter 89-014 is addressed.			
				Action W - WCAP-13559 will be revised to provide more specific references to sections in the AP600 SSAR which address the issues identified in this GL.			

AP600 Open Item Tracking System Database: Executive Summary

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Selection: [type] like 'dser*' And [DSER Section] like '20*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. / Date
1604	NRR/ADT	20.7-46	DSER-OI		Action W	Inactive	
				For Generic Letter 89-15, Westinghouse should identify emergency response data for the AP600 design.			
				Action W - The participation in the emergency response data system (ERDS) program is a COL applicant responsibility. WCAP-13559 will be revised to reflect the role of the AP600 ERGs in identifying key plant parameters which could be used by a COL applicant in the development and participation in this program.			
1605	NRR/ADT	20.7-47	DSER-OI		Action W	Inactive	
				Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR where Generic Letter 90-02 is addressed.			
				Action W - WCAP-13559 will be revised to provide more specific references to sections in the AP600 SSAR which address the issues identified in this GL.			
1606	NRR/ADT	20.7-48	DSER-OI		Action W	Inactive	
				Westinghouse should identify the specific section in Chapter 16 of the SSAR where Generic Letter 91-01 is addressed.			
				Action W - WCAP-13559 will be revised to provide more specific references to sections in the AP600 SSAR which address the issues identified in this GL.			
1607	NRR/ADT	20.7-49	DSER-OI		Action W	Inactive	
				Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR where Generic Letter 91-04 is addressed.			
				Action W - WCAP-13559 will be revised to provide more specific references to sections in the AP600 SSAR which address the issues identified in this GL.			
1608	NRR/ADT	20.7-50	DSER-OI		Action W	Inactive	
				Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR where Generic Letter 91-08 is addressed.			
				Action W - WCAP-13559 will be revised to provide more specific references to sections in the AP600 SSAR which address the issues identified in this GL.			
1609	NRR/ADT	20.7-51	DSER-OI		Action W	Inactive	
				For Generic Letter 91-09, Westinghouse should address the proper surveillance interval for these assemblies for the AP600 design.			
				Action W - The AP600 Technical Specifications are based on the Westinghouse Standard Technical Specifications which address this issue. Action W - WCAP-13559 will be revised to provide more specific references to sections in Chapter 16 of the AP600 SSAR which address the issues identified in this GL.			
1610	NRR/ADT	20.7-52	DSER-OI		Action W	Inactive	
				For Generic Letter 91-16, Westinghouse should discuss the responsibility of the COL applicant.			
				Action W - WCAP-13559 will be revised to clarify COL applicant responsibilities with respect to "fitness for duty" regulations (SSAR Chapter 13).			
1611	NRR/ADT	20.7.4-1	DSER-OI		Action W	Inactive	
				Westinghouse should address the questions to the bulletins and generic letters listed in Tables 20-3 and 20-4 of this report, respectively.			
				Action W - WCAP-13559 will be revised to address the issues identified in the open items for identified bulletins and generic letters.			
1830	NRR/ADT	20.4-1	DSER-CN		Action W	Inactive	
				20.4-1 For Issue II.D.3, Westinghouse will add positive indication of the reactor coolant system and steam generator relief and safety valves in Table 3.11-1.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			

Selection: [type] like 'dser*' And [DSER Section] like '20*' Sorted by Item #

Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. / Date
1976	NRR/ECGB	20.2-1	DSER-COL		Action W	Inactive	
				20.2-1 For Issue A-40, COL applicant should demonstrate the acceptability of AP600 design to the site-specific seismic characteristics.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1977	NRR/ADT	20.3-1	DSER-COL		Action W	Inactive	
				20.3-1 For Issue 142, the COL applicant should implement an annual program to inspect and test all electronic isolators between Class 1E and non-Class 1E systems, as well as identify the specific isolation devices used in the design.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1978	NRR/ADT	20.4-1	DSER-COL		Action W	Inactive	
				20.4-1 The COL applicant should address shift staffing and working hours of licensed operators in Issue I.A.1.4 as part of the licensing process.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1979	NRR/ADT	20.4-2	DSER-COL		Action W	Inactive	
				20.4-2 The COL applicant should address qualification and training of plant personnel in Issue I.A.2.6(1) as part of the licensing process.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1980	NRR/ADT	20.4-3	DSER-COL		Action W	Inactive	
				20.4-3 The COL applicant should address the plant training simulator in Issues I.A.4.1(2) and I.A.4.2 as part of the licensing process.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1981	NRR/ADT	20.4-4	DSER-COL		Closed	Inactive	
				20.4-4 For Issue I.C.5, the COL applicant should develop the detailed procedures for the plant-specific design.			
				Closed - The COL actions requested with this item are addressed via COL action items 13.5.1-1 and 13.5.2-1. COL action item 13.5.1-1 states the COL applicant should develop and describe its administrative procedures. COL action item 13.5.2-1 states the COL applicant should develop and describe the operating and maintenance procedures. See DSER Open items 13.5.1-1 and 13.5.2-1 for resolution.			
1982	NRR/ADT	20.4-5	DSER-COL		Closed	Inactive	
				20.4-5 For Issue I.C.9, the COL applicant should develop the detailed procedures for the plant-specific design.			
				Closed - The COL actions requested with this item are addressed via COL action items 13.5.1-1 and 13.5.2-1. COL action item 13.5.1-1 states the COL applicant should develop and describe its administrative procedures. COL action item 13.5.2-1 states the COL applicant should develop and describe the operating and maintenance procedures. See DSER Open items 13.5.1-1 and 13.5.2-1 for resolution.			
1983	NRR/ADT	20.4-6	DSER-COL		Closed	Inactive	
				20.4-6 The COL applicant should address the human factors details of Issue I.D.3.			
				Closed - The AP600 HFE program discussed in Chapter 18 addresses the human factors issues associated with Issue I.D.3. The resolution of Chapter 18 open items and resulting COL action items in Chapter 18 will adequately address the HFE issues for Issue I.D.3. A separate COL action item in Chapter 20 is not required.			

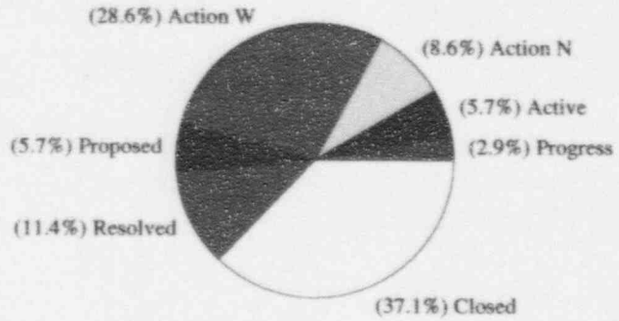
Item No	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. / Date
1984	NRR/ADT	20.4-7	DSER-COL		Closed	Inactive	
				20.4-7 For Issue I.F.2, the COL applicant should address its quality assurance program for the design, construction, and operation phases. The COL applicant should address this issue for the design of the remaining parts of the plant, and for the modification and operation of the plant.			
				Closed - The COL applicant responsibilities for this issue are addressed via COL Action Item 17.1.3-1, which states that the COL applicant should submit its design phase QA program for staff review. The closure of this COL action item is being tracked via DSER Open Item 17.1.3-2, "Westinghouse should add COL Action Item 17.1.3-1 to the SSAR."			
1985	NRR/ADT	20.4-8	DSER-COL		Action W	Inactive	
				20.4-8 The COL applicant should address the human factors aspects of accident monitoring instrumentation in Issue II.F.1.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1986	NRR/ADT	20.4-9	DSER-COL		Action W	Inactive	
				20.4-9 For Issue II.J.3.1, the COL applicant should address the organization for the plant, the construction of the plant, and any modifications to the AP600 certified design.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1987	NRR/ADT	20.4-10	DSER-COL		Closed	Inactive	
				20.4-10 For Issue II.J.4.1, the COL applicant should address plant procedures for adequate reporting in accordance with 10 CFR Part 21 and 10 CFR 50.55(e).			
				Closed - The COL applicant will have the responsibility for having the proper reporting procedures and addressing this issue as part of the licensing process. This is considered a part of the plant procedures development by the COL applicant. Procedures development by the COL applicant are addressed by COL Action Items 13.5.1-1 and 13.5.2-1. These COL action items are addressed by DSER open items 13.5.1-1 and 13.5.2-1.			
1988	NRR/ADT	20.4-11	DSER-COL		Action W	Inactive	
				20.4-11 For Issue II.K.1(26), the COL applicant should address the scope of examinations and criteria for licensing examinations, as well as new training requirements for operators.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1989	NRR/ADT	20.4-12	DSER-COL		Action W	Inactive	
				20.4-12 The COL applicant should address the dedicated telephone lines and short-range radio communication systems for the emergency support facilities in Issue III.A.3.3.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1990	NRR/ADT	20.7-1	DSER-COL		Action W	Inactive	
				20.7-1 For Bulletin 80-06, the COL applicant should address verification of the as-built instrumentation and control system.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			
1991	NRR/ADT	20.7-2	DSER-COL		Action W	Inactive	
				20.7-2 For Bulletins 80-16, 80-20, 86-02, and 88-03, and Generic Letters 88-05 and 89-02, the COL applicant should address procurement and/or maintenance issues.			
				Action W - This item will be addressed in the August revision to the AP600 SSAR.			

Selection: [type] like 'dser*' And [DSER Section] like '20*' Sorted by Item #

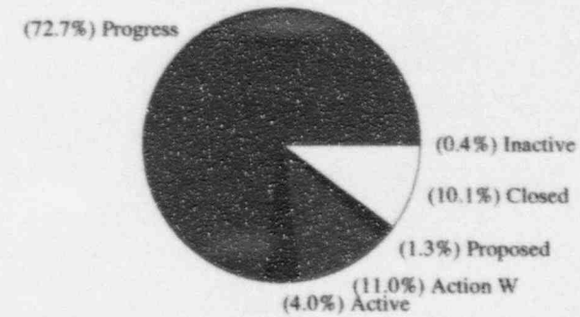
Item No.	Branch	DSER Section/ Question	Type	Title/Description Detail Status	(W) Status	NRC Status	Letter No. /	Date
1992	NRR/ADT	20.7-3	DSER-COL		Action W	Inactive		
				20.7-3 For Bulletin 89-03, the COL applicant should address operating procedures.				
				Action W - This item will be addressed in the August revision to the AP600 SSAR.				
1993	NRR/ADT	20.7-4	DSER-COL		Action W	Inactive		
				20.7-4 Generic Letter 81-38 is a site-specific issue because it depends upon available offsite storage space for plant low-level radioactive waste. This will be identified by the COL applicant, if it proposes an onsite low-level radioactive waste storage facility.				
				Action W - This item will be addressed in the August revision to the AP600 SSAR.				
1994	NRR/ADT	20.7-5	DSER-COL		Action W	Inactive		
				20.7-5 For Generic Letter 83-07, the Nuclear Waste Policy Act of 1982 requires licensees to have a contract with the Department of Energy (DOE) before receiving a license. This is within the scope of the COL applicant.				
				Action W - This item will be addressed in the August revision to the AP600 SSAR.				
1995	NRR/ADT	20.7-6	DSER-COL		Action W	Inactive		
				20.7-6 The COL applicant should address surface vehicle bomb security issues involved in Generic Letter 89-07.				
				Action W - This item will be addressed in the August revision to the AP600 SSAR.				

Open Item Status - Chapter 21 (Testing)

DSER Items (OI, COL, Conf.)



Follow-on Items (RAI, Mtg., Telecon)



	Inactive	Progress	Active	Action N	Action W	Proposed	Resolved	Closed	Total
DSER Items									
DSER-OI	0	1	2	3	10	2	4	13	35
DSER-Confirmatory	0	0	0	0	0	0	0	0	0
DSER-COL	0	0	0	0	0	0	0	0	0
Subtotal	**0**	**1**	**2**	**3**	**10**	**2**	**4**	**13**	**35**
Follow-on Items									
RAI-OI	0	105	7	0	0	3	1	10	126
Meeting-OI	1	58	1	0	25	0	0	12	97
Telecon-OI	0	2	1	0	0	0	0	1	4
Subtotal	**1**	**165**	**9**	**0**	**25**	**3**	**1**	**23**	**227**
Total	**1**	**166**	**11**	**3**	**35**	**5**	**5**	**36**	**262**

Westinghouse Status as of 29-May-95

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Selection: [type] like 'dser*' And [DSER Section] like '21*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1612	NRR/SRXB	21.2.7.2-1	DSER-OI		Active	Inactive		
				Westinghouse must demonstrate that the AP600 analysis codes, as validated by its testing program, can be relied upon to accurately represent shutdown conditions in the AP600.				
				Active - Discussions with NRC staff ongoing to determine actions necessary to close this open item.				
1613	NRR/SRXB	21.3.1-1	DSER-OI		Closed	Closed	NTD-NRC-95-4390	1/31/95
				The revised core makeup tank (CMT) scaling analysis is to be transmitted to the staff in December 1994. The staff has, therefore, not yet completed its review of the CMT test facility scaling logic.				
				Closed - WCAP-13963, Revision 1, AP600 Core Makeup Tank Test Facility Scaling Report, NTD-NRC-95-4390, 1/31/95				
1614	NRR/SRXB	21.3.1-2	DSER-OI		Closed	Inactive	NTD-NRC-94-4350	11/30/94
				Westinghouse should submit all remaining CMT test program documentation.				
				Closed - WCAP-14217, CMT Data Report; WCAP-14215, CMT Analysis Report				
1615	NRR/SRXB	21.3.2-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4420	3/24/95
				The automatic depressurization system (ADS) Phase B facility description report has not yet been submitted.				
				Closed - WCAP-14303, ADS Facility Description Report for Phase B1 submitted March 24, 1995, NTD-NRC-95-4420				
1616	NRR/SRXB	21.3.2-2	DSER-OI		Action W	Inactive		
				Westinghouse has committed to provide a "road map" to demonstrate how the information from the CMT [ADS?] test program will be used as a basis for further development and testing of the actual ADS valves. The staff awaits this submittal.				
				Action W - This open item is related to RAI 952.96 (Item 27). The requested roadmap is being written.				
1617	NRR/SRXB	21.3.3-1	DSER-OI		Action W	Inactive		
				Westinghouse must provide a detailed justification on the applicability of the straight tube passive residual heat removal heat exchanger (PRHRHX) test data to the new "C"-tube configuration.				
				Action W - This open item is related to RAI 952.94 (Item 25). The requested information will be provided.				
1618	NRR/SRXB	21.3.4-1	DSER-OI		Closed	Inactive	WCAP-14371	
				The departure from nucleate boiling (DNB) test program is complete; however, the staff has not received the DNB test program documentation necessary to complete it's review.				
				Closed - WCAP-14371, "AP600 Low Flow Critical Heat Flux (CHF) Test Data Analysis"				
1619	NRR/SRXB	21.3.5-1	DSER-OI		Closed	Closed	NTD-NRC-95-4391	1/31/95
				Westinghouse should submit the Oregon State University Advanced Passive Experiment (OSU/APEX) final scaling report.				
				Closed - OSU Scaling report, WCAP-14270, submitted via NTD-NRC-95-4391 on January 31, 1995				
1620	NRR/SRXB	21.3.5-2	DSER-OI		Action W	Inactive		
				Westinghouse should submit the remaining OSU/APEX test documentation.				
				Action W - Westinghouse action to submit OSU Final Test Report and Test Analysis Report				
1621	NRR/SRXB	21.3.6-1	DSER-OI		Closed	Inactive	NTD-NRC-95-4423	3/31/95
				Westinghouse should submit the remaining quick-look reports (QLRs) and the final test report for the SPES-2 test program.				
				Closed - All SPES-2 QLRs have been submitted.				

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Item No.	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1622	NRR/SCSB	21.3.8.1-1	DSER-OI		Closed	Inactive		
				Westinghouse should submit all outstanding large scale test (LST) documentation.				
				All outstanding LST documentation has been sent, including PCS-T2R-050, "Large Scale Test Data Evaluation," dated May 1995.				
1623	NRR/SCSB	21.3.8.5-1	DSER-OI		Closed	Inactive	NTD-NRC-94-4318	10/27/94
				Resolution of the LST facility scaling issue is a primary staff concern.				
				LST facility Phenomena Identification and Ranking Table and scaling via energy partitioning have been issued for NRC review via WCAP-14190.				
1624	NRR/SCSB	21.3.9.1-1	DSER-OI		Closed	Inactive	NTD-NRC-94-4337	
				The water distribution test reports contain only a matter-of-fact presentation of the data, and contain no evaluation or conclusions.				
				Closed - DISCUSSED W/ NRC IN 2/6/95 TELECON.NRC agreed closed, referencing response to RAI 952.104				
1625	NRR/SCSB	21.3.9.3-1	DSER-OI		Proposed	Inactive		
				None of the tests conducted in the water distribution tests, Phases 1-3, examined the heated-surface effect. Westinghouse was made aware of this staff concern before the commencement of the water distribution test program.				
				Proposed - NRC review and discussions of water coverage bases is ongoing.				
1626	NRR/SRXB	21.5.1-1	DSER-OI		Action W	Inactive		
				Early review of selected test data on the heated resistance temperature detector (RTD) level instrument has raised a concern about its ability to discriminate successfully between being immersed in liquid and being immersed in vapor. The staff's evaluation of this aspect of the test program is not yet complete.				
				Action W - Westinghouse action to submit additional information on the CMT level instrument.				
1627	NRR/SRXB	21.5.2-1	DSER-OI		Action W	Inactive		
				The final evaluation of the ADS test program must await review of the test data and Westinghouse's application of those data to design and operation of the ADS, to determine if key issues in these respects have been addressed adequately.				
				Action W - WCAP-14324, "ADS, Phase B1 Tests, Final Data Report," submitted via Westinghouse letter NTD-NRC-95-4424, dated April 13, 1995. Preliminary ADS Phase B1 Test Analysis Report provided via Westinghouse letter NTD-NRC-95-4425, dated April 13, 1995. Westinghouse action to submit Final ADS Phase B1 Test Analysis Report.				
1628	NRR/SRXB	21.5.5-1	DSER-OI		Action N	Active		
				The staff is continuing its review the OSU/APEX test data and Westinghouse's associated analyses. In addition, any insights from the NRC's confirmatory test programs that bear upon integral system behavior will be factored into the AP600 test program review.				
				Action N - NRC review of OSU test data ongoing. Westinghouse submittal of OSU Final Data Report and OSU Test Analysis Report (OI 21.3.5-2) supports this ongoing review.				
1629	NRR/SRXB	21.5.6-1	DSER-OI		Action N	Inactive		
				The staff has not yet completed its review of the SPES-2 testing program.				
				Action N - Staff review of SPES-2 test data is ongoing. Westinghouse submittal of SPES-2 test data (OI 21.3.6-1) supports this ongoing review.				
1630	NRR/SCSB	21.5.7.4-1	DSER-OI		Action W	Inactive		
				The staff is interested in determining whether the external wind helps containment cooling natural convection air flow, has no effect, or tends to counteract the flow (wind-positive, wind- neutral, and wind-negative, respectively).				
				Action W - Submittal of the Wind Tunnel Test Analysis Letter Report will address this item.				

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Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1631	NRR/SCSB	21.5.8-1	DSER-OI		Proposed	Inactive	NTD-NRC-95-4459	
				The treatment of noncondensables in the LST program is still under staff review.				
				Proposed in reports: WCAP-14326 (NTD-NRC-95-4428) which validates the correlations over the AP600 range, and Letter NTD-NRC-95-4459 providing a framework to assess mixing and stratification in the PCS evaluation model.				
1632	NRR/SCSB	21.5.8-2	DSER-OI		Resolved	Inactive		
				The applicability of the water coverage test results from both the water distribution and large scale tests, as they relate to the input used for the WGOTHIC code, is still under staff review.				
				Resolved - This item is resolved pending submittal of SSAR analysis which will outline details of water coverage assumptions.				
1633	NRR/SCSB	21.5.8-3	DSER-OI		Resolved	Inactive		
				The staff believes that more measurements may be needed to quantify the mixed-convective flow field. This is an issue which could be of importance in the scaling of results to predict the prototypical containment performance.				
				Resolved - the internal velocity field information as it relates to WGOTHIC validation has been presented in November 1994 and April 1995 meetings with the NRC. No additional measurements are needed. Westinghouse will provide this information within WCAP-14382, WGOTHIC V&V.				
1634	NRR/SCSB	21.5.8-4	DSER-OI		Resolved	Inactive		
				The measurement of condensate forming within the containment vessel must be considered when addressing the question of the ability of the WGOTHIC code to predict containment performance.				
				Resolved - presentations in November 1994 and April 1995 showed good agreement with instantaneous condensation rates as a function of time rather than time averaged values. This informaiton will be included in the WGOTHIC V&V WCAP-14382.				
1635	NRR/SCSB	21.5.8-5	DSER-OI		Resolved	Inactive		
				The lack of adequate instrumentation in the LST annular region makes it difficult to evaluate the evaporation rate from the containment shell.				
				Resolved - Presentations in July 1994 were based on instantaneous evaporation rates. Presentations in November 1994 and April 1995 showed that sufficient data is avaialable to assess predicitons of evaporation rates as a function of time. This information will be included in the WGOTHIC V&V WCAP-14382.				
1636	NRR/SCSB	21.5.8-6	DSER-OI		Closed	Inactive	NTD-NRC-94-4318	
				The LST model does not include a downcomer region, and uses a chimney-installed fan to model circulation in the annular region, both of which are non-prototypical of the AP600.				
				Closed - WCAP-14190, section 7.2 and 7.3, scaling of the external flow path shows no significant contribution of the downcomer to either energy or momentum partitioning of external PCS. NRC is evaluating whether to raise a specific question related to 2D effects on external flow path loss coefficients.				
1637	NRR/SCSB	21.5.8-7	DSER-OI		Action N	Inactive		
				The LST modeling of the long and short term heat sinks, flow paths, and internal volumes in containment, especially in relation to their representation in WGOTHIC, are still under staff review.				
				Action NRC - Westinghouse awaiting specific questions.				
1638	NRR/SCSB	21.5.9-1	DSER-OI		Action W	Inactive		
				There is no time-dependent film coverage model. There is a concern as to whether the 40-percent-60-percent-70-percent coverage model is valid at much later times after a design- basis accident (DBA).				
				Action W - SSAR submittal will include bounding water coverages throughout the 24 hour transient.				

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Selection: [type] like 'dser*' And [DSER Section] like '21*' Sorted by Item #

Item No	Branch	DSER Section/ Question	Type	Title/Description / Detail Status	(W) Status	NRC Status	Letter No. /	Date
1639	NRR/SCSB	21.5.9-2	DSER-OI		Active	Inactive		
				Under actual DBA conditions, when the shell is heated, coverage fractions could be different from the 40-percent-60-percent-70- percent distribution assumed in the SSAR.				
				Active - discussions with NRC and ACRS are ongoing with regard to water coverage fractions assumed in the SSAR				
1640	NRR/SCSB	21.5.9-3	DSER-OI		Progress	Inactive		
				The staff is also concerned that the supporting arms of the baffle wall of the PCCS, surface irregularities, and the possible effect of clogging of the weirs with foreign material are not modeled in the WGOTHIC analysis.				
				Progress - need to schedule discussions with NRC on approach for this item.				
1641	NRR/SRXB	21.6-1	DSER-OI		Closed	Inactive	NTD-NRC-94-4328	
				Westinghouse is expected to submit, by the end of 1994, details of the NOTRUMP validation.				
				Closed - Details of the NOTRUMP validation program provided as part of WCAP-14206, "Applicability of the NOTRUMP Computer Code to AP600 SSAR Small Break LOCA Analyses," and Draft Outlines for AP600 Test and Analysis Report submitted via Westinghouse letter NTD-NRC-94-4328, dated October 27, 1994. Submittal and staff review of NOTRUMP validation reports addressed via OI 21.6-4.				
1642	NRR/SRXB	21.6-2	DSER-OI		Closed	Inactive	NTD-NRC-94-4328	
				Westinghouse is expected to submit, by the end of 1994, details of the LOFTRAN validation.				
				Closed - Details of the LOFTRAN validation program provided as part of WCAP-14234, "LOFTRAN and LOFTTR2 AP600 Code Applicability Document," and Draft Outlines for AP600 Test and Analysis Report submitted via Westinghouse letter NTD-NRC-94-4328, dated October 27, 1994. Submittal and staff review of LOFTRAN validation reports addressed via OI 21.6-4.				
1643	NRR/SRXB	21.6-4	DSER-OI		Action W	Inactive		
				Westinghouse should provide information on the validation of the AP600 analysis codes, as part of the test program reports.				
				Action W - Submittals of preliminary and final validation reports for AP600 analysis codes (LOFTRAN, NOTRUMP, WGOTHIC and WCOBRA/TRAC) are scheduled.				
1644	NRR/SCSB	21.6-5	DSER-OI		Action W	Inactive		
				No predictions between the wind tunnel test data and any computer code analysis will be made. The acceptability of the data from these tests as input to the AP600 safety analysis is still under review.				
				Action W - will be addressed in Wind Tunnel Test Analysis Letter Report				
1645	NRR/SCSB	21.6-6	DSER-OI		Action W	Inactive		
				The staff has not yet completed its review and final evaluation of the WGOTHIC code.				
				Action W - DISCUSSED W/ NRC IN 2/6/95 TELECON: This is a top level item that will be closed after related specific issues are closed. Scheduled PCS test analysis reports should address this item.				
1649	NRR/SRXB	21.6-3	DSER-OI		Closed	Inactive		
				Westinghouse should submit all remaining code application documentation.				
				Closed - WCAP-14234, "LOFTRAN and LOFTTR2 Code Applicability Document," WCAP-14206, "Applicability of the NOTRUMP Computer Code to AP600 SSAR Small Break LOCA Analyses," WCAP-14171, "Westinghouse COBRA/TRAC Applicability to AP600 Large Break Loss of Coolant Accident"				