

October 23, 1996

Mr. Nicholas J. Liparulo, Manager
Nuclear Safety and Regulatory Activities
Nuclear and Advanced Technology Division
Westinghouse Electric Corporation
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SUBJECT: STAFF UPDATE TO DRAFT SAFETY EVALUATION REPORT CHAPTER 20 OPEN ITEMS
REGARDING THE WESTINGHOUSE AP600 ADVANCED REACTOR DESIGN

Dear Mr. Liparulo:

Westinghouse has recently submitted revisions to the Standard Safety Analysis Report, WCAP-13559, "Operational Assessment for AP600," and other information to address Three Mile Island requirements, Unresolved Safety Issues, medium- and high-priority Generic Safety Issues, the Nuclear Regulatory Commission (NRC) Regulatory Guides, Bulletins, and Generic Letters. As a result, the status of many Chapter 20 open items have changed to NRC action to review your submittals. Enclosed is the staff's open item status for Chapter 20.

Please update the open item tracking system database to reflect this information. If you have any questions regarding this matter, you can contact me at (301) 415-8548.

Sincerely,

original signed by:

Diane T. Jackson, Project Manager
Standardization Project Directorate
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

Docket No. 52-003

Enclosure: As stated

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Westinghouse Electric Corporation

Docket No. 52-003
AP600

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AP600 Open Item Tracking System Database: Executive Summary

Date: 10/15/96

Selection: [DSER Section] like '20.*' Sorted by NRC Branch

Item No.	Branch	DSER Section/ Question	Type	Title/Description Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. /	Ltr Date
1518	NRR/ADT	20.3-18	DSER-OI		2/28/96	Closed	Closed		
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.									
Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(ii) and (iv) and does not have to be addressed in the FSER.									
1520	NRR/ADT	20.3-20	DSER-OI		2/28/96	Closed	Closed		
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.									
Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(ii) and (iv) and does not have to be addressed in the FSER.									
1544	NRR/ADT	20.4-21	DSER-OI		2/28/96	Closed	Closed		
Issue I.L.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.									
Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(ii) and (iv) and does not have to be addressed in the FSER.									
1550	NRR/ADT	20.4-27	DSER-OI		2/28/96	Closed	Closed		
For Issue I.L.K.3(8), Westinghouse should provide information regarding the diverse heat removal method independent of steam generators for the AP600 design.									
Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(ii) and (iv) and does not have to be addressed in the FSER.									
1562	NRR/ADT	20.7-4	DSER-OI		2/28/96	Closed	Closed		
For Bulletin 80-02, Westinghouse should address the quality assurance program to identify contractor's quality control/quality assurance problems.									
Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(ii) and (iv) and does not have to be addressed in the FSER.									
1580	NRR/ADT	20.7-22	DSER-OI		9/11/96	Closed	Closed		
Westinghouse should more specifically explain where in SSAR Section 1.9 that Generic Letter 80-16 is addressed.									
Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(ii) and (iv) and does not have to be addressed in the FSER.									
1587	NRR/ADT	20.7-29	DSER-OI		2/28/96	Closed	Closed		
For Generic Letter 82-08, Westinghouse should address how the AP600 design conforms to the findings in NUREG-C909 on the Ginna tube rupture event.									
Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(ii) and (iv) and does not have to be addressed in the FSER.									
1590	NRR/ADT	20.7-32	DSER-OI		2/28/96	Closed	Closed		
For Generic Letter 84-01, Westinghouse should identify the specific sections in Chapter 17 where the generic letter is discussed.									
Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(ii) and (iv) and does not have to be addressed in the FSER.									

AP600 Open Item Tracking System Database: Executive Summary

Date: 10/15/96

Selection: [DSER Section] like 20.* Sorted by NRC Branch

Item No.	Branch	DSER Section/Question	Type	Title/Description	Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. / Ltr	Date
1594	NRR/ADT	20.7-36	DSER-OI	For Generic Letter 86-13, Westinghouse should address the consistency between plant safety analyses and the TS for the AP600. Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(i) and (iv) and does not have to be addressed in the FSER.	2/28/96		Closed	Closed		
1595	NRR/ADT	20.7-37	DSER-OI	For Generic Letter 86-15, Westinghouse should address if AP600 meets the requirements in 10 CFR 50.49. Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(i) and (iv) and does not have to be addressed in the FSER.	2/28/96		Closed	Closed		
1597	NRR/ADT	20.7-39	DSER-OI	Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR that address Generic Letter 87-09. Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(i) and (iv) and does not have to be addressed in the FSER.	2/28/96		Closed	Closed		
1598	NRR/ADT	20.7-40	DSER-OI	Westinghouse should more specifically explain where in Section 1.9 of the SSAR that Generic Letter 88-07 is addressed. Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(i) and (iv) and does not have to be addressed in the FSER.	2/28/96		Closed	Closed		
1599	NRR/ADT	20.7-41	DSER-OI	Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR where Generic Letter 88-12 is addressed. Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(i) and (iv) and does not have to be addressed in the FSER.	2/28/96		Closed	Closed		
1600	NRR/ADT	20.7-42	DSER-OI	Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR where Generic Letter 88-16 is addressed. Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(i) and (iv) and does not have to be addressed in the FSER.	2/28/96		Closed	Closed		
1601	NRR/ADT	20.7-43	DSER-OI	Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR where Generic Letter 89-01 is addressed. Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(i) and (iv) and does not have to be addressed in the FSER.	2/28/96		Closed	Closed		
1603	NRR/ADT	20.7-45	DSER-OI	Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR where Generic Letter 89-014 is addressed. Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(i) and (iv) and does not have to be addressed in the FSER.	9/11/96		Closed	Closed		
1605	NRR/ADT	20.7-47	DSER-OI	Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR where Generic Letter 90-02 is addressed. Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(i) and (iv) and does not have to be addressed in the FSER.	2/28/96		Closed	Closed		

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Item No.	Branch	DSER Section/ Question	Type	Title/Description Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. /	Ltr	Date
1606	NRR/ADT	20.7-48	DSER-OI		2/28/96	Closed	Closed			
Westinghouse should identify the specific section in Chapter 16 of the SSAR where Generic Letter 91-01 is addressed.										
Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(ii) and (iv) and does not have to be addressed in the FSER.										
1608	NRR/ADT	20.7-50	DSER-OI		2/28/96	Closed	Closed			
Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR where Generic Letter 91-08 is addressed.										
Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(ii) and (iv) and does not have to be addressed in the FSER.										
1609	NRR/ADT	20.7-51	DSER-OI		2/28/96	Closed	Closed			
For Generic Letter 91-09, Westinghouse should address the proper surveillance interval for these assemblies for the AP600 design.										
Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(ii) and (iv) and does not have to be addressed in the FSER.										
1991	NRR/ADT	20.7-2	DSER-COL		9/11/96	Closed	Action W	NSD-NRC-96-4818		
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.										
Closed - WCAP-13559 Rev. 1 issued September 11, 1996										
1994	NRR/ADT	20.7-5	DSER-COL		2/28/96	Closed	Closed			
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.										
Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(ii) and (iv) and does not have to be addressed in the FSER.										
1490	NRR/ECGB	20.2-1	DSER-OI		6/25/96	Action W	Action W			
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 - The item closure is pending on SSAR section 1.9.4 incorporating methodology for consideration of dynamic loads on piping due to water hammer.										

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1491	NRR/ECGB	20.2-2	DSER-OI		5/20/96	Closed	Action <input checked="" type="checkbox"/>	N		
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.										
Closed - Issue A.1 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item can be considered closed.										
1492	NRR/ECGB	20.2-3	DSER-OI		6/5/96	Closed	Active	ACTION	N	
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.										
Closed - The SSAR write-up for A-2 is final. The write-up on LBB in SSAR Rev. 7 responds to open items and questions. See open items related to subsection 3.6.3 for specific information.										
1493	NRR/ECGB	20.2-4	DSER-OI		3/6/96	Closed	Action <input checked="" type="checkbox"/>	N		
Westinghouse should address the role of the COL applicant in its resolution of Issue A-2 for the AP600 design.										
As discussed in Sections 5.2.4 and 5.4.2 of this report, the development of the SG tube 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.										
Closed - SSAR Revision 5 Section 5.2.6 and 5.4.15 address this COL item.										
1499	NRR/ECGB	20.2-10	DSER-OI		6/5/96	Closed	Action <input checked="" type="checkbox"/>	N		
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.										
Closed - SSAR subsection 1.9.4, Revision 7, includes appropriate reference.										
1501	NRR/ECGB	20.3-1	DSER-OI		6/5/96	Closed	Action <input checked="" type="checkbox"/>	N		
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.										
Closed - Issue 14 has been specifically addressed in Rev. 7 of Section 1.9.4 of the SSAR, which in turn refers to subsection 10.4.7. The feedwater system design described in 10.4.7 includes features including heated feedwater, a deaerator, and separate startup feedwater nozzles that minimize the conditions that can lead to cracking.										
1506	NRR/ECGB	20.3-6	DSER-OI		6/5/96	Closed	Action <input checked="" type="checkbox"/>	N		
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.										
Closed - Issue 73 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.										

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1508	NRR/ECGB	20.3-8	DSER-OI		6/5/96	Closed	Action <input checked="" type="checkbox"/>	✓	
<p>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.</p> <p>Closed - Issue 79 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR, and included in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues, according to what the NRC requested. The item is closed.</p>									
1509	NRR/ECGB	20.3-9	DSER-OI		2/28/96	Closed	Action N		
<p>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.</p> <p>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.</p>									
1512	NRR/ECGB	20.3-12	DSER-OI		8/19/96	Closed	Action <input checked="" type="checkbox"/>	✓	
<p>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.</p> <p>Closed - Corrected response for item 94 is included in SSAR Rev. 9.</p>									
1515	NRR/ECGB	20.3-15	DSER-OI		8/19/96	Closed	Action <input checked="" type="checkbox"/>	✓	
<p>An acceptable resolution of Issue 113 should include a detailed discussion of how the AP600 design meets the recommendations in NUREG/CR-5416.</p> <p>Closed - Response for Issue 113 references requirements in 3.9.3.4.3 and COL item in 3.9.8.3 for scrubber testing.</p>									
1534	NRR/ECGB	20.4-11	DSER-OI		6/5/96	Closed	Action <input checked="" type="checkbox"/>	✓	
<p>For Issue ILD.1, Westinghouse should address the two exceptions in the AP600 design to EPRI Report NP-2770-LD and the guidelines of Issue ILD.1 in NUREG-0737.</p> <p>The staff concludes that the reference to EPRI Report NP-2770-LD or the guidelines of Issue ILD.1 in NUREG-0737 is acceptable with the following exceptions:</p> <p>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.</p> <p>Westinghouse should provide clear guidelines on how to define the "similar design" between the AP600 valves, and the EPRI test conditions and configurations.</p> <p>Closed - Issue ILD.1 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.</p>									
1566	NRR/ECGB	20.7-8	DSER-OI		9/11/96	Closed	Action <input checked="" type="checkbox"/>	NSD-NRC-96-4818	
<p>Westinghouse should address the surveillance aspects of Bulletin 81-01.</p> <p>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.</p> <p>Closed - WCAP-13559 Rev. 1 issued September 11, 1996</p>									

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Item No.	Branch	DSER Section/ Question	Type	Title/Description Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. / Ltr	Date
1568	NRR/ECGB	20.7-10	DSER-OI		9/11/96	Closed	Action <input checked="" type="checkbox"/> <input type="checkbox"/>	NSD-NRC-96-4818	
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).									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									
1569	NRR/ECGB	20.7-11	DSER-OI		9/11/96	Closed	Action <input checked="" type="checkbox"/> <input type="checkbox"/>	NSD-NRC-96-4818	
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.									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									
1573	NRR/ECGB	20.7-15	DSER-OI		9/11/96	Closed	Action <input checked="" type="checkbox"/> <input type="checkbox"/>	NSD-NRC-96-4818	
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 susceptible to the thinning phenomena discussed in bulletin 88-09.									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									
1574	NRR/ECGB	20.7-16	DSER-OI		9/11/96	Closed	Action <input type="checkbox"/> <input checked="" type="checkbox"/>	NSD-NRC-96-4818	
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.									
1583	NRR/ECGB	20.7-25	DSER-OI		9/11/96	Closed	Action <input checked="" type="checkbox"/> <input type="checkbox"/>	NSD-NRC-96-4818	
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.									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									
1976	NRR/ECGB	20.2-1	DSER-COL		3/4/96	Closed	Action <input checked="" type="checkbox"/> <input type="checkbox"/>		
20.2-1 For Issue A-40, COL applicant should demonstrate the acceptability of AP600 design to the site-specific seismic characteristics.									
Closed - This item was addressed in the August revision to the AP600 SSAR, System 2.5.									
1581	NRR/EELB	20.7-23	DSER-OI		9/11/96	Closed	Action <input checked="" type="checkbox"/> <input type="checkbox"/>	NSD-NRC-96-4818	
For Generic Letter 80-35, Westinghouse should address 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 uninterruptible Power Supplies Failure Modes and Effects Analysis."									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									

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1524	NRR/HHFB	20.4-1	DSER-OI		9/19/96	Closed	Action		
<p>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.</p> <p>(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.</p> <p>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 discussed 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.</p> <p>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 relevant 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 responsibility of the COL applicant should be identified. The staff requests that Westinghouse address this issue for the AP600 design.</p> <p>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 amended 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.</p>									
1525	NRR/HHFB	20.4-2	DSER-OI		9/19/96	Closed	Action		
<p>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.</p> <p>Revision 1 of the at-power Emergency Response Guidelines was submitted by DCP/NRC0376 on 8/9/95. Normal, abnormal, maintenance and administrative plant procedures are the responsibility of the Combined License applicant as indicated in SSAR Section 13.5.</p>									
1526	NRR/HHFB	20.4-3	DSER-OI		9/19/96	Closed	Action		
<p>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 responsibility as well as the methods and criteria for the development, verification and validation, implementation, maintenance, and revision of procedures.</p> <p>Closed - Issue I.C.5 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.</p>									
1527	NRR/HHFB	20.4-4	DSER-OI		9/19/96	Closed	Action		
<p>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.</p> <p>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.</p>									
1541	NRR/HHFB	20.4-18	DSER-OI		6/5/96	Closed	Action		
<p>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.</p> <p>Closed - Issue II.J.3.1 has been included in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues, and classified as superseded. The item is closed.</p>									

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Item No.	Branch	DSER Section/ Question	Type	Title/Description Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. /	Ltr Date
1542	NRR/HHFB	20.4-19	DSER-OI		9/19/96	Closed	Action		
<p>To address Issue ILJ.4.1, Westinghouse should address the responsibility of the COL applicant for procedure development.</p> <p>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 issue is tracked by two other DSER open items.</p>									
1557	NRR/HHFB	20.5-1	DSER-OI		6/5/96	Closed	Action		
<p>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.</p> <p>Closed - Issue HF4.1 has been removed from the Rev. 7 of Section 1.9.4 of the SSAR, and included in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues, according to what was agreed with the NRC. The Item is closed.</p>									
1558	NRR/HHFB	20.5-2	DSER-OI		6/5/96	Closed	Action		
<p>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.</p> <p>Closed - Issue HF 5.2 has been revised in Rev. 7 of Section 1.9.4 of the SSAR to address these issues and refer to Chapter 18. The Item is closed.</p>									
1978	NRR/HHFB	20.4-1	DSER-COL		5/20/96	Closed	Action		
<p>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.</p> <p>Closed - Issue I.A.1.4 is included in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues, and classified as resolved without any new requirements.</p>									
1981	NRR/HHFB	20.4-4	DSER-COL		9/19/96	Closed	Action		
<p>20.4-4 For Issue I.C.5, the COL applicant should develop the detailed procedures for the plant-specific design.</p> <p>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.</p>									
1982	NRR/HHFB	20.4-5	DSER-COL		9/19/96	Closed	Action		
<p>20.4-5 For Issue I.C.9, the COL applicant should develop the detailed procedures for the plant-specific design.</p> <p>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.</p>									
1986	NRR/HHFB	20.4-9	DSER-COL		5/20/96	Closed	Action		
<p>20.4-9 For Issue ILJ.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.</p> <p>Closed - Issue ILJ.3.1 appears as superseded in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues. The Item can be considered closed.</p>									

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Item No.	Branch	DSER Section/ Question	Type	Title/Description Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. / Ltr	Date
1987	NRR/HHFB	20.4-10	DSER-COL	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.	9/19/96	Closed	Action <input checked="" type="checkbox"/>		
1988	NRR/HHFB	20.4-11	DSER-COL	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. Closed - Issue II.K.1.(26) appears to superseded in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues. The item can be considered closed.	5/20/96	Closed	Action <input checked="" type="checkbox"/>		
1498	NRR/HICB	20.2-9	DSER-OI	For Issue A-47, Westinghouse should address the applicability of the plant TS to the design. Action W - Pending the SSAR section 1.9.4 incorporating reference to surveillance requirements of TS 3.3.1 "Reactor Trip System Instrumentation" and T.S. 3.7.3 "Main Feedwater Isolation and Control Valves". Closed - With issuance of the Tech Specs in SSAR Rev. 9.	8/14/96	Closed	Action <input checked="" type="checkbox"/>		
1505	NRR/HICB	20.3-5	DSER-OI	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. Closed - Issue 67.3.3 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.	6/5/96	Closed	Action <input checked="" type="checkbox"/>		
1507	NRR/HICB	20.3-7	DSER-OI	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. Closed - The response for Issue 75 has been revised in Rev. 9 to specifically address the NRC questions.	8/19/96	Closed	Action <input checked="" type="checkbox"/>		
1516	NRR/HICB	20.3-16	DSER-OI	Westinghouse should address Issue 120 for the AP600 design. Closed - Issue 20 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item can be considered closed.	5/20/96	Closed	Action <input checked="" type="checkbox"/>		
1521	NRR/HICB	20.3-21	DSER-OI	The staff introduced significant information concerning the resolution of Issue 142 which Westinghouse did not include in its 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 AP600 design. Closed - Revised write-up for issue 142 in Revision 9 includes additional information.	8/19/96	Closed	Action <input checked="" type="checkbox"/>		

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Item No.	Branch	DSER Section/ Question	Type	Title/Description Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. /	Ltr Date
1528	NRR/HICB	20.4-5	DSER-OI		2/28/96	Closed	Action N		
<p>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.</p> <p>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.</p>									
1539	NRR/HICB	20.4-16	DSER-OI		7/22/96	Closed	Action		
<p>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.</p> <p>Closed - SSAR Revision 7 refers to 11.5.5 for additional information on radioactive effluent instrumentation, 9.3.3 for additional information on the primary sampling system, and Chapter 18 for the role of the Combined License applicant in the human factors aspects.</p>									
1540	NRR/HICB	20.4-17	DSER-OI		9/16/96	Closed	Action		
<p>To address Issue II.F.3, Westinghouse should provide the ranges expected for plant variables during core damage events.</p> <p>Closed - The list of process parameters and their ranges are provided in Table 7.5-1 of the SSAR. The instrumentation ranges are in compliance with Table 3 of Reg. Guide 1.97.</p>									
1551	NRR/HICB	20.4-28	DSER-OI		6/5/96	Closed	Action		
<p>For Issue II.K.3(18), Westinghouse should provide the PRA section that confirms the reliability of the automatic depressurization system (ADS) actuation.</p> <p>Closed - Issue II.K.1 (18) has been specifically addressed in Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.</p>									
1571	NRR/HICB	20.7-13	DSER-OI		9/11/96	Closed	Action		
<p>For Bulletin 85-02, Westinghouse should provide more information on the operability and surveillance requirements for the reactor trip breakers.</p> <p>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 Reactor Trip Break Undervoltage and Shunt Trip Mechanism (See Table 3.3.1-1 of AP600 TS). No revision necessary.</p>									
1576	NRR/HICB	20.7-18	DSER-OI		9/11/96	Closed	Action	NSD-NRC-96-4818	
<p>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.</p> <p>Action W - This item will be addressed in the August revision to the AP600 SSAR.</p> <p>Closed - WCAP-13559 Rev. 1 issued September 11, 1996</p>									
1977	NRR/HICB	20.3-1	DSER-COL		5/20/96	Closed	Action		
<p>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.</p> <p>Closed - Issue 142 has been removed from the Rev. 7 of Section 1.9.4 of the SSAR, and included in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues, according to what was agreed with the NRC. The item can be considered closed.</p>									

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Item No.	Branch	DSER Section/Question	Type	Title/Description Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. /	1st Date
1983	NRR/HICB	20.4-6	DSER-COL	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.	2/28/96	Closed	Action N		
1985	NRR/HICB	20.4-8	DSER-COL	The COL applicant should address the human factors aspects of accident monitoring instrumentation in Issue II.F.1. Closed - Issue II.F.1 been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR, and included in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues, according to what was agreed with the NRC. The item can be considered closed.	5/20/96	Closed	Action W		
1990	NRR/HICB	20.7-1	DSER-COL	For Bulletin 80-06, the COL applicant should address verification of the as-built instrumentation and control system. Resolved - Verification of the operability of safety related as-built instrumentation and control systems is contained in SSAR Chapter 14. The AP600 response to Bulletin 80-06 is contained in WCAP-13559. Additional COL information items unique to verification of the as-built instrumentation and control systems are not appropriate for the SSAR. Closed - WCAP-13559 Rev. 1 issued September 11, 1996	9/11/96	Closed	Action W	NSD-NRC-96-4818	
1980	NRR/HOLB	20.4-3	DSER-COL	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. Closed - Issue I.A.4.1(2) and I.A.4.2 are included in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues, and classified as non Design Certification Issues.	5/20/96	Closed	Action W		
1529	NRR/HQMB	20.4-6	DSER-OI	Westinghouse should address the classification of AP600 structures, systems, and components in its discussion of Issue I.F.1. Closed - Issue I.F.1 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.	6/5/96	Closed	Action W		
1530	NRR/HQMB	20.4-7	DSER-OI	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."	2/28/96	Closed	Action N		
1531	NRR/HQMB	20.4-8	DSER-OI	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. Closed - Issue I.G.2 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.	6/5/96	Closed	Action W		
1607	NRR/HQMB	20.7-49	DSER-OI	Westinghouse should identify the specific section(s) in Chapter 16 of the SSAR where Generic Letter 91-04 is addressed. Per NRC letter dated 9/21/95 this issue not relevant to the design review for the AP600 because the issue is not required by 10CFR 52.47 (a)(1)(ii) and (iv) and does not have to be addressed in the FSER.	2/28/96	Closed	Closed		

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Item No.	Branch	DSE/ Section/ Question	Type	Title/Description Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. /	Ltr	Date
1984	NRR/HQMB	20.4-7	DSER-COL		2/28/96	Closed	Action N			
<p>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.</p> <p>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."</p>										
1487	NRR/PDST	20.1-1	DSER-OI		9/12/95	Closed	Action N	NTD-NRC-94-4039	1/13/94	
<p>Westinghouse should incorporate into the SSAR the Section 1.9.4 that was submitted in the letter dated May 28, 1993.</p> <p>Closed - The revision to section 1.9.4 referred to was included in Revision 1 of the SSAR.</p>										
1488	NRR/PDST	20.1-2	DSER-OI		5/20/96	Closed	Action W N			
<p>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.</p> <p>Closed - Issues A-17, A-29, B-5 and 82 have been either specifically addressed in Rev. 7 of Section 1.9.4 of the SSAR or included in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues. The Item can be considered closed.</p>										
1489	NRR/PDST	20.1-3	DSER-OI		5/13/96	Closed	Action W N			
<p>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.</p> <p>Closed - All the issues have been either specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR or included in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues. The item can be considered closed.</p>										
1497	NRR/PDST	20.2-8	DSER-OI		6/5/96	Closed	Action W N			
<p>The staff does not agree that the AP600 Probabilistic 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.</p> <p>Closed - Issue A-33 has been removed from the Rev. 7 of Section 1.9.4 of the SSAR, and included in Table 1.9-2, Listing the Unsolved Safety Issues and Generic Safety Issues, according to what was agreed with the NRC. The item is closed.</p>										
1535	NRR/PDST	20.4-12	DSER-OI		6/5/96	Closed	Action W N			
<p>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.</p> <p>Closed - Issue II.E.1.3 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.</p>										
1559	NRR/PDST	20.7-1	DSER-OI		9/11/96	Closed	Action W N	NSD-NRC-96-4818		
<p>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.</p> <p>Action W - WCAP 13559 will be revised to incorporate bulletins and generic letters issued since the last revision of WCAP-13559 through December 31, 1995.</p> <p>Closed - WCAP-13559 Rev. 1 issued September 11, 1996</p>										

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


Selection: [DSER Section] like 20.* Sorted by NRC Branch

Item No.	Branch	DSER Section/ Question	Type	Title/Description Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. / Ltr Date
1560	NRR/PDST	20.7-2	DSER-OI		9/11/96	Closed	Action	NSD-NRC-96-4818
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.								
Closed - WCAP-13559 Rev. 1 issued September 11, 1996								
1586	NRR/PDST	20.7-28	DSER-OI		9/11/96	Closed	Action	NSD-NRC-96-4818
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.								
Closed - WCAP-13559 Rev. 1 issued September 11, 1996								
1611	NRR/PDST	20.7.4-1	DSER-OI		9/11/96	Closed	Action	NSD-NRC-96-4818
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.								
Closed - WCAP-13559 Rev. 1 issued September 11, 1996								
1979	NRR/PDST	20.4-2	DSER-COL		5/20/96	Closed	Action	
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.								
Closed - Issue I.A.2.6 is included in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues, and classified as non Design Certification Issue.								
2057	NRR/PDST	20.	DSER-OI50		6/3/96	Closed	Dropped	
61. Adverse Systems Interaction (See item 1, RTNSS)								
Issue dropped to "Top 50" list.								
1532	NRR/PERB	20.4-9	DSER-OI		6/5/96	Closed	Action	
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.								
Closed - Issue II.B.2 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.								
1553	NRR/PERB	20.4-30	DSER-OI		9/16/96	Closed	Resolved	
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.								
Closed - Issue III.A.1.2 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR, and included in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues, according to what was agreed with the NRC. The item is closed.								
NRC Status Update provided in September 5, 1996 letter: SSAR Revision 7, (4/96) of Section 1.9.3(2)(xxv) on page 1.9-22 of the SSAR specifically addresses issue III.A.1.2, Emergency Response Facilities - provides for a technical support center (TSC) and operational support center (OSC) - and included III.A.1.2 in Table 1.9-2 (Sheet 20 of 55, page 1.9-143), "Listing of Unresolved Safety Issues and Generic Safety Issues." Resolved								

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Selection: [DSER Section] like '20.*' Sorted by NRC Branch

Item No.	Branch	DSER Section/ Question	Type	Title/Description Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. /	Ltr Date
1554	NRR/PERB	20.4-31	DSER-OI		9/16/96	Closed	Resolved		
<p>Westinghouse should address the responsibility of the COL applicant in the resolution of Issue III.A.3.3.</p> <p>Closed - SSAR Table 1.9-2, sheet 21, Revision 7, indicates that Issue III.A.3.3 is not a design issue since it is covered by NRC regulations or guidelines on operation. The communications system design is addressed in the SSAR section 9.5.2. Subsection 9.5.2.5 addresses off site communications interfaces. COL applicant requirements related to Issue III.A.3.3 that are not interfaces with the design certification for AP600 are addressed in the combined license application process and are not included in the SSAR.</p> <p>NRC Status Update provided in September 5, 1996 letter: SSAR Revision 8, (6/96) of Section 9.5.2.5.2 on page 9.5-17 of the SSAR indicates that "the emergency response facility communication system, including the crisis management radio system, will be addressed by the Combined License applicant. Resolved</p>									
1604	NRR/PERB	20.7-46	DSER-OI		9/11/96	Closed	Action 	NSD-NRC-96-4818	
<p>For Generic Letter 89-15, Westinghouse should identify emergency response data for the AP600 design.</p> <p>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.</p> <p>Closed - WCAP-13559 Rev. 1 issued September 11, 1996</p>									
1989	NRR/PERB	20.4-12	DSER-COI		9/16/96	Closed	Resolved		
<p>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.</p> <p>Closed - Issue III.A.3.3 appears as a non Design Certification issue Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues. The Item can be considered closed.</p> <p>NRC Status Update provided in September 5, 1996 letter: SSAR Revision 7 (4/96) of Table 1.9-2, "Listing of Unresolved Safety Issues and Generic Safety Issues," (Sheet 21 of 55) on page 1.9-144, indicates Item III.A.3.3, Communications as not a design issue. However, the resolution of Item 1554, above, indicates communications will be addressed by the Combined License applicant. Resolved</p>									
1496	NRR/PSGB	20.2-7	DSER-OI		6/5/96	Closed	Action 		
<p>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.</p> <p>Closed - Issue A-29 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR and references SSAR Section 13.6.</p>									
1610	NRR/PSGB	20.7-52	DSER-OI		9/11/96	Closed	Action 	NSD-NRC-96-4818	
<p>For Generic Letter 91-16, Westinghouse should discuss the responsibility of the COL applicant.</p> <p>Action W - WCAP-13559 will be revised to clarify COL applicant responsibilities with respect to "fitness for duty" regulations (SSAR Chapter 13).</p> <p>Closed - WCAP-13559 Rev. 1 issued September 11, 1996</p>									

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Item No.	Branch	DSER Section/ Question	Type	Title/Description Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. / Ltr Date
1995	NRR/PSGB	20.7-6	DSER-COL		9/11/96	Closed	Action <input checked="" type="checkbox"/>	NSD-NRC-96-4818
<p>20.7-6 The COL applicant should address surface vehicle bomb security issues involved in Generic Letter 89-07.</p> <p>Action W - This item will be addressed in the August revision to the AP600 SSAR.</p> <p>Closed - WCAP-13559 Rev. 1 issued September 11, 1996</p>								
1503	NRR/SCSB	20.3-3	DSER-OI		6/5/96	Closed	Action <input checked="" type="checkbox"/>	
<p>Westinghouse did not address Issue 24 in its May 28, 1993, letter. It should address automatic ECCS switchover to recirculation for the AP600 design.</p> <p>Closed - Issue 24 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.</p>								
1517	NRR/SCSB	20.3-17	DSER-OI		6/5/96	Closed	Action <input checked="" type="checkbox"/>	
<p>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.</p> <p>Closed - The write-up for Issue 121 references the discussions in the PRA report for information related to hydrogen burns during severe accidents. The PRA Report is the document in which severe accidents are considered. Reference to the SSAR subsection describing the hydrogen igniters is included in the discussion of issue 121. Preoperational testing is discussed in Section 14.2. The emergency response guidelines are provided as a separate document.</p>								
1533	NRR/SCSB	20.4-10	DSER-OI		6/5/96	Closed	Action <input checked="" type="checkbox"/>	
<p>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.</p> <p>Closed - Issue II.B.8 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.</p>								
1536	NRR/SCSB	20.4-13	DSER-OI		6/5/96	Closed	Resolved	
<p>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.</p> <p>Closed - Section 1.9.3, item (2)(xiv) of the SSAR provides an explanation of how the AP600 design addresses Issue II.E.4.2. The response addresses the acceptance criteria for this issue.</p> <p>Informal update provided by staff (Moninger) at 8/17/95 meeting: This item relates to the applicant's information regarding conformance to TMI Item II.E.4.2. Item II.E.4.2 provides staff positions relating to containment isolation dependability. The DSER states that Section 1.9.3 lacks sufficient information and makes inappropriate use of the term "safeguards."</p> <p>The II.E.4.2 positions are encompassed by the technical review criteria specified in SRP Section 6.2.4. Conformance to the post-TMI staff positions need not be addressed separately. Resolution of all 6.2.4 open items will assure satisfactory conformance to the TMI positions. SCSB considers SSAR 1.9.3 to be adequate based on provision of a cross-reference. The use of the term "safeguards" is not inconsistent with common practice. This item should be closed.</p>								
1537	NRR/SCSB	20.4-14	DSER-OI		6/5/96	Closed	Resolved	
<p>Westinghouse needs to provide a clearer explanation of how the AP600 design meets the requirements of Issue II.E.4.4.</p> <p>Action W - Section 1.9.3, item (2)(xv) of the SSAR provides an explanation of how the AP600 design addresses Issue II.E.4.4.</p> <p>Informal update provided by Staff (Moninger) at 8/17/95 meeting: NUREG-0660 Item II.E.4.4 was subsumed by NUREG-0737 Item II.E.4.2. The issue relates to purging during various operational modes, and reliability of vent/purge isolation valves. The safety concern is the capability of open purge isolation valves to close against the dynamic conditions resulting from a LOCA. This concern is addressed as part of the SRP 6.2.4 evaluation. SCSB considers the SSAR 1.9.3 description to be acceptable. This item should be closed.</p>								

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1563	NRR/SCSB 20.7-5		DSER-OI			9/11/96	Closed	Action <input checked="" type="checkbox"/> N	NSD-NRC-96-4818	
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.										
Closed - WCAP-13559 Rev. 1 issued September 11, 1996										
1504	NRR/SPLB 20.3-4		DSER-OI			6/5/96	Closed	Action <input checked="" type="checkbox"/> N		
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.										
Closed - Issue 43 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.										
1510	NRR/SPLB 20.3-10		DSER-OI			6/5/96	Closed	Action <input checked="" type="checkbox"/> N		
Westinghouse did not address Issue 82 in its May 28, 1993, letter. It should address PRA for accidents in the AP600 spent fuel pool.										
Closed - Issue 82 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.										
1511	NRR/SPLB 20.3-11		DSER-OI			6/5/96	Closed	Action <input checked="" type="checkbox"/> N		
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.										
Closed - Issue 83 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.										
1519	NRR/SPLB 20.3-19		DSER-OI			2/28/96	Closed	Action N		
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.										
Closed - Westinghouse has completed necessary submittals to support staff review. 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"										
1522	NRR/SPLB 20.3-22		DSER-OI			6/5/96	Closed	Action <input checked="" type="checkbox"/> N		
Westinghouse should address Issue 143 for the AP600 design.										
Closed - A discussion of Issue 143 was added to subsection in Rev. 7										
1523	NRR/SPLB 20.3-23		DSER-OI			5/20/96	Closed	Action <input checked="" type="checkbox"/> N		
Westinghouse should address Issue 153 for the AP600 design.										
Closed - Issue 153 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item can be considered closed.										
1552	NRR/SPLB 20.4-29		DSER-OI			6/5/96	Closed	Action <input checked="" type="checkbox"/> N		
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.										
Closed - Issue II.K.3 (28) has been removed from the Rev. 7 of Section 1.9.4 of the SSAR, and included in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues, according to what was agreed with the NRC. The item is closed.										

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Item No.	Branch	DSER Section/ Question	Type	Title/Description Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. /	Ltr Date
1555	NRR/SPLB	20.4-32	DSER-OI		6/5/96	Closed	Action <input checked="" type="checkbox"/>	N	
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.									
Closed - The discussion for SSAR subsection 1.9.3 Item (2)(xxvi) Rev. 7 includes limitation on the circulation of fluids outside containment.									
1556	NRR/SPLB	20.4-33	DSER-OI		6/5/96	Closed	Action <input checked="" type="checkbox"/>	N	
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.									
Closed - Item (2)(xxviii) does not refer to toxic gases. See SSAR subsection 2.2.1 for COL item on the identification of site specific hazards. The items associated with radiation in the control room are being resolved as part of the review of the Control Room habitability design summarized in Section 6.4.									
1561	NRR/SPLB	20.7-3	DSER-OI		9/11/96	Closed	Action <input checked="" type="checkbox"/>	N	NSD-NRC-96-4818
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.									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									
1564	NRR/SPLB	20.7-6	DSER-OI		9/11/96	Closed	Action <input checked="" type="checkbox"/>	N	NSD-NRC-96-4818
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.									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									
1567	NRR/SPLB	20.7-9	DSER-OI		9/11/96	Closed	Action <input checked="" type="checkbox"/>	N	NSD-NRC-96-4818
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.									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									
1570	NRR/SPLB	20.7-12	DSER-OI		9/11/96	Closed	Action <input checked="" type="checkbox"/>	N	NSD-NRC-96-4818
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.									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									
1578	NRR/SPLB	20.7-20	DSER-OI		9/11/96	Closed	Action <input checked="" type="checkbox"/>	N	NSD-NRC-96-4818
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 G. to the AP600 design. The AP600 design does not have safety related Diesel Generators.									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									

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1582	NRR/SPLB	20.7-24	DSER-OI		9/11/96	Closed	Action	NSD-NRC-96-4815	
For Generic Letter 80-77, Westinghouse 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."									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									
1585	NRR/SPLB	20.7-27	DSER-OI		9/11/96	Closed	Action	NSD-NRC-96-4818	
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.									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									
1592	NRR/SPLB	20.7-34	DSER-OI		9/11/96	Closed	Action	NSD-NRC-96-4818	
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.									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									
1602	NRR/SPLB	20.7-44	DSER-OI		9/11/96	Closed	Action	NSD-NRC-96-4818	
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.									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									
1993	NRR/SPLB	20.7-4	DSER-COL		9/11/96	Closed	Action	NSD-NRC-96-4818	
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.									
Closed - WCAP-13559 Rev. 1 issued September 11, 1996									
1494	NRR/SRXB	20.2-5	DSER-OI		6/5/96	Closed	Action		
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.									
Closed - SSAR Rev. 7 response to A-17 references the Adverse Systems Interaction Evaluation Report, WCAP-1447									
1495	NRR/SRXB	20.2-6	DSER-OI		6/5/96	Closed	Action		
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.									
Closed - SSAR Rev. 7 response to A-17 references the Adverse Systems Interaction Evaluation Report, WCAP-1447									

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1502	NRR/SRXB	20.3-2	DSER-OI		6/5/96	Closed	Action W		
<p>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.</p> <p>Closed - Issue 22 has been specifically addressed in Rev. 7 of Section 1.9.4 of the SSAR, it makes reference to 9.3.6. The item is pending revision to SSAR chapter is 9.3.6.</p>									
1513	NRR/SRXB	20.3-13	DSER-OI		6/5/96	Closed	Action N		
<p>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.</p> <p>Closed - 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 was revised to remove the current discussion of issue 105. A discussion of ISLOCA is provided in Section 1.9.5.1 of the SSAR and will be retained.</p>									
1514	NRR/SRXB	20.3-14	DSER-OI		5/20/96	Closed	Action W		
<p>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.</p> <p>Closed - Issue 105 has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR, and included in Table 1.9-2, Listing of Unresolved Safety Issues and Generic Safety Issues, according to what the NRC requested. The item can be considered closed.</p>									
1538	NRR/SRXB	20.4-15	DSER-OI		6/5/96	Closed	Action W		
<p>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.</p> <p>Closed - This item is not applicable to the AP600. This is noted in Table 1.9-2</p>									
1545	NRR/SRXB	20.4-22	DSER-OI		6/5/96	Closed	Action W		
<p>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.</p> <p>Closed - Issue II.K.1 (17) has been specifically addressed in Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.</p>									
1546	NRR/SRXB	20.4-23	DSER-OI		6/5/96	Closed	Action W		
<p>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.</p> <p>Closed - Issue II.K.1 (24) has been specifically addressed in Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.</p>									
1547	NRR/SRXB	20.4-24	DSER-OI		6/5/96	Closed	Action W		
<p>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.</p> <p>Closed - 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. The AP600 ERGs have been submitted. This open item is closed.</p>									

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Selection: [DSER Section] like '20.*' Sorted by NRC Branch

Item No.	Branch	DSER Section/ Question	Type	Title/Description Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. / Ltr Date
1548	NRR/SRXB	20.4-25	DSER-OI	7/23/96	Closed	Action	W	
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 ILK.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.								
Revision 1 of the at-power Emergency Response Guidelines was submitted by DCP/NRC0376 on 8/9/95.								
1549	NRR/SRXB	20.4-26	DSER-OI	6/5/96	Closed	Action	W	
Issue ILK.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 ILK.3(5).								
Closed - Issue ILK.3 (5) has been specifically addressed in Rev. 7 of Section 1.9.4 of the SSAR. The item is closed.								
1565	NRR/SRXB	20.7-7	DSER-OI	9/11/96	Closed	Action	W	NSD-NRC-96-4818
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.								
Closed - WCAP-13559 Rev. 1 issued September 11, 1996								
1572	NRR/SRXB	20.7-14	DSER-OI	9/11/96	Closed	Action	W	NSD-NRC-96-4818
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.								
Closed - WCAP-13559 Rev. 1 issued September 11, 1996								
1575	NRR/SRXB	20.7-17	DSER-OI	9/11/96	Closed	Action	W	NSD-NRC-96-4818
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.								
Closed - WCAP-13559 Rev. 1 issued September 11, 1996								
1577	NRR/SRXB	20.7-19	DSER-OI	9/11/96	Closed	Action	W	NSD-NRC-96-4818
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.								
Closed - WCAP-13559 Rev. 1 issued September 11, 1996								
1579	NRR/SRXB	20.7-21	DSER-OI	9/11/96	Closed	Action	W	NSD-NRC-96-4818
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."								
Closed - WCAP-13559 Rev. 1 issued September 11, 1996								

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Selection: [DSER Section] like 20.* Sorted by NRC Branch

Item No.	DSER Section/Question	Branch	Type	Title/Description	Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. / Ltr	Date
1584	NRR/SRXB 20.7-26		DSER-OI	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.	Closed	9/11/96	Closed	Action	NSD-NRC-96-4818	
1588	NRR/SRXB 20.7-30		DSER-OI	Action W - WCAP-13559 will be revised to identify the role of the AP600 ERGs in addressing the issues in this GL. Closed - WCAP-13559 Rev. 1 issued September 11, 1996	Closed	9/11/96	Closed	Action	NSD-NRC-96-4818	
1589	NRR/SRXB 20.7-31		DSER-OI	For Generic Letter 81-1, 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. Closed - WCAP-13559 Rev. 1 issued September 11, 1996	Closed	9/11/96	Closed	Action	NSD-NRC-96-4818	
1591	NRR/SRXB 20.7-33		DSER-OI	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 reflect the role of the AP600 ERGs in addressing the issues of this GL. Closed - WCAP-13559 Rev. 1 issued September 11, 1996	Closed	9/11/96	Closed	Action	NSD-NRC-96-4818	
1593	NRR/SRXB 20.7-35		DSER-OI	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. Closed - WCAP-13559 Rev. 1 issued September 11, 1996	Closed	9/11/96	Closed	Action	NSD-NRC-96-4818	
1596	NRR/SRXB 20.7-38		DSER-OI	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 19.4, Issue A-1, "Water Hammer") Closed - WCAP-13559 Rev. 1 issued September 11, 1996	Closed	9/11/96	Closed	Action	NSD-NRC-96-4818	
1830	NRR/SRXB 20.4-1		DSER-CN	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. Closed - WCAP-13559 Rev. 1 issued September 11, 1996	Closed	5/20/96	Closed	Action	NSD-NRC-96-4818	
1992	NRR/SRXB 20.7-3		DSER-COL	20.4-1 For Issue 1, Westinghouse will add positive indication of the reactor coolant system and steam generator relief and safety valves in Table 3.11-1. Closed - Issue (2) (xi) has been specifically addressed in the Rev. 7 of Section 19.4 of the SSAR. The item can be considered closed.	Closed	9/11/96	Closed	Action	NSD-NRC-96-4818	
				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. Closed - WCAP-13559 Rev. 1 issued September 11, 1996						

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Selection: [DSER Section] like 20.* Sorted by NRC Branch

Item No.	Branch	DSER Section/ Question	Type	Title/Description Status Detail	Last Mod Date	(W) Status	NRC Status	Letter No. / Ltr	Date
2288	NRR/SRCB	20.	MTG-OI		3/13/96	Closed	Resolved		
<p>APRIL 19, 1995 (HSII) DISCUSSION ITEMS</p> <p>24. GSI 122.2 - Feed and Bleed ERG (SSAR Section 1.9.4):</p> <p>The August 8, 1994 response to Q440.121, regarding GSI 122.2 on emergency operator procedure and operator training for initiation of feed and bleed, states that operator can manually actuate the CMTs and ADS based on the same signals that would automatically actuate them (CMTs on low SG water level plus high RCS temperature and ADS on low CMT water level). Describe the steps in the ERGs for operator actions.</p> <p>Closed - Revision 1 of the ERGs were submitted 8/9/95 via NTD-NRC-95-4525. The ERGs clearly describe these steps for operator actions.</p>									
1500	NRR/TSB	20.2-11	DSER-OI		8/14/96	Closed	Action W N		
<p>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.</p> <p>Action W - The issue has been specifically addressed in the Rev. 7 of Section 1.9.4 of the SSAR. The item is pending revision of the AP600 Tech Specs to specify the allowable outage times.</p> <p>Closed - With issuance of the Tech Specs in SSAR Rev. 9.</p>									
1543	NRR/TSB	20.4-20	DSER-OI		6/5/96	Closed	Action W N		
<p>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.</p> <p>Closed - Issue II.K.1 (13) has been specifically addressed in Rev. 7 of Section 1.9.4 of the SSAR. The Item is closed.</p>									