Docket File
52-003

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 23, 1997

APPLICANT: Westinghouse Electric Corporation

FACILITY: AP600

SUBJECT: SUMMARY OF SEPTEMBER 10, 1997, MANAGEMENT MEETING WITH WESTINGHOUSE TO DISCUSS DESIGN CERTIFICATION SCHEDULE FOR THE AP600

The subject meeting was held on September 10, 1997, in the Rockville, Maryland, office of the Nuclear Regulatory Commission (NRC) between representatives of Westinghouse and the NRC staff. Attachment 1 is a list of meeting attendees. Attachments 2 and 3 are the handouts provided by the staff during the meeting.

The purpose of the meeting was to discuss the schedule for the AP600 review. The staff stated that the draft schedule, provided in Attachment 2, was still in the process of development and was flexible in some areas but in other areas it was not flexible. The staff also stated their intent to write a Commission paper that would update the AP600 schedule from that given in SECY-97-051 "Schedule for the Staff's Review of the AP600 Design Certification Application," dated February 26, 1997. The staff agreed to provide Westinghouse with an electronic version of the draft schedule. Westinghouse stated that it would provide feedback to the staff on the draft schedule with respect to sequencing and duration which they believed could potentially improve the schedule.

The staff noted that the draft schedule reflected a revised review approach that was developed to focus the review. Specifically, the branches were asked to provide final safety evaluation report (FSER) inputs on certain dates and not wait until all issues were resolved in their respective areas. Therefore, some of the FSER inputs received contain open items and some future FSER inputs would also contain open items. These open items have been, and will continue to be, extracted and forwarded to Westinghouse for resolution. The staff agreed to determine a method that would be used to clearly identify these open items from more routine requests for additional information and to aid in management of the resolution of these open items.

Attachment 3 contains a handout that was provided to Westinghouse during the discussion of the schedule. The staff identified all the FSER inputs that were currently projected to occur after October 1, 1997, and schedule impact issues. The staff expressed concern that there were many issues that needed to be resolved between now and January 30, 1998. Therefore, it was agreed that meetings would be held on a periodic basis between the staff and Westinghouse to discuss the progress of the review.

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Westinghouse agreed to provide feedback to the staff on the inspections, tests, analyses, and acceptance criteria schedule proposed in Attachment 3. Westinghouse also agreed to provide submittal dates to the staff for the

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following: a draft markup for the containment spray design, a reply to the staff's concerns on the basemat, a draft markup for control room habitability, and a response to the staff's concerns for seismic and missile protection for the post-72 hour equipment.

The staff agreed that it needed to provide feedback to Westinghouse on its submittal concerning the Regulatory Treatment of Non-safety Systems. The staff was also evaluating potential policy implications for the proposed method for cooling the spent fuel pool. A draft of this meeting summary was provided to Westinghouse to allow them the opportunity to comment on the summary prior to issuance.

original signed by:

Joseph M. Sebrosky, Project Manager
Standardization Project Directorate
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

Docket No. 52-003

Attachments: As stated

cc w/atts: See next page

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NAME	JSebrosky		TRQuay					
DATE	09/23/97		09/23/97					

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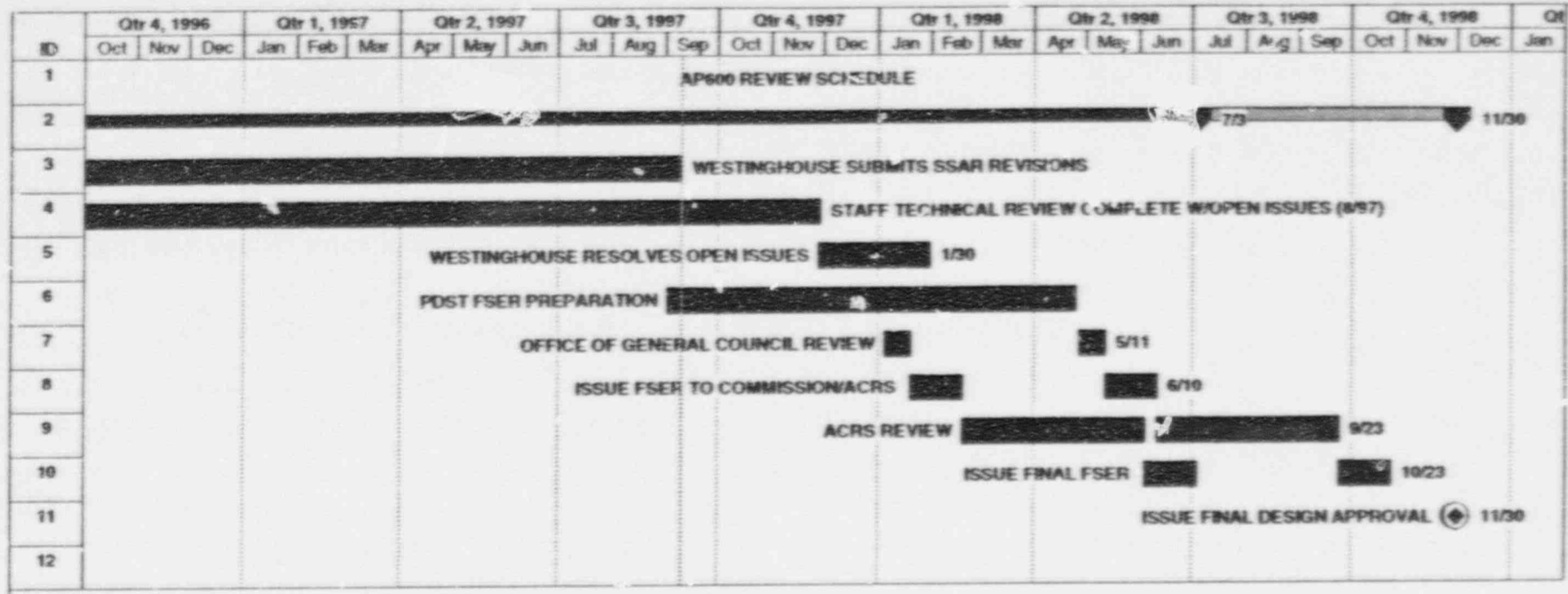
WESTINGHOUSE AP600 MANAGEMENT
MEETING ATTENDEES
SEPTEMBER 10, 1997

NAME	ORGANIZATION
BOB VIJUK	WESTINGHOUSE
BRIAN MCINTYRE	WESTINGHOUSE
JACK ROE (PART TIME)	NRR/DRPM
TED QUAY	NRR/DRPM/PDST
TOM KENYON	NRR/DRPM/PDST
BILL HUFFMAN	NRR/DRPM/PDST
JERRY WILSON	NRR/DRPM/PDST
JOE SEBROSKY	NRR/DRPM/PDST

Attachment 1



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Project: AP600 REVIEW SCHEDULE
Date: 9/10/97

Present Schedule
November 1996 Schedule
November Schedule Delay
November 1996 Summary

Attachment 2

AP600 REVIEW SCHEDULE

ID	Name	Bas. Fin.	Finish	Status
1	AP600 DESIGN CERTIFICATION REVIEW SCHEDULE			
2		7/3/98	11/30/98	
3	WESTINGHOUSE SUBMITS SSAR REVISIONS	5/21/97	9/9/97	
4	STAFF TECHNICAL REVIEW COMPLETE W/OPEN ISS	8/29/97	11/28/97	
5	WESTINGHOUSE RESOLVES OPEN ISSUES	NA	1/30/98	
6	PDST FSER PREPARATION	1/2/98	4/24/98	
7	OFFICE OF GENERAL COUNCIL REVIEW	1/19/98	5/11/98	
8	ISSUE FSER TO COMMISSION/ACRS	2/18/98	6/10/98	
9	ACRS REVIEW	6/3/98	9/23/98	
10	ISSUE FINAL FSER	7/3/98	10/23/98	
11	ISSUE FINAL DESIGN APPROVAL	NA	11/30/98	
12				

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AP600 REVIEW SCHEDULE

ID	Name	Bas. Fin.	Finish	Status
13	M98053 AP600 FSER PREPARATION	2/27/98	4/3/98	
14	M98053	1/2/98	4/3/98	
15	PDST	1/2/98	4/3/98	
16				
17	M90294 AP600 FSER ON CHAPTER 1	8/29/97	9/19/97	
18	M90294	8/29/97	9/19/97	
19	PDST	8/29/97	8/29/97	
20	1.11 Index of Tier 2* Information	8/29/97	8/29/97	
21	1.6 Summary of Open Items	8/29/97	8/29/97	
22	1.7 Summary of Confirmatory Items	8/29/97	8/29/97	
23	1.8 Index of Applicable Regulations and Exempti	8/29/97	8/29/97	
24	1.10 Combined License (COL) Action Items	8/29/97	8/29/97	
25	ECGB	8/29/97	8/29/97	
26	1.9 Interfaces for Standard Designs	8/29/97	8/29/97	
27	EMEB	8/29/97	8/29/97	
28	1.9 Interfaces for Standard Designs	8/29/97	8/29/97	
29	HFEB	8/29/97	8/29/97	
30	1.9 Interfaces for Standard Designs	8/29/97	8/29/97	
31	HQMB	8/29/97	9/12/97	
32	1.9 Interfaces for Standard Designs	8/29/97	9/12/97	
33	SCSB	8/29/97	8/29/97	
34	1.9 Interfaces for Standard Designs	8/29/97	8/29/97	
35	SPLB	8/29/97	9/19/97	
36	1.9 Interfaces for Standard Designs	8/29/97	9/19/97	
37	SRXB	8/29/97	8/29/97	
38	1.9 Interfaces for Standard Designs	8/29/97	8/29/97	
39				
40	M90295 AP600 FSER ON CHAPTER 2	4/30/97	9/1/97	
41	WESTINGHOUSE COMPLETES SSAR CHAPTER 2	6/21/96	6/21/96	
42	M90295	4/30/97	9/1/97	
43	ECGB	4/4/97	9/1/97	
44	2.1 Site Location and Description	4/4/97	4/4/97	Draft FSER
45	2.2 Potential Hazards	4/4/97	4/4/97	Draft FSER
46	2.4 Hydrologic Description	4/4/97	4/4/97	Draft FSER
47	2.5 Site Envelope Characteristics	4/4/97	9/1/97	Draft FSER (Open Issues) Final audit 8/4/9
48	W Provides Update Site chi/Q	2/26/97	2/26/97	
49	PERB	4/30/97	7/31/97	
50	2.3.1 Regional Climatology	2/14/97	7/31/97	Draft FSER (Open Issues)
51	2.3.2 Local Meteorology	4/30/97	7/31/97	Draft FSER (Open Issues)
52				
53	M90296 AP600 FSER ON CHAPTER 3	8/30/97	10/15/97	
54	WESTINGHOUSE COMPLETES SSAR CHAPTER 3	12/31/96	3/19/97	Analysis for post 72 hr design changes avail
55	M90296	8/30/97	10/15/97	Final LBB audit completed 4/14/97
56	ECGB	8/1/97	9/1/97	
57	3.1 Design of Structures, Components, Equip. &	4/2/97	4/2/97	Draft FSER
58	3.2.1 Seismic Classification	4/2/97	4/2/97	Draft FSER (open issues)
59	3.2.2 Seismic Quality Group Classification	4/2/97	4/2/97	Draft FSER
60	3.3.1 Wind Loadings	3/28/97	3/28/97	Draft FSER
61	3.3.2 Tornado Loading	3/28/97	3/28/97	Draft FSER
62	3.4.2 Analysis Procedures	3/28/97	3/28/97	Draft FSER
63	3.5.1.3 Turbine Missiles	2/12/97	2/12/97	Draft FSER
64	3.5.3 Barrier Design Procedures	3/31/97	3/31/97	Draft FSER (?)
65	3.6.2 Postulated Rupture Locations	4/2/97	4/2/97	Draft FSER(confirmatory issues)
66	Westinghouse provides LBB SSAR	2/26/97	6/27/97	
67	3.6.3 Leak-Before-Break	3/31/97	8/15/97	
68	3.7.1 Seismic Design Parameters	3/14/97	9/1/97	
69	3.7.2 Seismic System Analysis	3/14/97	9/1/97	Final audit 8/11/97
70	3.7.3 Seismic Subsystem Analysis	3/14/97	9/1/97	
71	3.7.4 Seismic Instrumentation	4/4/97	4/4/97	Draft FSER
72	3.8.2 Steel Containment	3/31/97	6/23/97	Draft FSER (open issues)
73	3.8.3 Internal Containment Structures	3/31/97	9/1/97	
74	3.8.4 Other Category I Structures	3/31/97	9/1/97	Staff's final audit 8/4/97 and 8/11/97
75	3.8.5 Foundations	3/31/97	9/1/97	Staff's final audit 8/4/97
76	3.9.1 Special Topics for Mech. Components	4/3/97	4/3/97	Draft FSER
77	3.9.2 Dynamic Testing	4/3/97	4/3/97	Draft FSER

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AP600 REVIEW SCHEDULE

ID	Name	Bas. Fin.	Finish	Status
78	3.9.3 ASME Code Class 1, 2, & 3 Components	4/3/97	4/3/97	Draft FSER (open issues)
79	3.9.4 Control Rod Drive Systems	3/31/97	5/27/97	Draft FSER
80	3.9.5 Reactor Pressure Vessel Internals	3/31/97	5/27/97	Draft FSER
81	W- COMPLETES IST RAI RESPONSE	3/19/97	6/27/97	
82	3.9.6 Inservice Testing of Pumps & Valves	3/31/97	3/31/97	Draft FSER (open issues)
83	3.9.7 Integrated Head Package	3/31/97	5/27/97	Draft FSER
84	3.10 Seismic Qualification of Mech. & Elect. Equ	3/31/97	4/1/97	Draft FSER (open issues)
86	Westinghouse provides Piping Criteria SSAR	2/28/97	6/9/97	
86	3.12 Piping Design	5/1/97	5/1/97	Draft FSER (open issues)
87	EMCB	6/30/97	6/30/97	
88	3.13 Threaded Fasteners	5/30/97	5/30/97	?
89	SPLB	6/30/97	10/15/97	
90	3.4.1 Flood Protection	5/30/97	10/15/97	
91	3.5.1 Missile Selection	5/30/97	10/15/97	
92	3.5.2 Missile Protection	5/30/97	10/15/97	
93	3.6.1 Piping Failure	2/28/97	10/15/97	
94	3.11 Environmental Qualification, Inc. Appendix 3	5/30/97	9/30/97	
95				
96	M90297 AP600 FSER ON CHAPTER 4	3/31/97	6/30/97	
97	WESTINGHOUSE COMPLETES SSAR CHAPTER 4	6/21/96	6/21/96	
98	M90297	3/31/97	6/30/97	
99	EMCB	3/31/97	3/31/97	
100	4.5.1 Control Rod Drive Structural Material	3/31/97	3/31/97	Draft FSER
101	4.5.2 Reactor Internals & Core Support Materials	1/13/97	1/13/97	Draft FSER
102	SRXB	3/31/97	6/30/97	
103	4.2 Fuel System Design	3/31/97	5/30/97	Draft FSER
104	4.3 Nuclear Design	3/31/97	5/30/97	Draft FSER
105	4.4 Thermal Hydraulic Design	3/31/97	5/30/97	Draft FSER
106	4.6 Functional Design of Control Rod Drive Syst	3/31/97	5/30/97	Draft FSER
107				
108	M90298 AP600 FSER ON CHAPTER 5	8/29/97	9/19/97	
109	WESTINGHOUSE COMPLETES SSAR CHAPTER 5	4/30/97	4/30/97	SSAR changes ongoing - final TBD
110	M90298	4/14/97	9/19/97	
111	ECGB	2/27/97	2/27/97	
112	5.2.1 Compliance with Codes and Standards Rul	12/31/96	12/31/96	Draft FSER (open issues)
113	5.2.3 Reactor Coolant Pressure Boundary Materi	1/28/97	1/28/97	Draft FSER
114	5.2.4 RCPB IST and ISI	2/27/97	2/27/97	Draft FSER
115	5.3.1 Reactor Vessel Materials	2/12/97	2/12/97	Draft FSER
116	5.3.2 Pressure-Temp. Limits & PTS	2/12/97	2/12/97	Draft FSER
117	5.3.3 Reactor Vessel Integrity	1/30/97	1/30/97	Draft FSER
118	5.4.1.1 Pump Flywheel Integrity	1/30/97	1/30/97	Draft FSER
119	5.4.2.1 Steam Generator Materials	2/12/97	2/12/97	Draft FSER
120	5.4.2.2 Steam Generator Tube ISI	12/31/96	12/31/96	Draft FSER (Check)
121	SPLB	4/14/97	9/19/97	
122	5.2.5 RCPB Leakage Detection	4/14/97	9/19/97	
123	5.4.11 Pressure Relief Discharge	4/14/97	8/29/97	
124	SRXB	1/31/97	9/1/97	
125	5.2.2 Overpressure Protection	1/31/97	9/1/97	
126	5.4.1 Reactor Coolant Pumps	1/31/97	9/1/97	
127	5.4.2 Steam Generators	1/31/97	9/1/97	
128	5.4.3 RCS Piping	1/31/97	9/1/97	
129	5.4.4 Main Steamline Flow Restriction	1/31/97	9/1/97	
130	5.4.5 Pressurizer	1/31/97	9/1/97	
131	5.4.6 Automatic Depressurization System Valves	1/31/97	9/1/97	
132	5.1 Summary Description	1/31/97	9/1/97	
133	5.4.7 Residual Heat Removal System	1/31/97	9/1/97	
134	5.4.9 Reactor Coolant System Pressure Relief D	1/31/97	9/1/97	
135	5.4.12 RCS High Point Vents	1/31/97	9/1/97	
136	5.4.13 Core Makeup Tank	1/31/97	9/1/97	
137	5.4.14 Passive Residual Heat Removal HX	1/31/97	9/1/97	
138				
139	M90299 AP600 FSER ON CHAPTER 6	8/1/97	11/26/97	
140	WESTINGHOUSE COMPLETES SSAR CHAPTER 6	10/31/96	5/30/97	
141	M90299	7/21/97	11/26/97	
142	ECGB	4/11/97	5/27/97	

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AP600 REVIEW SCHEDULE

ID	Name	Bas. Fin.	Finish	Status
143	Westinghouse Resolves 6.1	NA	8/19/96	
144	6.1 Engineered Safety Features Materials	4/11/97	4/11/97	Draft FSER (open issues)
145	6.1.2 Protective Coating Systems & Organic Mat	12/31/96	12/31/96	Draft FSER
146	6.2.7 Fracture Prevention of CSB	12/31/96	12/31/96	Draft FSER (no change from DSER)
147	6.2.2 Containment Sprays for Cleanup	12/31/96	5/27/97	Presently Not Applicable
148	6.6 Inservice Inspection of Class 2 and 3 Compo	2/27/97	2/27/97	Draft FSER (Open Issues)
149	SCSB	7/21/97	8/29/97	
150	Westinghouse Resolves 6.2	5/22/97	5/22/97	
151	6.2.1 Containment Functional Design	7/21/97	8/29/97	
152	6.2.1.1.A PWR Dry containment	7/21/97	8/29/97	Draft FSER (Open Issues)
153	6.2.1.2 Subcompartment Analysis	7/21/97	7/18/97	Draft FSER
154	6.2.1.3 LOCA	7/21/97	8/29/97	
155	6.2.1.4 Secondary System Pipe Rupture	7/21/97	8/29/97	
156	6.2.1.5 Containment Pressure	7/21/97	8/29/97	Draft FSER
157				
158	W. COMPLETES PAR RAI's	5/23/97	6/13/97	
159	6.2.2 Containment Heat Removal	7/21/97	8/29/97	
160	6.2.3 Secondary Containment Functional Design	7/21/97	7/21/97	Draft FSER (No changes from DSER)
161	6.2.4 Containment Isolation System	7/21/97	7/21/97	Draft FSER
162	6.2.5 Combustible Gas Control	7/21/97	8/29/97	
163	6.2.6 Containment Leak Testing	7/21/97	8/1/97	Draft FSER
164	6.2.7 Fracture Prevention of Containment Press	7/21/97	7/21/97	Draft FSER (No changes from DSER)
165	6.2.8 In-Containment Refueling Water Storage T	7/21/97	8/29/97	
166	SPLB	6/16/97	11/26/97	
167	Westinghouse resolves 6.4	10/31/96	10/31/96	
168	6.4 Control Room Habitability Systems	5/15/97	11/26/97	
169				
170	6.5.1 ESF Atmosphere Cleanup Systems	1/17/97	1/17/97	Not applicable to AP600
171	6.5.3 Fission Product Control Systems	1/17/97	1/17/97	Draft FSER (may be impacted by spray issu
172	SRXB	6/30/97	9/30/97	
173	Westinghouse Resolves 6.3	NA	2/19/97	
174	6.3 Passive Core Cooling System	6/30/97	9/30/97	
175				
176	M90300 AP600 FSER ON CHAPTER 7 INSTRUMENTAT	6/16/97	1/13/97	
177	WESTINGHOUSE COMPLETES SSAR CHAPTER 7	6/17/96	6/17/96	Westinghouse re-submitted SSAR Chapter
178	M90300	8/29/96	1/13/97	
179	HICB	8/29/96	1/13/97	
180	7.1 Instrumentation and Control	8/29/96	1/13/97	Draft FSER (open issues)
181	7.2 Reactor Trip System	8/29/96	1/13/97	Draft FSER (open issues)
182	7.3 Engineered Safety Features Actuation Syste	8/29/96	1/13/97	Draft FSER (open issues)
183	7.4 Systems Required for Safe Shutdown	8/29/96	1/13/97	Draft FSER (open issues)
184	7.5 Safety-Related Display Information	8/29/96	1/13/97	Draft FSER (open issues)
185	7.6 Interlock Systems Important to Safety	8/29/96	1/13/97	Draft FSER (open issues)
186	7.7 Control and Instrumentation Systems	8/29/96	1/13/97	Draft FSER (open issues)
187				
188	M90301 AP600 FSER ON CHAPTER 8 ELECTRIC POW	1/31/97	1/31/97	Draft FSER
189	WESTINGHOUSE COMPLETES SSAR CHAPTER 8	3/29/96	3/29/96	
190	M90301	1/31/97	1/31/97	
191	EELB	1/31/97	1/31/97	
192	8.1 Introduction	1/31/97	1/31/97	Draft FSER
193	8.2 Offsite Power System	1/31/97	1/31/97	Draft FSER
194	8.3.1 Onsite Power Systems (Onsite)	1/31/97	1/31/97	Draft FSER
195	8.3.2 DC Power Systems	1/31/97	1/31/97	Draft FSER
196	8.4 Other Electrical Features and Requirements	1/31/97	1/31/97	Draft FSER
197				
198	M90302 AP600 FSER ON CHAPTER 9 AUXILIARY SY	8/29/97	11/26/97	
199	WESTINGHOUSE COMPLETES SSAR CHAPTER 9	4/30/97	6/27/97	Final W SSAR due 6/27
200	M90302	7/31/97	11/26/97	
201	ECGB	4/2/97	4/2/97	
202	9.1.1 New Fuel Storage (secondary)	4/2/97	4/2/97	Draft FSER
203	9.1.2 Spent Fuel Storage (secondary)	4/2/97	4/2/97	Draft FSER
204	9.2.3 Demineralized Water Treatment System	3/5/97	3/5/97	Draft FSER
205	9.3.2 Process and Post-accident Sampling Syste	3/31/97	3/5/97	Draft FSER
206	9.3.3 Primary Sampling System	3/5/97	3/5/97	Draft FSER
207	9.3.4 Secondary Sampling System	3/5/97	3/5/97	Draft FSER

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AP600 REVIEW SCHEDULE

ID	Name	Bas. Fin.	Finish	Status
208	9.3.6 Chemical and Volume Control System (CV	3/5/97	3/5/97	Draft FSER
209	SPLB	7/4/97	11/26/97	
210	9.1.1 New Fuel Storage	6/3/97	8/29/97	
211	9.1.2 Spent Fuel Storage	7/4/97	8/29/97	
212	9.1.3 Spent Fuel Pool Cooling and Cleanup	7/4/97	8/29/97	
213	9.1.4 Light Load Handling System	6/3/97	8/29/97	
214	9.1.5 Overhead Heavy Load Handling	6/3/97	8/29/97	
215	Westinghouse resolves 9.2	2/29/96	4/30/97	
216	9.2.1 Station Service Water System	4/15/97	8/29/97	Draft FSER (Confirmatory RTNSS)
217	9.2.2 Component Cooling Water System	4/15/97	8/29/97	Draft FSER (Confirmatory RTNSS)
218	9.2.4 Demineralized Water Transfer and Storage	4/15/97	8/29/97	Draft FSER
219	9.2.5 Potable Water System	4/15/97	8/29/97	Draft FSER
220	9.2.6 Sanitary Drainage System	4/15/97	7/23/97	Draft FSER
221	9.2.7 Central Chilled Water System	4/15/97	8/29/97	Draft FSER
222	9.2.8 Turbine Building Closed Cooling System	4/15/97	8/29/97	Draft FSER (Confirmatory RTNSS)
223	9.2.9 Waste Water System	4/15/97	8/29/97	Draft FSER
224	9.2.10 Hot Water Heating System	4/15/97	8/29/97	Draft FSER
225	Westinghouse Resolves 9.3	4/30/96	6/27/97	
226	9.3.1 Compressed Air System	5/30/97	10/22/97	
227	9.3.2 Plant Gas System	NA	10/22/97	
228	9.3.3 Equipment and Floor Drainage Systems	5/30/97	10/22/97	
229	Westinghouse Resolves 9.4 Issues	4/30/96	7/30/97	
230	9.4.1 Nuclear Island Nonradioactive Ventilation S	5/15/97	11/7/97	
231	9.4.2 Annex/Auxiliary Buildings Non-Radioactive	5/15/97	11/26/97	
232	9.4.3 Radiologically Controlled Area Ventilation S	5/15/97	11/7/97	
233	9.4.4 Balance-of-Plant Interface	5/15/97	11/7/97	
234	9.4.5 Engineered Safety Feature Ventilation Syst	5/15/97	11/7/97	
235	9.4.6 Containment Recirculation Cooling System	5/15/97	11/7/97	
236	9.4.7 Containment Air Filtration System	5/15/97	11/7/97	
237	9.4.8 Radwaste Building HVAC System	5/15/97	11/7/97	
238	9.4.9 Turbine Building Ventilation System	5/15/97	11/7/97	
239	9.4.10 Diesel Generator Building Heating and Ve	5/15/97	11/7/97	
240	9.4.11 Health Physics and Hot Machine Shop HV	5/15/97	11/7/97	
241	Westinghouse Resolves 9.5 Issues	4/30/96	7/30/97	
242	9.5.1 Fire Protection Program	5/30/97	11/26/97	
243	9.5.4 Emergency Diesel Fuel Storage	5/30/97	10/22/97	
244	9.5.5 Emergency Diesel Cooling	5/30/97	10/22/97	
245	9.5.6 Emergency Diesel Starting System	5/30/97	10/22/97	
246	9.5.7 Emergency Diesel Engine Lubrication	5/30/97	10/22/97	
247	9.5.8 Emergency Diesel Engine Combustion	5/30/97	10/22/97	
248	HICB	8/29/96	8/29/96	
249	9.5.2 Communications Systems	8/29/96	8/29/96	
250	EELB	1/31/97	1/31/97	
251	9.5.3 Lighting Systems	1/31/97	1/31/97	
252				
253	M90303 AP600 FSER ON CHAPTER 10 STEAM POW	5/30/97	9/19/97	
254	WESTINGHOUSE COMPLETES SSAR CHAPTER 10	4/30/97	6/27/97	Key Issue 14 unresolved
255	M90303	5/30/97	9/19/97	
256	SPLB	5/30/97	9/19/97	
257	Westinghouse Resolves 10.2	2/29/96	6/27/97	
258	10.2 Turbine Generator	5/30/97	9/19/97	
259	10.2.1 Overspeed Protection	5/30/97	9/19/97	
260	10.2.2 Digital Electrohydraulic Control System	5/30/97	9/19/97	
261	10.2.3 Automatic Turbine Control	5/30/97	9/19/97	
262	10.2.4 Turbine Protective Trips	5/30/97	9/19/97	
263	10.2.5 Valve Control	5/30/97	9/19/97	
264	10.2.6 Turbine Missiles	5/30/97	9/19/97	
265	10.2.7 Inservice Inspection	5/30/97	9/19/97	
266	10.2.8 Access to Turbine Areas	5/30/97	9/19/97	
267	10.2.9 Turbine Rotor Integrity	5/30/97	9/8/97	Draft FSER
268				
269	Westinghouse Resolves 10.3	4/30/96	6/27/97	
270	10.3 Main Steam Supply System	5/30/97	9/19/97	Draft FSER
271	Westinghouse Resolves 10.4	3/29/96	6/27/97	
272	10.4.1 Main Condensers	5/30/97	9/19/97	

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AP600 REVIEW SCHEDULE

ID	Name	Bas. Fin.	Finish	Status
273	10.4.2 Main Condenser Evacuation System	5/30/97	9/19/97	
274	10.4.3 Turbine Gland Sealing System	5/30/97	9/19/97	
276	10.4.4 Turbine Bypass System	5/30/97	9/19/97	
276	10.4.5 Circulating Water System	5/30/97	9/19/97	
277	10.4.7 Condensate and Feedwater System	5/30/97	9/19/97	
278	10.4.9 Auxiliary Feedwater System	5/30/97	9/19/97	
279	10.4.10 Auxiliary Steam System	5/30/97	9/19/97	
280	ECGB	6/30/97	9/1/97	
281	10.2.3 Turbine Diskrotor Integrity	5/30/97	9/1/97	
282	10.3.6 Steam and Feedwater Materials	5/30/97	9/1/97	
283	10.4.6 Condensate Cleanup System	5/30/97	9/1/97	Draft FSER
284	10.4.8 Steam Generator Blowdown System	5/30/97	9/1/97	Draft FSER
285				
286	M90304 AP600 FSER ON CHAPTER 11 RADIOACTIVE	3/31/97	10/16/97	
287	WESTINGHOUSE COMPLETES SSAR CHAPTER 11	11/29/96	6/27/97	Chapter 11 outstanding issue resolution - (K
288	M90304	3/31/97	10/16/97	
289	SPLB	3/31/97	10/16/97	
290	11.1 Source Terms	3/31/97	10/15/97	
291	11.2 Liquid Waste Management Systems	3/31/97	10/15/97	
292	11.3 Gaseous Waste Management Systems	3/31/97	10/15/97	
293	11.4 Solid Waste Management Systems	3/31/97	10/15/97	
294	11.5 Process and Effluent Rad Monitoring	3/31/97	10/15/97	
295	PERB	3/31/97	7/31/97	
296	11.5 Process and Effluent Rad Monitoring	3/31/97	7/31/97	
297				
298	M90305 AP600 FSER ON CHAPTER 12 RADIATION P	2/28/97	7/31/97	
299	WESTINGHOUSE COMPLETES SSAR CHAPTER 12	4/30/96	4/30/96	
300	M90305	2/28/97	7/31/97	
301	PERB	2/28/97	7/31/97	
302	12.2 ALARA (Occupational)	2/28/97	7/31/97	Draft FSER
303	12.3 Radiation Sources	2/28/97	7/31/97	Draft FSER
304	12.4 Radiation Protection Design Features	2/28/97	7/31/97	Draft FSER
305	12.5 Dose Assessment	2/28/97	7/31/97	Draft FSER
306	12.6 Health Physics Facilities Design	2/28/97	7/31/97	Draft FSER
307				
308	M90306 AP600 FSER ON CHAPTER 13 CONDUCT OF	2/28/97	11/3/97	
309	WESTINGHOUSE COMPLETES SSAR CHAPTER 13	7/1/96	6/27/97	
310	M90306	2/28/97	11/3/97	
311	HHFB	2/28/97	4/30/97	
312	13.1 Management and Technical Support	2/28/97	4/30/97	Draft FSER
313	13.1.1- 13.1.2 Operating Organization	2/28/97	4/30/97	Draft FSER
314	13.2 Training	2/28/97	4/30/97	Draft FSER
315	13.5 Procedures	2/28/97	4/30/97	Draft FSER
316	PERB	2/28/97	9/1/97	
317	13.3 Emergency Planning	2/28/97	9/1/97	
318	HQMB	2/28/97	9/12/97	
319	13.4 Operational Review	2/28/97	9/12/97	(no outstanding issues)
320	PSGB	2/28/97	11/3/97	
321	Westinghouse Submits Security Design Report	NA	9/15/97	
322	13.6 Physical Security	2/28/97	11/3/97	45 days after W responds to Qs
323				
324	M90307 AP600 FSER ON CHAPTER 14 INITIAL TES	6/9/97	9/30/97	
325	WESTINGHOUSE COMPLETES SSAR CHAPTER 14	1/31/97	5/30/97	SSAR markup - 5/30, SSAR Rev 14 - 6/27
326	M90307	6/9/97	9/30/97	
327	HQMB	6/9/97	9/30/97	
328	14.1 Introduction	6/9/97	9/30/97	
329	14.2 Initial test Program	6/9/97	9/30/97	
330	14.3 Certified Design Material			Information in ITAACs
331				
332	M90308 AP600 FSAR ON CHAPTER 15 ACCIDENT AN	6/30/97	11/26/97	
333	WESTINGHOUSE COMPLETES SSAR CHAPTER 15	2/28/97	5/30/97	SSAR Rev 13
334	M90308	6/30/97	11/26/97	
335	SRXB	6/30/97	9/30/97	
336	15.1 Scope of Design-Basis Events	6/30/97	9/30/97	
337	15.2 Analysis Methods	6/30/97	9/30/97	

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AP600 REVIEW SCHEDULE

ID	Name	Bas. Fin.	Finish	Status
338	PERB	4/30/97	9/30/97	
339	15.3 Radiological Consequences of Accident	4/30/97	9/30/97	(Need response to aerosols, pH, EQ)
340	15.3.1 Radiological Consequences of a Mai	4/30/97	9/30/97	
341	15.3.2 Radiological Consequences of Rod	4/30/97	9/30/97	
342	15.3.3 Radiological Consequences of the F	4/30/97	9/30/97	
343	15.3.4 Radiological Consequences of Loss-	4/30/97	9/30/97	
344	15.3.5 Steam Generator Tube Rupture (SG	4/30/97	9/30/97	
345	15.3.6 Radiological Consequences of Fuel	4/30/97	9/30/97	
346	SPLB	NA	11/26/97	
347	15.7.3 Postulated Radioactive Releases due to Li	NA	11/26/97	
348	M90309 AP600 FSER ON CHAPTER 16 TECH SPECS	6/30/97	11/26/97	
349	WESTINGHOUSE COMPLETES SSAR CHAPTER 16	7/31/96	6/27/97	Chapter 16 submittal assumes staff comme
350	M90309	4/7/97	11/26/97	
351	TSB (Tech. Spec.)	4/7/97	11/26/97	
352	ECGB (Tech. Spec.)	12/31/96	9/19/97	
353	EELB (Tech. Spec.)	3/27/97	9/19/97	
354	HICB (Tech. Spec.)	4/7/97	9/19/97	
355	PERB (Tech. Spec.)	12/31/96	9/19/97	
356	SCSB (Tech. Spec.)	4/7/97	9/19/97	Complete - With Comments
357	SRXB (Tech. Spec.)	12/31/96	9/1/97	
358	SPLB (Tech. Spec.)	4/7/97	10/15/97	
359	HQMB	1/31/97	8/29/97	
360	Westinghouse provides final RAP	4/30/96	6/13/97	
361	16.2 Reliability Assurance	1/31/97	8/29/97	
362				
363	M90310 AP600 FSER ON CHAPTER 17 QA	1/31/97	11/26/97	
364	WESTINGHOUSE COMPLETES SSAR CHAPTER 17	4/30/96	4/30/96	
365	M90310	1/31/97	11/26/97	
366	HQMB	1/31/97	11/26/97	
367	QA Inspection Complete	NA	10/15/97	(Preliminary audit 9/24-25)
368	17.1 QA During the Design and Construction P	1/31/97	11/26/97	Draft FSER 30 days after final QA inspectio
369	17.2 QA During Operating Phase	1/31/97	11/26/97	Draft FSER 30 days after final QA inspectio
370				
371	M90311 AP600 FSER ON CHAPTER 18 HUMAN FACTO	3/13/97	10/1/97	
372	WESTINGHOUSE COMPLETES SSAR CHAPTER 18	2/12/97	2/12/97	
373	M90311	3/13/97	4/30/97	
374	HHFB	3/13/97	4/30/97	
375	18.0 Human Factors Engineering	3/13/97	4/30/97	Draft FSER (open issues)
376	WESTINGHOUSE COMPLETES ERG	2/28/97	5/30/97	
377	M95553	8/15/97	10/1/97	
378	HICB (ERG)	8/15/97	8/21/97	
379	SRXB (ERG)	8/15/97	10/1/97	
380				
381	M90312 AP600 FSER ON CHAPTER 19 PRA SEVERE	8/1/97	9/30/97	
382	WESTINGHOUSE COMPLETES SSAR CHAPTER 19	5/1/97	5/1/97	Chapter 19 SSAR inputs overdue - expecte
383	M90312	8/1/97	9/30/97	
384	LEVEL 1 PRA	NA	9/30/97	
385	W-COMPLETES SEISMIC MARGINS	4/11/97	4/11/97	
386	ECGB (Level 1 PRA)	8/1/97	9/30/97	Seismic margins 3/18 - Post 72hr 5/30
387	SPSB (Level 1 PRA)	8/1/97	9/30/97	
388	LEVEL 2/3 PRA	NA	9/15/97	
389	SCSB (Level 2/3 PRA)	8/1/97	9/15/97	
390				
391	FSER ON CHAPTER 20 - GENERIC ISSUES	7/4/97	9/30/97	
392	WESTINGHOUSE COMPLETES SSAR CHAPTER 20	3/31/97	3/31/97	
393	Unresolved and Generic Safety Issues	NA	9/30/97	
394	HICB (GIs)	12/31/96	1/13/97	Draft FSER
395	PERB (GIs)	4/30/97	7/30/97	(W input received)
396	ECGB (GIs)	1/31/97	6/13/97	Draft FSER (open issue) Partially Complete
397	EELB (GIs)	3/27/97	7/30/97	
398	SCSB (GIs)	4/15/97	8/29/97	
399	SRXB (GIs)	7/4/97	9/30/97	
400	SPLB (GIs)	7/4/97	9/19/97	
401	HHFB (GIs)	3/13/97	9/12/97	
402	HQMB (GIs)	6/9/97	8/29/97	

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AP600 REVIEW SCHEDULE

ID	Name	Bas. Fin.	Finish	Status
403	PSGB (GIs)	2/28/97	7/30/97	
404	TSB (GIs)	7/4/97	7/30/97	
405				
406	FSER ON CHAPTER 21 - TESTING	NA	11/28/97	
407	SRXB	NA	11/3/97	
408	21.1 Introduction	6/2/97	11/3/97	
409	21.2 Issues of Concern	6/2/97	11/3/97	
410	21.3 Overview of Westinghouse Testing Programs	6/2/97	11/3/97	
411	21.4 Overview of NRC Activities	6/2/97	11/3/97	
412	21.5 Evaluation of Vendor Testing Programs	6/2/97	11/3/97	
413	WESTINGHOUSE COMPLETES NOTRUMP	12/17/96	6/13/97	
414	M91011	4/15/97	10/1/97	
415	SRXB (Notrump)	4/15/97	10/1/97	
416	M91042 AP600 LOFT	9/5/96	7/10/89	
417	AP600 LOFT SSAR INPUT	9/5/96	9/5/96	
418	M91042	4/15/97	6/24/97	
419	SRXB (LOFT)	4/15/97	6/24/97	Draft FSER
420	WCOBRA/TRAC	4/14/97	10/1/97	
421	WCOBRA/TRAC SSAR INPUT	12/26/96	12/26/96	
422	SRXB (COBRA/TRAC) LBLOCA	4/14/97	10/1/97	
423	SRXB (COBRA/TRAC) LTC	4/14/97	9/15/97	
424	AP600 WGOTHIC	7/21/97	11/28/97	
425	WGOTHIC SSAR INPUT AND RESPONSES TO R	4/15/97	9/9/97	
426	SCSB (WGOTHIC)	7/21/97	11/28/97	
427	RTNSS	NA	9/30/97	
428	WESTINGHOUSE COMPLETES RTNSS	NA	4/3/96	
429	SRXB (RTNSS)	12/20/96	9/30/97	
430	SCSB (RTNSS)	12/20/96	8/22/97	
431				
432	M95666 AP600 ITAAC REVIEW	8/29/97	11/28/97	
433	WESTINGHOUSE COMPLETES ITAAC	6/30/97	6/30/97	
434	M95666	8/29/97	11/28/97	
435	ECGB (ITAAC)	8/29/97	11/28/97	
436	EELB (ITAAC)	8/29/97	11/28/97	
437	HICB (ITAAC)	8/29/97	11/28/97	
438	HQMB (ITAAC)	8/29/97	11/28/97	
439	PERB (ITAAC)	8/29/97	11/28/97	
440	SCSB (ITAAC)	8/29/97	11/28/97	
441	SPLB (ITAAC)	8/29/97	11/28/97	
442	SRXB (ITAAC)	8/29/97	11/28/97	
443	HHFB (ITAAC)	8/29/97	11/28/97	
444	M98069 AP600 SHUTDOWN RISK EVALUATION	5/30/97	9/30/97	
445	W- COMPLETES SHUTDOWN RISK STUDY	12/31/96	5/23/97	
446	M98069	5/30/97	9/30/97	
447	SRXB (Shutdown Risk)	5/30/97	9/30/97	
448	SCSB (Shutdown Risk)	7/18/97	9/30/97	Assigned to Task Force

PURPOSE

- Provide the proposed AP600 schedule

AP600 SCHEDULE RECENT BACKGROUND

November - December 1996	Staff and Westinghouse developed detailed schedule
February 1997	SECY-97-051 issued
	• Advanced FSER November 1997
	• Final Design Approval March 1998
April 1997	Staff informs Westinghouse that the schedule needs to be reevaluated due to missed schedule dates
May 1997	Westinghouse provides revised submittal schedule

Attachment 3

ASSUMPTIONS OF SECY 97-051

- Timely, high-quality submittals from Westinghouse
- Westinghouse to submit most of the key information in the February - March 1997 time frame, with all material to be submitted by the end of May 1997
- NRC staff resources available to perform the review

AP600 SCHEDULE - ACTUAL

- Both Westinghouse and the Staff missed November 1996 dates.
- 4/97 letter to Westinghouse requesting revised submittal dates, which was provided in May 1997.
- Process to closure involves staff writing SERs with open items. The staff will have to assemble the FSER and resolve open items at the same time

AP600 PROJECTED SCHEDULE

Date	Item	W submittal complete	SERs to PDST	AFSER	FDA
2/26/97	SECY-97-051	(3/97)	7/97	11/97	3/98
today	Staff expectations	9/97*	11/97	5/98	11/98

* In the last SMM Westinghouse committed to complete the majority of their submittals by the end of August 1997

SERs INPUTS AFTER 10/1/97

- ITAAC
- Security (Chapter 13.6)
- QA (Chapter 17)
- SRXB input to testing (Chapter 21)
- WGOTHIC
- SPLB inputs for part of Chapters 3, 6, 9, 11, 15, and 16

ITAAC REVIEW

Branch	RAIs issued	W-response	Task Group Meeting	ITAAC/SSAR	FSER
ECGB	August 22 Oct. 3	Nov. 3	Nov. 18-25, 1997	Dec 30,'98	Jan 30
EELB	Sept. 19	Oct. 20	Oct. 27-31	Dec 30,'98	Jan 30
HICB	August 13	Oct. 20	Oct. 27-31	Dec 30,'98	Jan 30
HHFB	August 28 Sept. 19	Oct. 20	Unlikely	Dec 30,'98	Jan 30
HQMB	Sept. 17	Oct. 17	Unlikely	Dec 30,'98	Jan 30
PDST	Oct. 3	Nov. 3	Nov. 18-25	Dec 30,'98	Jan 30
PERB	Oct. 3	Nov. 3	Nov. 18-25	Dec 30,'98	Jan 30
SCSB	April 18 More Qs	June 16 Nov. 17	Nov. 18-25	Dec 30,'98	Jan 30
SPLB	Nov. 14	Nov. 17	Oct. 27-31 Nov. 18-25	Dec 30,'98	Jan 30
SRXB	Sept. 17	Oct. 17	Oct. 27-31	Dec 30,'98	Jan 30

IMPACT ISSUES

- Containment Design
  - Containment Spray
  - WGOTHIC
- Structures-basemat
- Fire Protection
- Auxiliary Systems
  - Spent Fuel Pool
  - Control Room Habitability
  - Post-72 hour plant support
- Source Term
- Regulatory Treatment of Non-safety Systems

SUMMARY

- Expedited Feedback from Westinghouse
- SECY schedule to Commission