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NUCLEAR REGULATORY COMMISSION

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NUCLEAR REGULATORY COMMISSION

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BRIEFING BY WESTINGHOUSE ON  
ADVANCED PWR PROGRAM

- - - -

PUBLIC MEETING

Nuclear Regulatory Commission  
One White Flint North  
Rockville, Maryland

Wednesday, November 1, 1989

The Commission met in open session, pursuant to notice, at 2:30 p.m. , Thomas M. Roberts, Commissioner, presiding.

COMMISSIONERS PRESENT:

THOMAS M. ROBERTS, Commissioner  
KENNETH C. ROGERS, Commissioner  
JAMES R. CURTIS, Commissioner

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STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

SAMUEL J. CHILK, Secretary

WILLIAM C. PARLER, General Counsel

CARLO CASO, General Manager, Nuclear and Advanced  
Technology Division, Westinghouse

BRIAN McINTYRE, Manager, Advanced Plant Safety and  
Licensing, Westinghouse

BILL JOHNSON, Manager, Nuclear Safety Department,  
Westinghouse

BOB WIESEMANN, Manager, Regulatory and Legislative  
Affairs, Westinghouse

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## P-R-O-C-E-E-D-I-N-G-S

2:31 a.m.

1  
2  
3 COMMISSIONER ROBERTS: Good afternoon,  
4 ladies and gentlemen. This is our third meeting of  
5 the day, hearing from vendors about advanced light  
6 water reactors. We're happy today to welcome this  
7 afternoon Westinghouse.

8 Let me quickly say, Chairman Carr is  
9 involved in an exercise that involves simulated event  
10 and he wants me to assure you that his absence in no  
11 way reflects his lack of interest in your presentation  
12 and he -- the staff is well represented and he will  
13 review the transcript.

14 Any opening remarks?

15 Please proceed.

16 MR. CASO: (Slide) Thank you very much and  
17 good afternoon. I'm Carlo Caso, the General Manager  
18 of the Nuclear and Advanced Technology Division of  
19 Westinghouse Electric Corporation. On my right is Bob  
20 Wieseemann, who is the Manager of Regulatory and  
21 Legislative Affairs, and on my left is Bill Johnson,  
22 Manager of Nuclear Safety and farther to the left is  
23 Mr. Brian McIntyre, who is the Manager of Advanced  
24 Plant Safety and Licensing Design.

25 I have the responsibility within

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1 Westinghouse for developing and licensing the  
2 technology for the new evolutionary and advanced  
3 plants for tomorrow as well for plants operating  
4 today. I'm here to describe to you as well the  
5 Westinghouse advanced plant program with an emphasis  
6 on the SP/90, which is our evolutionary design, that  
7 is currently under NRC review. The other model, the  
8 600 megawatt passive plant, the AP600 as we call it,  
9 will be discussed only insofar as the AP600 design  
10 certification program overlaps the SP/90 program.

11 I will also discuss our view on the role of  
12 the EPRI utility requirements document and the impact  
13 of this document on the licensing process, both for  
14 the evolutionary and the passive plant. Also, very  
15 importantly, I will discuss where we believe the staff  
16 should place their emphasis.

17 (Slide) Next slide, please.

18 The return of the nuclear power market in  
19 the United States requires predictability in the  
20 licensing process. The vendor needs certainties that  
21 the plant he designs will be licensable or no utility  
22 will buy it. The design certification process  
23 provides certainty for the vendor by having the NRC  
24 review and approve the plant design prior to  
25 construction.

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1           The utility needs certainty that the plant  
2 will be allowed to operate once construction is  
3 complete. The recently issued standardization rule is  
4 a significant step toward providing the required  
5 predictability by authorizing early site permits,  
6 standard design approvals, and combined construction  
7 operating licensing for essentially complete power  
8 plant design. There is, of course, still the need to  
9 eliminate the opportunity of a hearing prior to  
10 operation that has been and is being debated in this  
11 and other arenas.

12           The NRC needs certainty that the plant, as  
13 constructed, will be safe to operate. The new Part 52  
14 provides this certainty by requiring a set of  
15 inspection, test, analyses and acceptance criteria to  
16 be submitted, reviewed and approved as part of the  
17 certified design and the COL. Performing the tests,  
18 inspections and analyses and meeting the acceptance  
19 criteria provides assurance that the plant, which  
20 incorporates the certified design, has been built and  
21 will operate in accordance with the design  
22 certification and the COL.

23           (Slide) Next slide, please.

24           The Electric Power Research Institute, with  
25 the associated Utility Steering Committee, is

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1 currently developing a comprehensive set of technical  
2 design requirements for advanced light water reactors.  
3 These design requirements are in the form of a  
4 requirements document which defines the technical  
5 basis for improved and standardized future light water  
6 reactor designs. The ALWR requirements are  
7 essentially a consensus of the industry as to which  
8 feature should be sought in the next generation of  
9 nuclear plants.

10 In addition to identify design needs, this  
11 program will provide a stabilized regulatory basis for  
12 future LWRs by resolving outstanding licensing issues,  
13 defining any necessary change to regulatory  
14 requirement and specifying guidelines for design which  
15 provide acceptable severe accident prevention and  
16 mitigation.

17 The requirements document for the  
18 evolutionary plant is near completion and is being  
19 reviewed by the NRC. Completion of the staff review  
20 and issuance of a safety evaluation report will  
21 provide certainty that the needs of the power  
22 generation industry and the regulatory authorities are  
23 compatible.

24 (Slide) Next slide, please.

25 I would like to focus for a few minutes on

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1 where the staff needs to place an emphasis. While the  
2 industry is moving toward certification of several  
3 reactor designs, there are several issues that the  
4 staff needs to complete to actually implement the new  
5 Part 52. The first item clearly in our mind relates  
6 to the inspections, tests, analyses and acceptance  
7 criteria.

8 Determining in advance the acceptance  
9 criteria and related tests, inspections and analysis  
10 has never been required or accomplished before.  
11 Substantial efforts are underway by NUMARC to develop  
12 what will be required.

13 A matching effort will be needed by the NRC  
14 regulatory staff to review the industry proposal so  
15 that agreement can be reached on how to detail the  
16 ITAAC. This matter is critical to the effort to  
17 eliminate a hearing at the post-construction, pre-  
18 operational stage. If the ITAAC cannot properly  
19 detail as part of the design certification or COL  
20 process, an amendment to the COL would be needed and  
21 such an amendment would require an opportunity for  
22 hearing.

23 The next issue is a need to resolve  
24 environmental impact issues. The court decision in a  
25 recent Limerick case means that the NRC must consider

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1 design alternatives in connection with the NRC  
2 consideration of environmental matters under NEPA,  
3 even if these design alternatives do not need to be  
4 considered under the Atomic Energy Act. The intent of  
5 Part 52 was to preclude design considerations after a  
6 design has been certified. In light of the Limerick  
7 case, it will be necessary to consider environmental  
8 impact of the design certification stage in order to  
9 accomplish this intent. However, as presently  
10 written, the NRC does not require this. Thus, as  
11 presently written, the NEPA review at the COL stage  
12 could lead to design changes, even though the plant  
13 has a certified design approval.

14 This matter is currently being discussed by  
15 industry lawyers with the NRC staff lawyers in the  
16 context of the litigation challenge in Part 52 which  
17 has been brought by the environmentalists.

18 The third item is the need to work out  
19 emergency plan revisions. Part 52 complicates  
20 emergency planning. The rule requires either  
21 certification of an emergency plan from a state or an  
22 adequate utility plan, even though the certifications  
23 are not binding on a state and may be rescinded by a  
24 new state administration. The requirement for  
25 certification is an unnecessary new requirement.

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1           Due to the requirement of an emergency plan  
2           exercise prior to operation and the court-imposed  
3           requirement that there must be a hearing on the  
4           exercise, the way is open for a post-construction,  
5           pre-operational hearing on emergency planning, the  
6           very thing that helped bring down Shoreham and  
7           threatens Seabrook. There is language in the court  
8           case that suggests that if the NRC had criteria for  
9           accepting emergency plans and judging their adequacy,  
10          such a hearing may not be needed. Changes are needed  
11          in the NRC regulations on emergency planning, or in  
12          Part 52, to allow for the use of ITAAC in connection  
13          with emergency plans and to eliminate language now  
14          interpreted to require a hearing on the emergency  
15          planning exercise.

16                 In addition to these items, there are a  
17          number of other issues, such as how to consolidate  
18          contentions, how to handle proprietary information,  
19          definition of the former content of the application  
20          and the rule that need to be resolved in the design  
21          certification rulemaking and the NRC should address  
22          these items.

23                 Finally, Part 52 requires the standard  
24          design certification to set forth the interface  
25          requirements to be met by those portions of the plant

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1 for which the application does not seek certification.  
2 Part 52 also requires that an application for a COL  
3 referencing a certified design demonstrate compliance  
4 with such interface requirements. NRC regulatory  
5 guidance is needed on what will be required for the  
6 interface requirement and what will be necessary to  
7 demonstrate that the interface requirement has been  
8 satisfactorily met.

9 (Slide) Next slide.

10 The EPRI utility requirements document for  
11 evolutionary plants is now being reviewed by the  
12 staff. Methods for resolving a number of generic  
13 issues, including severe accidents, can best be  
14 developed through review of the requirements document.  
15 Completing the safety evaluation report on the  
16 evolutionary utility requirements document in the very  
17 near future will smooth the design certification  
18 process by providing a standard approach to resolving  
19 the generic issues facing the industry. Additionally,  
20 the review and safety evaluation report for the  
21 evolutionary requirements document will provide  
22 insight for the development of the passive plant  
23 requirements document.

24 Emphasis should be placed on those plants  
25 that support the major trends in the market so as to

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1 have available certified designs of the type desired  
2 in the market place by the time plants are needed. We  
3 believe the market will require such reviews to be  
4 completed no later than the mid-'90s. It will be  
5 possible to complete these reviews and the  
6 certification of passive plants within that time,  
7 provided that the NRC puts resources in this area.  
8 Since we believe passive plants are what the domestic  
9 market will want, the emphasis should be placed on  
10 review of the passive plants.

11 The work accomplished to date on  
12 evolutionary plant design needs to be captured and  
13 preserved to avoid wasting the effort expended to date  
14 and to provide support for U.S. vendors in the  
15 international market.

16 (Slide) Next slide.

17 From a Westinghouse perspective, we believe  
18 that the design programs for evolutionary plants are  
19 well in hand. The plant models are either in the  
20 preliminary or final design stages. Standard design  
21 approvals, either PDAs or FDAs, have either been  
22 issued or are expected to be issued in the very near  
23 future.

24 Of course, the evolutionary plant design  
25 certification, when needed, will be subject to

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1 resolution of the Part 52 implementation aspects and  
2 of the generic technical issues which we plan to  
3 address through the EPRI utility requirements  
4 document.

5 (Slide) Next slide.

6 The passive plant programs, the AP600, have  
7 been through the conceptual design process and the  
8 final design is on an accelerated schedule. We  
9 consider it essential to address all technical issues  
10 related to the plant design as early as possible in  
11 the design program so that the resolution can be  
12 engineered into the design rather than added on. The  
13 licensing review basis document, to be prepared in  
14 mid-'90, will serve this purpose.

15 We believe that there will be a market for  
16 the passive plant in the United States within the next  
17 ten years, and this view is supported by the recent  
18 Department of Energy awards for design certification  
19 to be completed by the end of 1994.

20 (Slide) Next slide.

21 A timely review of the EPRI evolutionary  
22 plant requirements document and a speedy issuance of  
23 the SER will benefit both the evolutionary and the  
24 passive plant programs through the resolution of  
25 generic issues and common requirements. This will lay

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1 the groundwork for the staff review of the passive  
2 plant requirements document which is expected to begin  
3 in mid-1990. By establishing these methods of  
4 resolution and requirements now, they can be  
5 engineered into plant designs rather than added at a  
6 later date.

7 (Slide) Next slide.

8 Westinghouse has two plants in our  
9 standardization program. The first is a 1300 megawatt  
10 evolutionary design, the RESAR SP/90, that has been  
11 under NRC review since 1983. It was designed and  
12 submitted for review prior to the EPRI utility  
13 requirements document. In fact, many of the items in  
14 the utility requirements were developed from features  
15 in the SP/90. For issues such as severe accident that  
16 have developed since the SP/90 was submitted for  
17 review, Westinghouse intends to meet the EPRI utility  
18 requirements document.

19 The NRC review has progressed to the point  
20 that we believe the preliminary design approval can be  
21 issued to Westinghouse in April of 1990. I will talk  
22 more about the PDA and the SP/90 in a few minutes.

23 (Slide) Next slide.

24 The first module of the SP/90 Reference  
25 Safety Analysis Report was submitted for NRC review in

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1 1983. Since that time, we have submitted the  
2 remaining safety analysis report modules, including  
3 two PRA modules in 1987. We have since responded to a  
4 number of requests for additional information and have  
5 updated the RESAR in response to staff comments. We  
6 have met with the ACRS subcommittee five times and we  
7 will meet with them again the day after tomorrow to  
8 discuss open issues. We have made one presentation to  
9 the full ACRS and in December 1987 we briefed you on  
10 the design features of the SP/90. The NRC has issued  
11 three draft safety evaluation reports.

12 We believe that with few exceptions all  
13 technical issues related to the SP/90 design have been  
14 resolved and that we are in a position to receive the  
15 PDA for the SP/90 in April of 1990 using the process  
16 that I will describe later.

17 (Slide) Next slide.

18 The second plant in the Westinghouse  
19 standardization program is a 600 megawatt passive  
20 design, the AP600, that is being co-funded by the  
21 Department of Energy. The conceptual design for this  
22 plant is complete and the final design effort will  
23 commence on January 1, 1990. The final design of this  
24 plant will be developed in concert with the EPRI  
25 utility requirements for passive plants.

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1 (Slide) Next slide.

2 This schedule reflects the overlap of the  
3 remaining SP/90 PDA effort with the program we have  
4 committed to as part of our AP600 DOE contract.

5 The first AP600 submittal the NRC will  
6 receive from us will be the licensing review basis  
7 document in mid-1990. We expect the LRB to be  
8 approved by October 1990. It is imperative that the  
9 LRB be approved early in the program to establish the  
10 basis of subsequent design and safety analysis  
11 efforts.

12 The Standard Safety Analysis Report, ITAAC  
13 and PRA reports will be submitted in mid-1992.

14 We feel that the successful conclusion of  
15 the SP/90 review early in 1990 will make available  
16 necessary staff resources for the work to be  
17 accomplished on the AP600. The AP500 final design  
18 approval is targeted for the end of 1993 and the  
19 design certification for the end of 1994.

20 (Slide) Next slide.

21 The SP/90 intermediate design is complete.  
22 The SP/90 was developed as a part of a contract that  
23 included over \$150 million in development costs shared  
24 by five Japanese utilities, the Japanese government,  
25 the MITI organization, Mitsubishi Heavy Industries and

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1 Westinghouse. The design work for a total plant,  
2 including verification testing of major components,  
3 was completed as of March 1987. Since the SP/90  
4 design was considered when the EPRI evolutionary plant  
5 requirements document was developed, the SP/90 meets  
6 most of the requirements, such as the items listed on  
7 the overhead. Specifically, increased margins,  
8 dedicated safety systems, use of PRA and reduced  
9 dependence on operator actions.

10 The SP/90 is an evolutionary plant that  
11 builds directly on present day plant design, with  
12 enhancements in safety, improvements in plant  
13 performance and reduced generating costs. No  
14 additional development efforts are required. We  
15 believe that the primary market for large evolutionary  
16 plants like the SP/90 will be in the international  
17 arena.

18 (Slide) Next slide.

19 We have received three draft safety  
20 evaluation reports on the SP/90. We expect the draft  
21 SER on the PRA next month. We have responded to  
22 requests for additional information on the PRA and  
23 have met with the staff and their contractor to  
24 discuss the PRA results.

25 It is anticipated that no additional major

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1 items will be identified in the PRA draft SER beyond  
2 the severe accident issues already known. The only  
3 remaining draft SER is our approach to the unresolved  
4 safety issues and generic safety issues. At this  
5 time, we expect to receive that report early in 1990.

6 (Slide) Next slide.

7 There have been a total of 107 open issues  
8 in the three draft SERs that we have received to date.  
9 Of these, we consider that we have closed 87 by either  
10 revising the safety analysis report or providing  
11 additional clarifying information. That leaves 20  
12 issues remaining. These can be categorized as  
13 requiring additional effort to resolve, use of new  
14 methodologies not yet reviewed by the staff and issues  
15 where the NRC review is not complete. A selected few  
16 of the severe accident issues that have not been  
17 resolved fall into this group.

18 This is a sufficiently small number of open  
19 issues to give us confidence that we will be able to  
20 resolve them without serious disruption. Based on  
21 what we know, we do not expect a large number of  
22 additional open issues from either the backend PRA or  
23 USI/GSI draft SERs.

24 (Slide) Next slide.

25 We were asked by the staff to provide our

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1 perspective of a preliminary design approval. Given  
2 the changes that have occurred in standard plant  
3 licensing since we originally applied for the SP/90  
4 PDA in 1983, the staff questions what value it would  
5 have. After some careful thought, we came up with  
6 four items that we believe a PDA addresses.

7 First, it documents the review that has been  
8 completed and is specific about what needs to be  
9 completed to receive the final design approval. In  
10 the case of the SP/90, considerable effort has been  
11 expended in getting this far. Westinghouse has spent  
12 over 400 man months. Without formalizing what has  
13 been done so far, we will have to spend considerable  
14 duplicate time and effort for the FDA.

15 The PDA also provides us with a preliminary  
16 evaluation by the staff of the SP/90 safety analysis  
17 and design features.

18 (Slide) Next slide.

19 In the severe accident area, the EPRI  
20 utility requirements document is still being reviewed by  
21 the staff. We believe that the best approach is for  
22 us to wait until the EPRI utility requirements  
23 document SER is issued and take advantage of the  
24 effort and insight that is provided for the SP/90.

25 (Slide) Next slide.

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1           We also see four benefits to issuing the  
2 PDA. As mentioned previously, two of the benefits are  
3 the preservation of the effort we have both expended  
4 in the SP/90 review and the formalization of those  
5 items which have been agreed on.

6           Additional benefits are: the PDA supports  
7 the present market for large evolutionary plants in  
8 the international arena. Evidence of licensibility of  
9 design in the country of origin is essential in the  
10 international market. We plan to reference the PDA  
11 and seek country-specific solutions to the open issues  
12 for opportunities offshore.

13           Finally, the successful completion of the  
14 SP/90 PDA will make available additional resources,  
15 both on the part of the staff as well as Westinghouse,  
16 to work on the procedures and processes necessary to  
17 implement Part 52 and to proceed with the design and  
18 certification effort for the smaller passive designs.

19           (Slide) Next slide.

20           We believe it is practical to have the SP/90  
21 PDA issued by April 1990. The necessary ACRS reviews  
22 can be completed by that time. We believe that no  
23 more than two subcommittee meetings should be required  
24 and one of those is scheduled for the day after  
25 tomorrow. One full committee meeting should be able

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1 to be held by March. We are meeting with the staff  
2 tomorrow to discuss our approach to the open items and  
3 completing the RESAR review.

4 The few severe accident issues that are  
5 still not resolved, in particular the need for  
6 containment venting, would be deferred until the FDA  
7 application. By that time, the EPRI utility  
8 requirements document SER will be issued and we can  
9 take advantage of the effort expended in developing  
10 industry-wide standard approaches to the severe  
11 accident issues.

12 In the draft SER, the open issues which  
13 cannot be resolved on a timely basis should also be  
14 addressed at the FDA stage. There is no benefit that  
15 we can see to closing each of these issues at the PDA  
16 stage.

17 (Slide) Next slide.

18 In the longer term, we would like to be able  
19 to incorporate the benefit of the EPRI utility  
20 requirements document in the FDA application. The  
21 SP/90 was submitted for review prior to the EPRI  
22 documents being developed. While many of the SP/90  
23 features have been incorporated into the document,  
24 there may be features in the final document that  
25 receives the SER that are worthwhile going back to

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1 incorporate in the final SP/90 design.

2 We will submit the SP/90 for a final design  
3 approval when we believe the market conditions are  
4 appropriate.

5 (Slide) Next slide.

6 In summary, the standardization of nuclear  
7 plant design is necessary for the return of the  
8 nuclear options in the United States. The new 10 CFR  
9 Part 52 has features required to put standardization  
10 into practice, although certain changes are needed.  
11 In addition, significant effort is required to  
12 implement Part 52. We believe that developing the  
13 implementation processes should be given a top  
14 priority by the staff.

15 (Slide) Next slide.

16 Westinghouse has standard design programs  
17 that are responsive to what we see that market needing  
18 over the next decade. The SP/90 meets the need for  
19 large plants, which we see as being offshore. We  
20 believe that the SP/90 PDA review should be wrapped up  
21 by April 1990. For the domestic market, the AP600  
22 provides a plant responsive to utility needs, targeted  
23 for certification by 1994.

24 We fully support the ongoing development of  
25 the EPRI ALWR utility requirements document as it

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1 impacts both the evolutionary and passive plant  
2 designs.

3 We believe that the EPRI utility  
4 requirements document is the appropriate vehicle to  
5 develop resolution between the utilities, designers  
6 and regulators of generic issues, such as severe  
7 accidents, facing the industry today. As such, we  
8 urge the staff to place an emphasis on completing the  
9 SER on the evolutionary plant document and to review  
10 the passive plant document in a timely manner.

11 I appreciate this opportunity to provide the  
12 Westinghouse viewpoint on advanced plant directions  
13 and would be pleased to respond to any questions you  
14 may have.

15 COMMISSIONER ROBERTS: Ken?

16 COMMISSIONER ROGERS: Are you in a position  
17 to provide any data on core damage frequency and  
18 conditional containment failure probabilities on the  
19 SP/90?

20 MR. CASO: The analysis that was done did  
21 result in evaluation of the core frequency and  
22 releases from the SP/90 which are in excess or smaller  
23 than the requirements specified by the EPRI document  
24 by about an order of magnitude. We have not completed  
25 the evaluation of external event, waiting for the

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1 evaluation that is being done generic by the NRC. I  
2 think Bill Johnson can expand on the specifics.

3 MR. JOHNSON: Right. The analyses that has  
4 been presented in the RESAR SP/90 application  
5 determine a core damage frequency of approximately  
6  $1.3 \times 10^{-6}$  and the probability of severe release,  
7 frequency of severe, significant release of  $3 \times 10^{-7}$ .

8 Those are substantial improvements relative  
9 to those that are typical for current plants and  
10 resulted from a number of the improved design features  
11 that had been evolved in the development of the SP/90  
12 from its inception in 1983, primarily coming from  
13 reduction in reliance on operator actions, reduced  
14 core linear power heating, the placement of the core  
15 lower in the overall system to reduce the effect of  
16 LOCAs, core uncovering, improved reliabilities of  
17 emergency feedwater systems and approved reliabilities  
18 in additional systems for air to coolant pump support  
19 systems.

20 COMMISSIONER ROGERS: Now, those evaluations  
21 were done only for internal events though, I take it?

22 MR. JOHNSON: That's correct. They were  
23 done --

24 COMMISSIONER ROGERS: While awaiting the--

25 MR. JOHNSON: That's right.

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1           COMMISSIONER ROGERS: Did you do a  
2 conditional containment failure probability?

3           MR. JOHNSON: We did not particularly do a  
4 conditional containment failure probability. We have  
5 taken an approach to primarily work toward the safety  
6 goal philosophies in terms of core damage frequency  
7 and frequency of severe release. We have prioritized  
8 our work on absolute probability, if you will.

9           Similar to what you heard somewhat earlier,  
10 in terms of conditional containment failure  
11 probabilities, they, by nature, have to exclude some  
12 sequences of particularly low probability and  
13 therefore we have primarily adopted an approach  
14 targeted towards the safety goal type criteria.

15           COMMISSIONER ROGERS: Can you say something  
16 about the reduced operator actions requirement of the  
17 SF/90 design problem?

18           MR. JOHNSON: Yes. One of the keys, for  
19 example, in that regard is the elimination of switch  
20 over during a large break loss of coolant from  
21 injection to recirculation by virtue of the inside  
22 containment storage tank which eliminates one of the  
23 areas which PRA had shown as being one of the higher  
24 demands on operator action requirements, one of the  
25 key areas.

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1           COMMISSIONER ROGERS: To what extent is this  
2 a totally manually operated reactor? To what extent  
3 do you rely on automatic controls?

4           MR. JOHNSON: For the most part, the reactor  
5 is manually operated. The control systems, however,  
6 as most of the advanced control systems, has an  
7 integrated protection system and is microprocessor  
8 based, and does involve a substantial amount of  
9 control features which reduce the burden on the  
10 operator. But from a fundamental standpoint, it is a  
11 manually driven machine.

12           COMMISSIONER ROGERS: Coming back to the  
13 EPRI design requirements document, do I understand  
14 correctly that your design will -- that you view your  
15 completion of your design submissions to follow the  
16 EPRI design requirements document?

17           MR. CASO: In large amount, yes. I think it  
18 does follow significantly the --

19           COMMISSIONER ROGERS: I mean sequentially  
20 follow.

21           MR. CASO: No. We -- sequentially in time?

22           COMMISSIONER ROGERS: Yes.

23           MR. CASO: No. This model was developed  
24 before the EPRI requirements document was generated.

25           COMMISSIONER ROGERS: I understand that, but

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1 then you are prepared to respond to that though, I  
2 take it.

3 MR. CASO: Yes. We definitely will have to  
4 look at the design that we have, vis-a-vis the EPRI  
5 design document. So far, we identify no major  
6 discrepancies between the requirements document and  
7 the plant as we have it. Definitely, we have not  
8 identified issues in terms of the safety criteria.  
9 There may be some operating parameters that may end up  
10 to be slightly different from the recommended EPRI  
11 requirements, but no problems. And, of course, as we  
12 indicated, we still have to factor in the severe  
13 accident considerations.

14 COMMISSIONER ROGERS: Yes. What is your  
15 strategy with respect to deferring severe accident and  
16 open SER issues to the final design approval? How are  
17 you dealing with that? Isn't that postponing  
18 something a little bit late?

19 MR. CASO: Well, at this point in time, we  
20 have completed the design of the plant and there is no  
21 specific need being identified from any utility to  
22 build such a plant. We plan to proceed and to  
23 complete a design and the application for the FDA for  
24 the final design approval at the time when an interest  
25 is going to be expressed. The nearest opportunity for

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1 application of this plant is for a plant in Japan  
2 which yield to site difficulties and so on, is not  
3 something that has matured as fast as we would have  
4 expected.

5 So at this point in time, we believe that we  
6 will benefit by having the generic discussion of the  
7 severe accident through the EPRI requirements document  
8 and then backfit and evaluate the changes which we may  
9 introduce.

10 COMMISSIONER ROGERS: Thank you.

11 COMMISSIONER ROBERTS: Jim?

12 COMMISSIONER CURTISS: I have a number of  
13 things I want to cover. I'll begin with what I think  
14 your message is, if I could distill it.

15 What you're looking on the SP/90 for us to  
16 do is to issue the PDA by April of '90, and to  
17 complete the work on the evolutionary requirements  
18 document that EPRI has underway to approve that.

19 At the same time, I take it from what you've  
20 said that you view the market for the SP/90 or any  
21 reactor of that class to be almost exclusively  
22 foreign. In fact, of the three presenters today, I  
23 guess you've made the strongest statement, that you  
24 see the market for those reactors existing not in the  
25 United States but in foreign countries. And in turn,

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1 you said that the question of priorities and our focus  
2 on the requirements document in the passive area ought  
3 to be driven by what I think you said were the  
4 domestic expressions of interest that we see emerge.

5 I guess the question that I have is, in view  
6 of those various statements, what's the rationale for  
7 asking the Agency to do anything on the SP/90,  
8 including issuance of the PDA, and to go forward with  
9 completion of the EPRI requirements document from your  
10 perspective -- I realize there are others that have an  
11 interest in that -- but to complete the evolutionary  
12 requirements document, if in fact we take as a given  
13 your statement that the interest is almost exclusively  
14 international in that arena?

15 MR. CASO: Okay. As I indicated, the work  
16 for the SP/90 is for all practical purposes completed.  
17 We have been working on this since 1983. "We" means  
18 Westinghouse and the NRC and the staff have been  
19 working since 1983. And being only a few months away  
20 from the completion, I feel that it is appropriate to  
21 put a ribbon around all the effort that has been done  
22 and not waste all the effort that has been spent in  
23 the last several years.

24 So we are not requesting to dedicate a very  
25 high level of effort, but we believe that we can

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1 complete this under the assumption that I described  
2 previously and which will be discussed with the staff  
3 in the next few days. We can complete this effort  
4 reasonably quickly and get to the situation where we  
5 have at least closed in the proper binder and the  
6 proper situation the effort that has been expended to  
7 date.

8 As I indicated, while there are countries  
9 internationally that do not specifically require a  
10 stamp of approval from the regulatory entities in the  
11 United States, there are definitely other countries  
12 that do not intend to develop their own specific  
13 processes and criteria and they rely heavily on the  
14 United States' approval. And therefore, to have a  
15 design approval will benefit in that process. Given  
16 the fact that we are such a short distance away from  
17 that process, I think it makes sense to do it.

18 The other thing is that a lot of work has  
19 been done to complete several discussions and items.  
20 And if we don't, if we're not to complete this effort,  
21 this will potentially come up again in the future  
22 discussion. So I think it is of benefit for us to  
23 complete this.

24 Relative to the requirements document for  
25 evolutionary plant presented by EPRI, as you are well

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1 aware the evolutionary requirements document has been  
2 for all practical purposes submitted for review,  
3 except for one volume, the MMI, while the submission  
4 of the documents for the passive plant has not  
5 happened yet.

6 Second thing, it is our understanding that a  
7 significant portion of the evolutionary requirements  
8 document is going to be utilized for the passive  
9 document. All the major principle introduction and  
10 several of the chapters that are not directly affected  
11 by the different safety concepts will be the same.

12 Therefore, for these reasons, we believe  
13 that there is a significant advantage to proceed right  
14 away on an expeditious basis in order not to waste any  
15 time to reach the completion of the LWR.

16 The basic point behind the summary that you  
17 presented summarizing our presentation, the basic  
18 point is that I strongly feel that the success that we  
19 have had in nuclear area in other countries versus  
20 some of the problems that we've experienced in this  
21 country is because other countries had more homogenous  
22 approach because of their institutional arrangements  
23 which allowed them to have a much more standardized  
24 process.

25 I believe strongly that in order to have a

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1 successful return of nuclear power, we must move in  
2 the direction of having a standardized process. I do  
3 not see how we can have a standardized process if we  
4 build only one or two plants because we will go back  
5 exactly where we were before, where we have a  
6 combination and permutation of four vendors and 18 AEs  
7 and so many utilities.

8 I think we have to arrive to the point where  
9 we use a plan to design a set of requirements and  
10 documents that are going to be used for many plants,  
11 to the point many being definitely more than three or  
12 four -- hopefully we're going to make many more than  
13 that -- that will allow really to use the concept of a  
14 standard design. It is for these reasons that I  
15 really believe we have to work on the passive reactor  
16 and it's for this reason that I really strongly feel  
17 we should accelerate the effort to reach that goal.

18 The completion of the SP/90 and the  
19 evaluation of the evolutionary model is a step that  
20 allows us to make quick progresses in the direction of  
21 evaluating the passive requirements document.

22 COMMISSIONER CURTISS: Well, as I say,  
23 you've taken a much stronger stand than the other two  
24 vendors that made presentations today that the market  
25 in the States will be for the passive generation of

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1 plants, the smaller, more modular plants that you and  
2 others are working on and not the evolutionary class  
3 of plants. I guess I'm just curious in view of the  
4 difference between your position and the others.  
5 Could you expand upon what's led you to that  
6 conclusion in a much stronger way than the others have  
7 set forth?

8 MR. CASO: Yes. Well, I hope because my  
9 crystal ball is shinier than the other ones. But  
10 independently of this capability to predict the  
11 future, I think it's essentially the need for  
12 standardization, Commissioner. I really believe that  
13 if we have to get the benefit of standardization, we  
14 have to use a model of plant design that is going to  
15 be utilized by several utilities, by many utilities.

16 I have difficulties to see the evolutionary  
17 plant as being able to provide the same benefits in  
18 terms of general acceptability by the different  
19 utilities and standardization that the passive plant  
20 will have.

21 So, if you look at some utilities, they may  
22 decide that they did not need standardization, they  
23 have enough standardization within themselves to be  
24 able to take a design and internalize it and use the  
25 processes for maintenance of operation, for training

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1 and whatever is needed for operating the plant and  
2 achieve benefits within their own operation even  
3 though the designs are different.

4 But if you want to integrate and reach a  
5 standardization that is a broader application, I think  
6 you have to get to the point where you have a model  
7 that has acceptance not only by a few utilities but  
8 many utilities. And in this context, I think the  
9 passive reactor offers characteristics that are more  
10 generally acceptable.

11 COMMISSIONER CURTISS: Is that an  
12 attractiveness that is a function of the size of the  
13 reactor, in your judgment, or the prefabricated aspect  
14 or the modular aspect of these plants or their passive  
15 features or a combination of those?

16 MR. CASO: Well, I would take almost all the  
17 items you said without the pass -- in my mind, the  
18 passive intervenes because of the need to simplify the  
19 plant once you reduce the size. There is nothing that  
20 says that you cannot reach the same level of core melt  
21 frequency without using a passive, using active  
22 systems. We are designing a sizeable plant in the  
23 U.K. which has a similar level of core melt  
24 frequencies and releases, but it has been achieved  
25 with active components. So, you can reach the same

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1 level without the components. So, the passive element  
2 comes in as the need for simplification.

3 I believe the items that lead to this  
4 conclusion are more the other items you mentioned.  
5 Given the fact that the return of nuclear power would  
6 probably entail a different relationship between the  
7 entities involved in the construction of the plant,  
8 between the vendor, the AE, the utilities, the  
9 bankers, the public utility commissions and so on, given  
10 the fact that the relation is going to be different, I  
11 think we must be in a situation where we can  
12 demonstrate the capability of the plant to operate  
13 properly, to be operated on an economic manner which  
14 means not only constructed at low price, low cost, in  
15 which case intervene with modularization and the cost  
16 certain and schedule certain. But also that it has a  
17 low value for operating and maintenance, which  
18 involves simplification. So, all these items tend to  
19 be tied together.

20 Now, when you look at the capabilities some  
21 smaller utilities may have or the capability to  
22 collect money on the street, at Wall Street, you see  
23 that the responsibility relative to the risk for the  
24 construction, for the operation, for the efficiency is  
25 going to be distributed on a different basis.

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1 I believe the return on nuclear power is  
2 going to require the vendors to take a different and  
3 higher level of responsibility. I don't think we--  
4 it is not going to be sufficient to do what was done  
5 in the '70s, where the vendors supplied the plant and  
6 basically relinquished their responsibility. The risk  
7 would be much more closely allocated to those that can  
8 control the risk. And to the extent that the supplier  
9 can control the schedule and the cost, we will have to  
10 be probably called to support that.

11 To the extent that the availability is going  
12 to be a condition in order to be able to collect money  
13 from Wall Street, then somebody will have to be  
14 responsible. The user will be required to guarantee  
15 some kind of reliability.

16 Now, all of this requires a greater level of  
17 standardization and a greater level of knowledge and  
18 capability to control.

19 COMMISSIONER CURTISS: Let me shift to one  
20 final topic. You've had a greater list of suggestions  
21 than the other two vendors had about the Part 52  
22 process. I asked each of them if they had any  
23 suggestions or thoughts about the Part 52 procedures  
24 now that they're on the books and they've had an  
25 opportunity to take a look at them. Early on in your

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1 presentation you gave us a list of areas where either  
2 the industry or the Commission or the both of us need  
3 to devote some additional attention.

4 There are two on that list that I guess I'd  
5 like to ask you about, the inspections, tests and  
6 analyses and the acceptance criteria. You mentioned  
7 that NUMARC is working on that issue. Do you see the  
8 challenge there as one that rests primarily with the  
9 industry in determining how to come up with the  
10 inspections, tests and analyses that the rule requires  
11 or is it a question of some need for clarification in  
12 more detail than the rule sets forth as to exactly  
13 what level of inspections, tests and analyses we will  
14 require?

15 MR. CASO: It cannot be the industry by  
16 itself. That's clear. There is no way the industry  
17 by itself can resolve the problem. There is going to  
18 be a need to reach a consensus between the NRC and the  
19 industry on what is really needed. There is no --

20 COMMISSIONER CURTISS: I guess I thought the  
21 rule was clear on that point.

22 MR. CASO: Yes.

23 COMMISSIONER CURTISS: I don't have Part 52  
24 with me, but I gather it said something to the effect  
25 that we'd like to see, up front, all the inspections,

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1 tests and analyses necessary together with the  
2 design --

3 MR. CASO: That's right.

4 COMMISSIONER CURTISS: -- necessary to  
5 demonstrate the acceptability of the plant. Is there  
6 something that's unclear about that?

7 MR. CASO: No, no. It is not a matter of  
8 the rule.

9 COMMISSIONER CURTISS: Okay.

10 MR. CASO: I apologize. But I was just  
11 going to specifically say that we don't see the need  
12 to change the rule, we see the need to have a  
13 significant amount of work to define what is going to  
14 be included in this inspection, test and acceptance  
15 criteria. We don't see those issues, those criteria  
16 to be limited to the design process by itself. For  
17 example, one of the issues that could be included is  
18 the emergency plan. What are the criteria that one  
19 would have to satisfy in order for the emergency plan  
20 to be approved once the plant is built? So, we have  
21 to define all this. The only reason to raise it is  
22 not to say, "Change the rule." The reason to raise it  
23 is there is a significant amount of work that needs to  
24 be done and we'd better get on with it --

25 COMMISSIONER CURTISS: Okay.

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1 MR. CASO: -- if we want to achieve the  
2 result by 1994.

3 There is another item where I said that I  
4 think there is a need for -- maybe there's going to be  
5 a need for a change in the rule and that is related to  
6 the second hearing where we have to define what  
7 exactly the second hearing is, whether that is going  
8 to be achieved with or without the change in the rule.

9 COMMISSIONER CURTISS: Actually, the second  
10 area that I was interested in had to do with the  
11 emergency plan provisions. In your presentation you  
12 suggested that we take a look at the feasibility of  
13 applying the inspections, tests and analyses approach  
14 to emergency planning. So, I gather from what you say  
15 that the acceptability of the emergency plan could not  
16 only be presented on paper, but demonstrated in some  
17 way through a set of inspections, tests and analyses  
18 up front and litigated at the COL stage.

19 I guess the question that I have is isn't  
20 that what, in effect, an exercise is today? It is a  
21 test of sorts of the emergency plan. I'm curious to  
22 know if you have any thoughts at this point that go  
23 beyond what kind of inspection, tests and analysis  
24 that we do today.

25 MR. WIESEMANN: I think the problem is that

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1 there is no standard at the present time. The court  
2 was unable to find a standard for accepting an  
3 emergency plan. Basically, I think the staff or the  
4 Commission took the position that the purpose of the  
5 test was to determine whether the plan was acceptable  
6 or not. So, it was sort of, "You do it, we'll look at  
7 it and we'll tell you what needs to be fixed."

8 The approach that the court left the door  
9 open for us was that, "If you could come up in advance  
10 with what are the requirements for an acceptable  
11 emergency plan." We think that there have been enough  
12 of them prepared it should be possible to identify  
13 what are the elements of a successful emergency plan.  
14 Once you've identified those elements, to identify  
15 what it is that needs to be done to demonstrate that  
16 each of those elements are in place, and what are the  
17 acceptance criteria by which you're going to judge  
18 whether or not they are adequate or not, and once  
19 that's done, then what the -- you still may want to do  
20 the exercise because you don't want people to enter  
21 into this program for the first time when it's really  
22 needed. But the plan then serves a different purpose.  
23 Instead of being there to determine whether the plan  
24 is acceptable or not, it's there to determine whether  
25 or not the people are -- to demonstrate that the

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1 people are knowledgeable about the plan and can  
2 perform the functions --

3 COMMISSIONER CURTISS: What you essentially  
4 have to do is come up with a test that permits some  
5 sort of objective evaluation.

6 MR. WIESEMANN: Right.

7 COMMISSIONER CURTISS: If you come up with  
8 an exercise that requires some kind of subjective  
9 evaluation, I gather the court was saying that's not  
10 the kind of inspection, test and analyses that we  
11 normally think of when you go out and run your diesels  
12 for 100 hours or do the kinds of inspections, tests  
13 and analyses that we typically thought of.

14 I don't want to pursue it here any further,  
15 but I'd be interested, I guess, at some point, to hear  
16 the thoughts of anybody on the subject of whether it's  
17 possible to come up with the kind of inspections,  
18 tests and analyses in the emergency planning context  
19 that do lend themselves to objective verification.

20 That's all I have, Tom.

21 COMMISSIONER ROBERTS: Well, we thank you  
22 for coming and thank you for a very interesting  
23 presentation. We'll adjourn.

24 (Whereupon, at 3:25 p.m., the above-entitled  
25 matter was adjourned.)

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PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: NOVEMBER 1, 1989

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11/1/89

SCHEDULING NOTES

**Title:** Briefing by Westinghouse on Advanced PWR Program

**Scheduled:** 2:30 p.m., Wednesday, November 1, 1989 (OPEN)

**Duration:** Approx 1 hr

**Participants:** Westinghouse 60 mins

- Carlo Caso, General Manager  
Nuclear and Advanced  
Technology Divisions
- Industry Perspective
- Westinghouse Perspective
- SP/90 Status
- Brian McIntyre, Manager  
Advanced Plant Safety and Licensing
- Bill Johnson, Manager  
Nuclear Safety Department



**WESTINGHOUSE ELECTRIC CORPORATION**

**A PRESENTATION TO THE**

**NUCLEAR REGULATORY COMMISSION**

**ON THE**

**WESTINGHOUSE ELECTRIC CORPORATION**

**ADVANCED PWR PROGRAMS**

**ROCKVILLE, MD**  
**NOVEMBER 1, 1989**

WESTINGHOUSE ELECTRIC CORPORATION  
NUCLEAR REGULATORY COMMISSION BRIEFING

ADVANCED PWR PROGRAMS

NOVEMBER 1, 1989

CARLO CASO, GENERAL MANAGER,  
NUCLEAR AND ADVANCED TECHNOLOGY DIVISION

- I. INTRODUCTION
  - A. INDUSTRY PERSPECTIVE
  - B. WESTINGHOUSE PERSPECTIVE
  - C. WESTINGHOUSE PLANT PROGRAM SUMMARY
  
- II. SP/90 STATUS
  - A. DESIGN
  - B. NRC REVIEW
  - C. DIRECTIONS
  
- III. SUMMARY

**A PRESENTATION TO THE  
NUCLEAR REGULATORY COMMISSION  
ON THE**

**WESTINGHOUSE ELECTRIC CORPORATION  
ADVANCED PWR PROGRAMS**

**ROCKVILLE, MARYLAND  
NOVEMBER 1, 1989**

## LICENSING CERTAINTY

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- o **REQUIRED BY DOMESTIC NUCLEAR MARKET**
  
- o **DESIGN CERTIFICATION**
  - **LICENSABILITY OF DESIGN**
  
- o **STANDARDIZATION RULEMAKING**
  - **IMPLEMENTATION OF DESIGN - ITAAC**
  - **LICENSABLE AFTER CONSTRUCTION**



**LICENSING CERTAINTY (CONT')**



- 
- o EPRI UTILITY REQUIREMENTS**
    - UTILITY CONSENSUS OF DESIGN NEEDS**
    - RESOLUTION OF GENERIC ISSUES**

## EMPHASIS NEEDED

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- o STAFF IMPLEMENTATION OF PART 52**
  - ITAAC**
  - ENVIRONMENTAL IMPACT ISSUES**
  - EMERGENCY PLAN PROVISIONS**
  - CERTIFICATION RULEMAKING PROCEDURES**
  - PROPRIETARY INFORMATION**
  - FORMAT & CONTENT OF D.C. APPLICATION**
  - FORMAT & CONTENT OF D.C. RULE**
  - INTERFACE WITH NON-CERTIFIED DESIGN ASPECTS**

**EMPHASIS NEEDED (CONT')**



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**0 REGULATORY REVIEWS FOR STANDARD  
PLANT DESIGNS**

**0 EPRI/UTILITY REQUIREMENTS DOCUMENT  
FOR GENERIC ISSUES**

## WESTINGHOUSE PERSPECTIVE

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- o **EVOLUTIONARY PLANT PROGRAMS**
  - **MODELS DEFINED**
  - **DESIGN APPROVALS NEAR COMPLETION**
  - **DESIGN CERTIFICATION UPON COMPLETION OF:**
    1. **PROCEDURES FOR IMPLEMENTATION**
    2. **RESOLUTION OF TECHNICAL ISSUES (EPRI REQ DOC)**

## **WESTINGHOUSE PERSPECTIVE (CONT')**

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- o PASSIVE PLANT PROGRAMS**
  - CONCEPTS DEFINED**
  - CERTIFICATION PROCESS INITIATED**
  - APPLICATION OF EVOLUTIONARY REQUIREMENTS**
  - EARLY ISSUE RESOLUTION**
  - MARKET READY WITHIN NEXT DECADE**

**WESTINGHOUSE PERSPECTIVE (CONT')**



- 
- 0 EPRI ALWR REQUIREMENTS PROGRAM**
    - RESOLUTION OF GENERIC ISSUES**
    - COMMON REQUIREMENTS**

**WESTINGHOUSE STANDARDIZATION PROGRAMS**

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**SP/90**

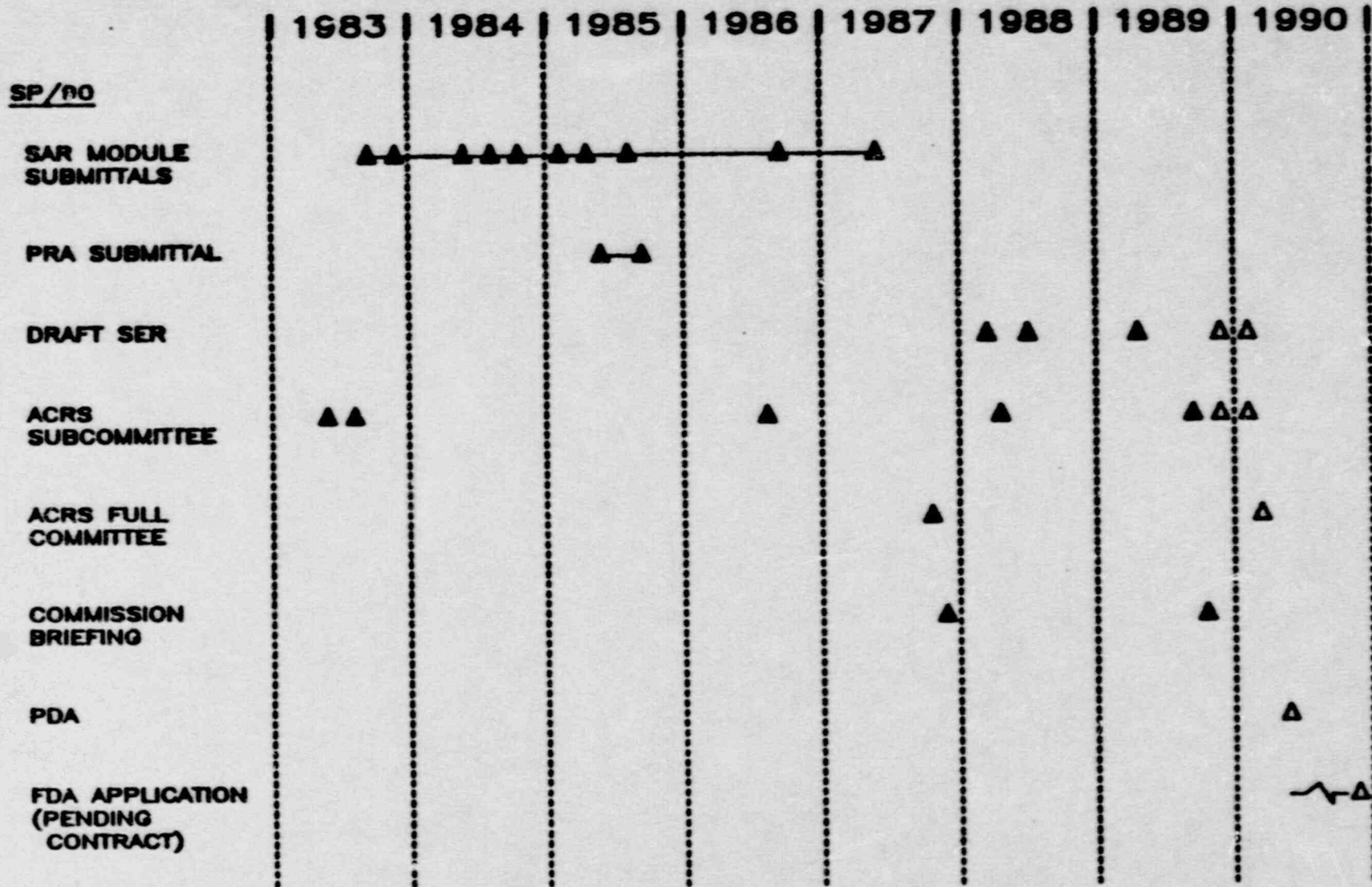
**o EVOLUTIONARY ALWR**

**o 1300 MWE**

**o RESPONSIVE TO EPRI/UTILITY  
REQUIREMENTS**

**o NRC REVIEW FOR PDA NEAR  
COMPLETION**

# WESTINGHOUSE SP/90 PROGRAM SUMMARY





## WESTINGHOUSE STANDARDIZATION PROGRAMS

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### AP600

- o PASSIVE ALWR
- o 600 MWE
- o BEING DEVELOPED IN CONCERT WITH EPRI/UTILITY REQUIREMENTS
- o DETAILED DESIGN/DESIGN CERTIFICATION PROCESS INITIATED



## **SP/90 INTERMEDIATE DESIGN IS COMPLETE**

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- o INTERNATIONAL PARTICIPATION**
- o HIGHER RATED OUTPUT**
- o PRA BASED DESIGN**
- o CONVENTIONAL SAFETY SYSTEM CONCEPTS**
- o DEDICATED SAFETY SYSTEMS**
- o INCREASED MARGIN**

**SP/90 INTERMEDIATE DESIGN IS COMPLETE**

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- o STATE-OF-THE-ART DIGITAL CONTROL AND PROTECTION SYSTEMS**
- o REDUCED OPERATOR ACTIONS**
- o NO FURTHER TESTING OR DEVELOPMENT**
- o AVAILABLE IN VERY NEAR FUTURE**
- o INTERNATIONAL MARKET FOR ADVANCEMENT OF PROVEN LWR DESIGN**

## SP/90 REVIEW STATUS

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<b>PRA FRONT END</b>	<b>DRAFT SER 3/21/88</b>
<b>AUXILIARY REVIEW</b>	<b>DRAFT SER 6/10/88</b>
<b>SYSTEMS REVIEW</b>	<b>DRAFT SER 3/9/89</b>
<b>PRA BACK END</b>	<b>DRAFT SER EXPECTED 11/89</b>
<b>USI/GSI RESOLUTIONS, &amp; REG CONFORMANCE</b>	<b>DRAFT SER EXPECTED EARLY 1990</b>

**RESOLUTION OF DRAFT SER OPEN ISSUES**

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<b>CLARIFICATION PROVIDED BY W</b>	<b>59</b>
<b>RESAR REVISED</b>	<b><u>28</u></b>
<b>ISSUES CONSIDERED CLOSED</b>	<b>87</b>
<b>NRC REVIEW NOT COMPLETE</b>	<b>12</b>
<b>NEW METHODS NOT REVIEWED BY NRC</b>	<b>3</b>
<b>REQUIRE ADDITIONAL EFFORT</b>	<b><u>5</u></b>
<b>ISSUES REMAINING</b>	<b><u>20</u></b>
<b>TOTAL DRAFT SER ISSUES RECEIVED</b>	<b>107</b>

**WESTINGHOUSE PERSPECTIVE  
OF PDA FOR RESAR SP/90**

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- o **DOCUMENTS THE REVIEW THAT HAS BEEN COMPLETED WITH A CLEAR INDICATION OF WHAT ACTIONS NEED TO BE COMPLETED FOR FDA/DC**
  
- o **"PRELIMINARY" NRC STAFF SAFETY EVALUATION OF DESIGN FEATURES**

**WESTINGHOUSE PERSPECTIVE  
OF PDA FOR RESAR SP/90 (CONT')**

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- o "PRELIMINARY" NRC STAFF SAFETY  
EVALUATION OF SAFETY ANALYSES**
  
- o PROVIDES FOR RESOLUTION OF "SEVERE  
ACCIDENT ISSUES" AFTER EPRI UTILITY  
REQUIREMENTS DOCUMENT SAFETY  
EVALUATION**



## **BENEFITS OF SP/90 PDA COMPLETION**

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- o PRESERVES EXPENDITURE OF EFFORT INVESTED**
- o FORMALIZES AGREEMENTS REACHED TO DATE**
- o SUPPORTS MARKET FOR LARGE PLANTS, OFFSHORE**
- o ALLOWS STAFF TO FOCUS ON PART 52 IMPLEMENTATION**



**SP/90 PROGRAM**

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- 0 NEAR TERM OBJECTIVE**
  - ISSUE SP/90 PDA BY APRIL, 1990**
  
- 0 STRATEGY**
  - COMPLETE ACRS REVIEWS**
  - DEFER SEVERE ACCIDENT TO FDA**
  - DEFER OPEN DSER ISSUES TO FDA**

## SP/90 PROGRAM (CONT')

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### o LONG-TERM OBJECTIVES

- INCORPORATE BENEFITS OF EPRI UTILITY REQUIREMENTS IN FDA
- FDA/DC PROGRAM BASED ON MARKET NEEDS



**SUMMARY**

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**DESIGN STANDARDIZATION PROCESS IS  
CRITICAL TO NUCLEAR RENAISSANCE**

**o 10 CFR 52 IMPLEMENTATION IS KEY**

**SUMMARY (CONT')**



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**WESTINGHOUSE STANDARD DESIGN PROGRAMS  
ARE RESPONSIVE TO INDUSTRY NEEDS**

- o SP/90 PROVIDES FOR NEAR-TERM  
NEED FOR LARGE PLANTS,  
PRIMARILY INTERNATIONAL**
  
- o AP600 PROVIDES FOR U.S. MARKET  
FOR SMALLER, SIMPLER PLANT**
  
- o EPRI/UTILITY REQUIREMENTS  
PROGRAM WILL ESTABLISH  
RESOLUTION TO GENERIC ISSUES**

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Attached are copies of a Commission meeting transcript and related meeting document(s). They are being forwarded for entry on the Daily Accession List and placement in the Public Document Room. No other distribution is requested or required.

Meeting Title: Brief by Westinghouse on Advanced PWR Program

Meeting Date: 11/1/89 Open X Closed \_\_\_\_\_

Item Description*	Copies Advanced to PDR	DCS Copy
1. TRANSCRIPT <u>w/ Scheduling notes &amp; Viewgraphs</u>	1	1
2. _____	_____	_____
3. _____	_____	_____
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5. _____	_____	_____
6. _____	_____	_____

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