



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

52-3

July 11, 1997

APPLICANT: Westinghouse Electric Corporation
FACILITY: AP600
SUBJECT: SUMMARY OF JUNE 23, 1997, MEETING TO DISCUSS WESTINGHOUSE AP600
FIRE PROTECTION ANALYSIS

The subject meeting was held at the Nuclear Regulatory Commission (NRC) office in Rockville, Maryland, on June 23, 1997, between representatives of the NRC staff and Westinghouse Electric Corporation (the applicant). The purpose of the meeting was to discuss the status of two key issues regarding the standard safety analysis report (SSAR) Section 9.5.1 and 9A. Attachment 1 is a list of meeting participants and the meeting agenda.

The staff issued technical positions on the issues on May 5 and June 6, 1997. The two issues are (1) the post-fire shutdown condition and (2) the shutdown capability of the plant. Despite several meetings to discuss the issues, the staff and the applicant have not been able to reach resolution. Mr. Jim Winters of Westinghouse presented its position. Attachment 2 is the applicant's meeting handout.

The applicant presented its legal and technical viewpoint on the post-fire shutdown condition of the plant. The applicant stated that its legal interpretation of SECY-94-084 is that the acceptability of safe shutdown (420 °F or below) applied to the fire protection systems and that safe shutdown is also the technically appropriate and safest mode for fire-related shutdowns for the AP600. The applicant contended that the AP600 can remain indefinitely in safe shutdown mode and that operating reactors need to achieve cold shutdown due to limitations in water available for decay heat removal, which is not a concern for the AP600. In the discussions, the staff agreed that a technical solution should be sought to resolve the issue.

For the second issue, shutdown capability of the plant, the applicant believes that its passive systems are the normal shutdown systems to achieve safe shutdown after a fire and an alternate or dedicated system is not necessary to comply with the regulation. This issue is coupled to the first issue, in that, the AP600 systems necessary to achieve safe shutdown are different systems than those needed to achieve cold shutdown. Currently, the AP600 plant cannot reach cold shutdown with fire-protected equipment due to separation, automatic fire suppression, and smoke control requirements. Possible solutions were discussed, including adding additional automatic suppression and requesting deviations for the lack of separation. However, the AP600 post-fire endstate will effect the scope of this issue.

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July 11, 1997

The staff took the action to discuss the information presented by the applicant and provide a response prior to the next senior management meeting. A draft of this meeting summary was provided to the applicant to allow them the opportunity to ensure that the representations of their comments and discussions were correct.

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

cc: See next page

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Westinghouse Electric Corporation

Docket No. 52-003

cc: Mr. Nicholas J. Liparulo, Manager
Nuclear Safety and Regulatory Analysis
Nuclear and Advanced Technology Division
Westinghouse Electric Corporation
P.O. Box 355
Pittsburgh, PA 15230

Mr. B. A. McIntyre
Advanced Plant Safety & Licensing
Westinghouse Electric Corporation
Energy Systems Business Unit
Box 355
Pittsburgh, PA 15230

Ms. Cindy L. Haag
Advanced Plant Safety & Licensing
Westinghouse Electric Corporation
Energy Systems Business Unit
Box 355
Pittsburgh, PA 15230

Mr. M. D. Beaumont
Nuclear and Advanced Technology Division
Westinghouse Electric Corporation
One Montrose Metro
11921 Rockville Pike
Suite 350
Rockville, MD 20852

Mr. Sterling Franks
U.S. Department of Energy
NE-50
19901 Germantown Road
Germantown, MD 20874

Mr. S. M. Modro
Nuclear Systems Analysis Technologies
Lockheed Idaho Technologies Company
Post Office Box 1625
Idaho Falls, ID 83415

Mr. Charles Thompson, Nuclear Engineer
AP600 Certification
NE-50
19901 Germantown Road
Germantown, MD 20874

Mr. Frank A. Ross
U.S. Department of Energy, NE-42
Office of LWR Safety and Technology
19901 Germantown Road
Germantown, MD 20874

Mr. Ronald Simard, Director
Advanced Reactor Program
Nuclear Energy Institute
1776 Eye Street, N.W.
Suite 300
Washington, DC 20006-3706

Ms. Lynn Connor
Doc-Search Associates
Post Office Box 34
Cabin John, MD 20818

Mr. James E. Quinn, Projects Manager
LMR and SBWR Programs
GE Nuclear Energy
175 Curtner Avenue, M/C 165
San Jose, CA 95125

Mr. Robert H. Buchholz
GE Nuclear Energy
175 Curtner Avenue, MC-781
San Jose, CA 95125

Barton Z. Cowan, Esq.
Eckert Seamans Cherin & Mellott
600 Grant Street 42nd Floor
Pittsburgh, PA 15219

Mr. Ed Rodwell, Manager
PWR Design Certification
Electric Power Research Institute
3412 Hillview Avenue
Palo Alto, CA 94303

WESTINGHOUSE/NRC AP600 MEETING

FIRE PROTECTION

JUNE 23, 1997

MEETING PARTICIPANTS

<u>NAME</u>	<u>ORGANIZATION</u>
T. MARTIN	NRR/AOT
G. HOLAHAN	NRR/DSSA/SPLB
M. SLOSSON	NRR/DRPM/PDST
S. WEISS	NRR/DRPM/PDST
T. MARSH	NRR/DSSA/SPLB
T. QUAY	NRR/DRPM/PDST
S. WEST	NRR/DSSA/SPLB
E. CONNELL	NRR/DSSA/SPLB
J. HOLMES	NRR/DSSA/SPLB
D. JACKSON	NRR/DRPM/PDST
E. CUMMINS	WESTINGHOUSE
B. MCINTYRE	WESTINGHOUSE
J. WINTERS	WESTINGHOUSE
D. HUTCHINGS	WESTINGHOUSE

**AP600 FIRE PROTECTION
June 23, 1997**

Agenda

I. Introduction

II. Westinghouse presentations

1. Post-Fire Safe Shutdown Condition

Stable shutdown vs. Cold shutdown

Staff position letter issued June 6, 1997

2. Safe Shutdown Capability

Application of Appendix R criteria

Staff position letter issued May 5, 1997

Westinghouse position letter May 9, 1997

III. Discussion and Summary

Fire Protection Issue

June 23, 1997

J. W. Winters

Outline

Basic Question

Interrelated Supporting Questions

“Cold” or “Safe” Shutdown

Why Use “Safe” Shutdown

Alternate/Dedicated or Not

Conclusion

“Cold” or “Safe” Shutdown

SECY-94-084, as approved by the Commission, said that “safe” shutdown could be used rather than “cold” shutdown for passive plants. It used Appendix R as an example of why this position was required.

NRC staff in a July 24, 1996 letter endorsed the details of this position.

Why Use “Safe” Shutdown

- AP600 is different
- Plant is safe and stable
- Reactor coolant boundary is closed and in containment
- Containment is closed
- No need for time limits to transcend judgment
- Current PWRs have finite decay heat removal capabilities in hot shutdown; AP600 does not
- Repairs can be initiated on other systems of interest without affecting plant status

Interrelated Supporting Questions

1. Can AP600 use “safe” rather than “cold” shutdown for compliance with Appendix R?
2. Are alternate/dedicated shutdown system rules applicable to AP600?

Alternate/Dedicated Systems

Using the “safe shutdown” approach, AP600 meets the conditional logic of Appendix R so that alternate/dedicated systems are not required. This approach is consistent with ABWR.

Conclusion

AP600 currently meets the requirements of Appendix R and BTP 9.5-1, including III.G.1 of Appendix R and C.5.b of BTP 9.5-1.