



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

Mice
File **A9**

TAP A-9

AUG 15 1979

MEMORANDUM FOR: S. H. Hanauer, Director
Unresolved Safety Issues Program

FROM: A. Thadani, Task Manager, A-9

SUBJECT: NRC - B&W ATWS MEETING SUMMARY

The NRC staff met with B&W and B&W owners group to discuss plans for resolution of the ATWS issue.

Opening Remarks

After initial staff comment on the objective of the meeting, the industry made the following opening comments:

B&W Owners Group: The owners want to work with the staff to achieve resolution of ATWS but that the groundrules need to be assessed in light of TMI-2 event for timely resolution.

B&W: ATWS is not a safety issue and that TMI-2 event provides further support to the B&W position that additional safety valves on pressurizer should not be required.

Impact of TMI-2

The questions (resulting from the TMI-2 event) raised by the NRC staff at the 7/25/79 meeting with the industry were discussed and summarized below. B&W has agreed to provide some of the requested information in a report in October '79.

- a) Long Term Shutdown With Stuck Open Pressurizer Safety/Relief Valve
 - i) The major staff concerns relate to the potential effects of the voids generated in the primary system in preventing natural circulation.

B&W stated that they intend to address this issue but did not commit to a schedule.

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- ii) Post TMI deliberations have shown that the tripping of RCPs immediately following a small LOCA may be the most appropriate action. Since ATWS analyses did not consider such factors, the staff asked B&W to address this issue.

B&W has not yet committed to address this concern.

- iii) The staff asked B&W owners and B&W to list the instruments and equipment relied on to mitigate the consequences of ATWS events and to provide assurance that the instrumentation and equipment are qualified for ATWS environment.

B&W agreed to provide the list of instruments/equipment in October but stated that the question on qualification will be addressed after "lessons learned" requirements review is complete.

b) Operator Actions

The staff asked B&W to provide justification for credit for operator action ten minutes after the initiation of the postulated ATWS event. In particular B&W is to address the information displayed and the simplicity of operator actions.

B&W agreed to provide this information in the October report.

c) Blocked PORV

The staff has learned that some plants operate with the PORV blocked because of leakage through the PORV. Since the PORV is relied on (for Alt #3 plants) to provide capability to limit the overpressure during ATWS events, bases for continued operation with blocked PORV must be provided.

B&W does not plan to address this issue and they suggested that individual plant owners should address this concern.

d) Larger Safety Valves

B&W agreed to address in the October report the value and the impact of using larger diameter pressurizer safety valves instead of using a greater number of valves.

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e) Pressurizer Safety/Relief Valve Qualification

Recent studies by the staff indicate a need for assurance that the safety/relief valves would behave as predicted in the ATWS analysis when exposed to two phase and subcooled water conditions. Since the valves are not qualified for this environment, the staff asked that a program to verify correct valve behavior be initiated and results obtained early.

B&W suggested that the staff communicate with EPRI on this issue and that the sticking open of all safety/relief valves is probably less severe than one valve sticking open.

f) Radiological Calculations

B&W agreed to address all parameters in this assessment except leakage which they believe is plant specific. However, they did not commit to any schedule on this item.

g) Input Parameters

B&W agreed to address plant specific input in their October report.

Subsequent to the above discussion, the staff made the following comments:

- a) Prevention measures proposed do not provide the necessary assurance of safety from ATWS and the responsibility lies within the industry to provide sufficient demonstration that Alt. #3 is adequate. The type of rule proposed to the Commission next spring would depend on the type of information provided by the industry.
- b) Industry should provide by August 25, 1979 a letter which includes the scope and the schedule of the ATWS submittals. In this regard the staff noted that consideration be given to the following:
 - i) Feb. 15, 1979 Mattson letter to B&W
 - ii) March 27, 1979 Mattson letter to B&W
 - iii) TMI-2 related questions discussed
 - iv) B&W should also address ability of the computer codes to correctly evaluate the consequences of voids in the primary system, the effect of changes in the water relief model and the role of the RCPs. Long term shutdown considerations should also address Boron precipitation.

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- c) The industry should expedite valve tests.
- d) The industry should provide bases for the applicability of analyses to specific plant designs so that the staff can continue with the "Early Verification" approach to resolve ATWS.

The list of attendees is in Enclosure 1, and copies of the viewgraphs presented are in Enclosure 2.

A. Thadani

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Task Manager, A-9

Enclosures:
As stated

cc: ATWS Distribution

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ATWS MEETING WITH B&W OWNERS OF B&W - 8/9/79

Attendees

A. Thadani	NRC/DSS
S. Hanauer	NRC/USI
F. Odar	NRC/DSS
M. Srinivasan	NRC/DSS
K. Parczewski	NRC/DOR
Michael Tokar	NRC/DSS
Frank C. Cherny	NRC/DSS
Kulin D. Desai	NRC/DSS
H. Vander Molen	NRC/DOR
Jack Roberts	NRC/CB
James Norberg	NRC/OSD
M. Fleishman	NRC/OSD
Roy Woods	NRC/DOR
F. Akstulewicz	NRC/DSE
F. McPhatter	B&W
Alan Hosler	WPPSS
M. J. Salerno	CPCo
A. J. Rushnok	OEC
W. B. Rodill	VEPCO
Terry G. Tyler	TVA
P. M. Abraham	Duke Power
C. S. Banworth	B&W
S. H. Duerson	B&W
J. Ted Enos	AP&L
Ted Myers	Toledo Edison
Ron Clauson	Florida Power Corp.
Mike White	Arkansas Power & Light

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B&W/B&W ATWS USERS GROUP/NRC

ATWS MEETING

AUGUST 9, 1979

- I. PURPOSE OF MEETING
- II. B&W POSITION ON ATWS
- III. REVIEW MARCH COMMITMENTS
- IV. TMI-2 EVENT - IMPACT ON ATWS
- V. ITEMS FROM JULY 25TH MEETING
- VI. NEW ATWS SCHEDULE

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NEW ATWS SCHEDULE

- I. SYSTEM ANALYSES AND DOCUMENTATION
- II. CORE ANALYSES
 - A. JUSTIFY 177 FA AS BOUNDING
 - B. DNBR FOR LOOP & 2 PCD
 - C. PCI DURING RMD ATWS
 - D. CLAD COLLAPSE
 - E. DOCUMENT MODELS
- II. STRUCTURAL ANALYSES
 - QUALITATIVE ASSESSMENT
 - METHODS, DRAWINGS, DISTORTION ANALYSES

NRC ITEMIZED CONCERNS

TMI-2 IMPACT ON ATWS

- ATWS WITH STUCK OPEN RV
- LONG TERM SHUTDOWN
- EXCESSIVE PRESSURE
- INCREASE # OF VALVES?
- QUALIFY RV FOR WATER RELIEF?
- PLANT SPECIFIC ATWS & ECCS DESIGNS
- PORV FAILS/BLOCKED CLOSED
- BORON PRECIPITATION
- LEAKAGE OUTSIDE CONTAINMENT
- OPERATOR ACTION