

CT-2034

PDR 9/25/92



Department of Nuclear Engineering and Engineering Physics

University of Wisconsin

153 Engineering Research Building
1500 Johnson Drive
Madison, WI 53706-1687
Phone (608) 263-1648
Fax (608) 262-6707

June 29, 1992

RECEIVED
ADVISORY COMMITTEE ON
REACTOR SAFETY

JUN 30 1992

At: 7100 Madison Ave.

Dr. M. Dean Houston and Dr. William Kerr
ACRS-Senior Staff Engineer
U.S. Nuclear Regulatory Commission
M/S P-315
Washington D.C. 20555

Dear Dean Houston and Bill Kerr:

I read over the latest draft of the letter dated 6/25/92. Generally, I think it is right on the mark. Most of the comments are insightful as to the staff or research weakness. I do have some brief comments/questions for Bill about specifics. He can reach me after Wednesday of this week.

Line 23-31: Do you feel the peer review process is really useful? If so in what sense; i.e., is it better than nothing, does it appear to be a thorough job (say MELCOR), it is simply good PR? After starting on the SCDAP review I have some doubts about its technical thoroughness although it is much better than nothing at all. I have a suggestion of something better for the staff.

Line 73-75: I thought the ANL DCH tests had already started with only partial successes; were there no presentations of their data?

Line 102-111: I agree with your point about in-vessel melt progression, but didn't the staff present its findings about TMI as it relates to what might be the expected state of molten core if it leaves the vessel. It seems that and lower plenum related tests (FARO) may have input. Finally, what did the staff say about reflood experiments and the ability to understand how water quenches yet produces alot of hydrogen?

Line 125-127: I think these are the most important points about hydrogen! What is your view about overpressurization by combustions? I thought only local burns (or detonations) are now of concern. Also shouldn't the HMS code be reviewed if hydrogen mixing is so important.

Line 141-147: SCDAD was worthless for this effort. I hope the staff realizes this. A simple calculation would be better.

Mark I Issue: I agree with all your points.

Line 201-203: MCCI are done for dry cavity conditions, but not wet where debris coolability is an issue. What was said about MACE?

DESIGNATED ORIGINAL

Certified By _____

1000000
9210090204 920629
PDR ACRS
CT-2034 PDR

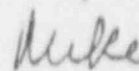
P501 1/0

Dean Houston and William Kerr
June 29, 1992
Page Two

Line 229-233: MELCOR actually got somewhat of a bum wrap compared to these 'mechanistic' codes. What did the staff say about this 'two-tier' structure? Is it not good.

Closing: The summary is good but you said nothing about FCI issues and I am waiting to hear what you thought on them. Maybe you are just being nice to me but the staff neglected to talk about the FARO work etc?

Sincerely,



Michael L. Corradini
Nuclear Engineering and
Engineering Physics
Mechanical Engineering

MLC:lcw