

UNITED STATES
NUCLEAR REGULATORY COMMISSION

November 4, 1987

Reference 1102

MEMORANDUM FOR: Themis Speis, Deputy Director for
Generic & Regulatory Issues
Office of Nuclear Regulatory Research

FROM: R. W. Houston, Acting Director
Division of Reactor Accident Analysis
Office of Nuclear Regulatory Research

SUBJECT: INTEGRATION OF GENERIC ISSUE RESOLUTION

PDR: per
R. EMRIT

This responds to your request dated October 21, 1987 with respect to potential integration of generic issues in DRAA. There are five issues involved, three of which derive from the TMI Action Plan, viz.

- II.B.5(1) Behavior of Severely Damaged Fuel
- II.B.5(2) Behavior of Core Melt; and
- II.B.5(3) Effect of Hydrogen Burning and Explosions on Containment Structure.

These are characterized in NUREG-0933 as calling for "research on phenomena" and fall clearly within the realm of severe accident research. Resolution of issues arising from this research should be formulated and dealt with in the context of Severe Accident Policy Implementation. This suggests to me that it would make more sense to identify these (and possibly others) as "Generic Safety Research Issues", separated from the current listing of G.S.I.s. As an example, I believe it would be fair to note that the Mark I Containment Performance issue arose from research; is, in fact, a generic issue, but is not identified as such in a formal sense. I believe it should be, but clearly we are not awaiting a "prioritization" of it.

If my suggestion is followed, I believe it would make sense to recombine these three research tasks into a single Generic Safety Research Issue, as: II.B.5 Severe Accident Research. The resolution of which would be synonymous with the ending of the research program.

If my suggestion is not followed, then I don't see any tangible benefit to combining them. On the contrary, keeping them separate permits the potential for earlier resolution of one or two of the three items.

The other two issues are:

- A-48 Hydrogen Control; and
- 121 Hydrogen Control for Large, Dry PWR containments

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These issues are associated with degraded but recoverable core damage accidents (75% metal-water reaction), as contrasted with 11.B.E.(3) above that goes to full core melt and core-concrete interaction sources of combustible gas. I agree that it would be appropriate to fold 121 into A-48.

Responsibility for all of the above issues except 121 currently is in DRAA. We are prepared to proceed along the above lines, including the transfer of 121 from DRA into DRAA and request a decision on this matter as soon as possible.

The severe accident research issues are now, and should remain, assigned to AEB, while the (integrated) hydrogen control issues is (would be) in SAIB.


R. W. Houston, Acting Director
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Office of Nuclear Regulatory Research

cc: E. Beckjord
D. Ross
B. Morris
T. King ✓
L. Hulman
M. Silberberg