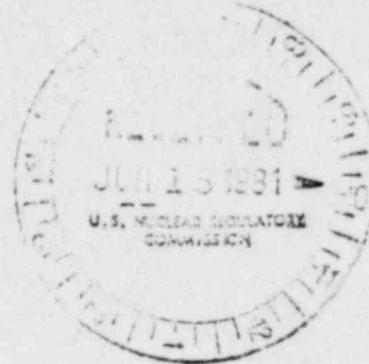


P. R. Davis
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May 30, 1981

CT-1342

Mr. David Bessette
U. S. Nuclear Regulatory Commission
Advisory Committee on Reactor Safeguards
Washington, D. C. 20555



Dear Mr. Bessette;

Pursuant to your telephone request yesterday, I am pleased to submit these comments relative to the Class 9 Sub-committee meeting on the MARCH code held last week. Due to the limited time available, I am able only to indicate briefly a few of my more significant concerns and recommendations regarding the code and the NRC's related programs, as follows;

1. While I had some familiarity with the MARCH code prior to the meeting, I was surprised to learn of the many limitations, omissions, and errors which it contains. Many of these, as pointed out by Sandia and others, are not due to lack of knowledge regarding the physical processes involved. The code needs to be updated, its limitations and capabilities clearly expressed for all users, and default values should be best estimate values (The fact that default values in MARCH are not best estimate is a very serious shortcoming in the code).
2. At the present time, various organizations are developing, modifying, assessing, and applying the MARCH code. There needs to be a systematic and well controlled way in which code corrections, improvements, and modifications become properly qualified and incorporated into the base code for the benefit of all users. Such a mechanism does not now appear to exist.
3. The NRC needs to develop a well defined plan for the development of the code. Part of this plan must include an assessment of how comprehensive and accurate the code needs to be to satisfy NRC needs.
4. The NRC's core melt experimental research program must reflect the developmental and assessment needs of the MARCH and related codes. It is not clear that the NRC's experimental program appropriately reflects the important needs of the code development effort.

I hope that these thoughts are of some use to the ACRS. If you have any questions, or require further elaboration on these or other related points, please do not hesitate to call.

Sincerely,

P. R. Davis

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