

Union of
**CONCERNED
SCIENTISTS**

February 3, 1983

M. Silberberg
Chief
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U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Dr. Silberberg:

Re: Peer Review Meeting, 25-26 January 1983, for the
NUREG-0956(Draft) Study on Accident Source Term
(Volume I: PWR Analysis)

Thank you for the invitation to this meeting, which was conducted with your usual courtesy. I regret that I was obliged to leave early. For the moment, I have just a few comments, as follows:

(i) Collaboration Among Research Teams

A number of speakers at the meeting expressed concern that different teams (NRC, IDCOR, etc.) might produce different results. It was suggested that these teams should compare their results before publication and try to eliminate differences, thus avoiding embarrassment for the nuclear industry.

Such collaboration would be inconsistent with the principles of scientific objectivity you enunciated at the beginning of the meeting. In fact, to achieve such objectivity (both in actuality and in appearance) it will be necessary to avoid collaboration, rather than to encourage it. Furthermore, it will be necessary to expose the research results to detailed scrutiny by teams of reviewers who have not participated in the research efforts themselves.

(ii) Uncertainty

The "best estimate" approach is adequate for the preliminary stages of this research. However, before the research results are used in the regulatory arena, there should be a systematic treatment of uncertainty. It should be possible to see how uncertainty in any area propagates through the analysis.

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(iii) Experiments

Several speakers suggested that your analysis should be tested against experiments where possible (the TMI-2 event was mentioned several times). I heartily concur with this view.

There should be a systematic treatment showing the degree to which different parts of the analysis are backed up by experiment. This treatment should parallel the treatment of uncertainty as proposed in comment (ii) above.

I repeat a suggestion from my comments on the draft of NUREG-0772 (see my letter to you of 31 March 1981), namely:

"This report should include estimates of analytic and experimental programs which might help to resolve uncertainties. Such estimates should cover both the time scales and resource requirements of such programs."

In view of the regulatory importance of the source term issue, a substantial experimental program is justified if it will help to reduce uncertainties.

(iv) Research Schedule

The schedule you have outlined (publication of a final version of NUREG-0956 in mid-June) is tight. It will not be possible to resolve the issue by this point. Although you have indicated that elements of the research will continue beyond June, it is not clear that the entire source term issue will remain open.

It is appropriate to provide a summary of the status of knowledge by June 1983, provided that uncertainties are fully addressed. It is not appropriate to pretend that the issue will be resolved at that point.

Thank you for your attention.

Sincerely,


Gordon Thompson