



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

MAY 14 1979

Mr. John D. Stevenson  
Woodward-Clyde Consultants  
3645 Warrensville Center Road  
Cleveland, Ohio 44122

Dear Mr. Stevenson:

Thank you for your letter of April 6, 1979, to Dr. Hendrie concerning the design of a containment system to resist core melt. We appreciate your suggestions regarding improvements in reactor safety.

I am enclosing for your information a report describing proposed research to improve the safety of light water reactors. I direct your attention to Section 3.3, which discusses the risk reduction potential of alternate containment concepts and core retention measures, and to Section 1.2, which discusses limitations on the extent to which NRC may support and participate in the development of designs for safety systems.

The Office of Nuclear Regulatory Research has just begun to implement the research plan. An initial effort is an investigation by Sandia Laboratories of vented, filtered containment as a means of mitigating accidents involving core melt. Additional studies to assess the technical feasibility and risk reduction potential of other containment concepts, such as those described in your paper, are being considered.

I will be happy to discuss with you any further thoughts you might have on this matter after you have had the opportunity to review the enclosed report. Thank you for your interest.

Sincerely,

A handwritten signature in cursive script that reads "Saul Levine".

Saul Levine, Director  
Office of Nuclear Regulatory Research

Enclosure:  
NUREG-0438

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# Woodward-Clyde Consultants

April 6, 1979

Dr. Joseph M. Hendrie  
Chairman  
Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Joe:

I am sure over the past two weeks you have had enough suggestions and recommendations to last you a lifetime. By this letter, I want to burden you with one more. Normally I wouldn't bother you with a suggestion of this type, but I am sure in these extraordinary times, much of any redirection of safety research will be coming directly from the top of the Commission and the Staff Divisions.

Attached hereto please find the copy of a paper I presented in August, 1977 concerning the design of a containment system to resist core melt where I performed a preliminary cost and design evaluation of such a passive containment structure. The idea was also submitted to the NRC Division of Reactor Safety Research in the form of an unsolicited proposal to develop the design in more detail where additional development effort would have been shared between my organization, Argonne National Laboratory which has done considerable research in the effect of core melt on concrete and a major nuclear Architect-Engineer.

Of course, up until now, containment design to accommodate a core melt has not been considered a rational requirement. Unfortunately, the recent 3 Mile Island experience may have changed that perception. In any event, I would be happy to discuss my idea further with the NRC staff or resubmit my proposal if it is felt the idea has any merit.

Thank you for your attention.

Sincerely,

*John D. Steamer*  
John

285 240

JDS/ijz  
Enclosure  
cc: Mr. Harold R. Denton  
Director, Office of Nuclear  
Consulting Engineers, Geologists  
and Environmental Scientists  
Mr. Saul Lev  
Director, Office of  
Offices in Other Principal Cities

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