ACRSR-1853

September 17, 1999

Dr. William D. Travers
Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Dr. Travers:

SUBJECT: MODIFICATIONS PROPOSED BY THE WESTINGHOUSE OWNERS GROUP TO THE CORE DAMAGE ASSESSMENT GUIDELINES AND POST ACCIDENT SAMPLING SYSTEM (PASS) REQUIREMENTS

During the 464th and 465th meetings of the Advisory Committee on Reactor Safeguards, July 14-16 and September 1-3, 1999, respectively, we discussed your June 22, 1999 response to our May 19, 1999 letter on the subject matter. Your letter included the following comments:

(1) "The staff . . . intends to allow options other than PASS samples (such as the use of specific gamma monitors) to provide information regarding the disposition of fission products."

(2) ". . . the staff concludes that, for plants with passive pH control or that are not subject to contamination of the sump with brackish water, pH measurement is not needed because, in these plants, pH will either be maintained alkaline or could be estimated with a sufficient degree of accuracy."

Because we disagree with both of these positions, we are clarifying our original recommendations.

With respect to Comment (1) above, our view is that the Post Accident Sampling Systems implemented in the Westinghouse plants do not meet the intent of TMI Action Plan Requirement II.B.3, as specified in NUREG-0737, to have direct and timely information regarding "certain radionuclides in the reactor coolant and containment atmosphere that may be indicators of the degree of core damage. . . ." Such intent could be satisfied by the use of specific gamma monitors installed in containment that are tuned to the isotopic gamma emissions of cesium and krypton. If Requirement II.B.3 for timely and radionuclide-specific information is no longer necessary, it should be removed rather than circumvented. If this requirement is retained, then the staff should consider a compliance backfit for the installation of such gamma monitors.

With respect to Comment (2), we disagree with the assertions regarding assurance of maintenance of containment sump alkalinity by passive pH control. The sources of acidic materials during severe accidents are very uncertain and may not have all been identified. In addition, the evaluation of sump alkalinity would be complicated by the need to quantitatively assess complexation, adsorption, and precipitation of buffers by materials introduced into the sump water over the course of an accident. Passive pH control cannot be assessed with sufficient accuracy to assure that an adequate level of alkalinity is maintained over the desired period of time. A direct measurement is needed for appropriate post-accident decisionmaking. Therefore, we repeat our original recommendation that pH measurement continue to be required for all sumps.

Sincerely,

/s/

Dana A. Powers
Chairman

References:

1. Letter dated June 22, 1999, from William D. Travers, Executive Director for Operations, NRC, to Dana A. Powers, Chairman, ACRS, Subject: Modifications Proposed by the Westinghouse Owners Group to the Core Damage Assessment Guidance and the Post Accident Sampling System Requirements.
2. Letter dated May 19, 1999, from Dana A. Powers, Chairman, ACRS, to William D. Travers, Executive Director for Operations, NRC, Subject: Modifications Proposed by the Westinghouse Owners Group to the Core Damage Assessment Guidelines and the Post Accident Sampling System Requirements.
3. U. S. Nuclear Regulatory Commission, NUREG-0737, “Clarification of TMI Action Plan Requirements,” dated November 30, 1980.