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Mr. William J. Dircks
Executive Director for Operations
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Dircks:

SUBJECT: ACRS COMMENTS ON PRIMARY COOLANT SYSTEM DEFECT EVALUATION

During its 303rd meeting, July 11-13, 1985, the Advisory Committee on Reactor Safeguards considered the continued funding of two RES-sponsored research projects at the Battelle Pacific Northwest Laboratory [acoustic emission (AE) and synthetic aperture technique (SAFT-UT)] that were commented on in our Report to Congress on the NRC Safety Research Program for Fiscal Year 1985, NUREG-1039, dated February 1984.

The initial hope for AE was that it would be able to monitor primary coolant systems for the development of cracks. This goal is not currently attainable because of the problem of separating the signal from the noise. However, the AE technique is now capable of monitoring the growth of a known crack. The NRC may well find a proven technique for monitoring a crack useful, and if the NRC Staff feels that work aimed at this goal should be funded, we would have no objections, and believe that it may indeed lead to valuable results.

The SAFT-UT development work has advanced slowly, but continues to make progress. It now has demonstrated its usefulness in the field as a "tie-breaker" for the interpretation of known flaws where more standard techniques give ambiguous results. We have questioned how long RES should fund development work on a product that will ultimately have to prove itself in the commercial market if it is to survive. Again we would lean heavily on the judgment of the NRC Staff. If they feel it can be useful to them in the near future, that would weigh heavily in an evaluation. Industrial sponsorship is now forthcoming which will aid transfer of this technology to industry.

In summary we have no objections to the continued funding of these projects if you feel that they are truly in the terminal stages of NRC funding, and that they will prove valuable.

Sincerely,

David A. Ward
Chairman

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