

April 12, 1994

Mr. John T. Larkins, Executive Director
Advisory Committee on Reactor Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Mr. Larkins:

SUBJECT: RESOLUTION OF ADVANCE SAFETY EVALUATION REPORT (SER) ITEM F6.2.1.9-1
FOR THE ADVANCED BOILING WATER REACTOR (ABWR)

The purpose of this letter is to inform the Advisory Committee on Reactor Safeguards (ACRS) that the Office of Nuclear Reactor Regulation staff has reached technical resolution for the suppression pool strainer issue identified as Open Item F6.2.1.9-1 in the advance SER. In the recent meeting with the Committee, the staff indicated that it had reached a point of disagreement with GE Nuclear Energy (GE) on what an adequate resolution would be for the sizing of strainers for the ABWR suppression pool sump, reactor core isolation cooling, and high pressure core flooders systems. The staff also indicated that if it reached agreement on this issue it would provide the resolution in writing to the Committee. Intensive discussions have resulted in a GE proposal to revise its previous position as discussed in the enclosed April 11, 1994, letter.

The staff has found the proposal to be satisfactory and GE has committed to provide this information in a markup of the standard safety analysis report by the end of this week. Subsequently, the staff will develop a revised SER input to reflect GE's revised design information and the staff's acceptance thereof and will provide a copy of this to the ACRS and the Commission. This information will be included in the final NUREG version of the SER.

Sincerely,

(Original signed by)
R. W. Borchardt, Director
Standardization Project Directorate
Associate Directorate for Advanced Reactors
and License Renewal
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
See next page

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Docket No. 52-001

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April 11, 1994

Docket No. 52-001

Chet Poslusny, Senior Project Manager
Standardization Project Directorate
Associate Directorate for Advanced Reactors
and License Renewal
Office of the Nuclear Reactor Regulation

Subject: Submittal Supporting Accelerated ABWR Schedule -
Suppression Pool Strainers

Dear Chet:

In a conference all on April 11, 1994, between GE Nuclear Energy and the NRC Staff, an agreement for closing Open Item 6.2.1.9-1 (Suppression Pool Strainer) of the ABWR Advanced FSER was reached. Messrs. R. Barrett, J. Moninger, D. Tang, and C. Poslusny for the NRC and C. Sawyer, A. Beard and W. Taft of GENE participated in the call and agreed that the requirements in the enclosure satisfactorily resolve this Open Item F6,2.1.9-1. A SSAR markup of Appendix 6C will follow in the next couple of days incorporating the agreed upon requirements and including a sample calculation.

If you should have any further questions, please contact Alan Beard at (301)770-5985.

Sincerely,

Jack Fox
Advanced Reactor Programs

cc: Alan Beard (GE)
Norman Fletcher (DOF)
Joe Quirk (GE)

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Enclosure

ENCLOSURE

- 1) All ECCS Strainers will at a minimum be sized to conform with the guidance provided in Reg Guide 1.82 Rev. 1 for the most severe of all postulated breaks.
- 2) The following clarifying assumptions will also be applied and will take precedence:
 - a) The debris generation model will utilize right angle cones acting in both directions;
 - b) The amount of insulation debris generated will be assumed to be 100% of the insulation in a distance of $3 L/D$ of the postulated break within the right angle cones including targeted insulation;
 - c) All of the insulation debris generated will be assumed to be transported to the suppression pool;
 - d) The debris in the suppression pool will be assumed to remain suspended until it is captured on the surface of a strainer.
- 3) The sizing of the RHR suction strainers will assume that the insulation debris in the suppression pool is evenly distributed to the 3 pump suction. The strainer size will be determined based on this amount of insulation debris and then increased by a factor of 3. The flow rate used for calculating the strainer size will be the runout system flow rate.
- 4) The sizing of the RCIC and HPCF suction strainers will conform to the guidance of Reg Guide 1.82 and will assume that the insulation debris in the suppression pool is proportionally distributed to the pump suction based on the flow rates of the systems at runout conditions. The strainers assumed available for capturing insulation debris will include 2 RHR suction strainers and a single HPCF or RCIC suction strainer.