

PDR



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

DEC 27 1979

Mr. Matthew C. Jay  
Matthew C. Jay and Associates  
P.O. Box 23395  
San Diego, California 92123

Dear Mr. Jay:

Your letter of October 23, 1979, to Congressman Bob Wilson has been referred to me for reply. It proposed a modification to the design of nuclear reactors which would allow radioactive fluids to be vented underground directly from the reactor.

You should first understand that it is NRC's responsibility to generate design criteria which, when satisfied, assure that reactors can operate without undue risk to the public. It is the responsibility of the reactor suppliers and operators to develop and implement the detailed designs which satisfy these criteria.

Upon analyzing the accident at Three Mile Island, the NRC staff has concluded that the reactor cooling system should be designed to allow venting of noncondensable gases from high elevations in the system. Owners of reactors are required to submit their designs for such capabilities to the NRC by January 1, 1980, and to complete installation by January 1, 1981.

The system should be capable of removing gas pockets from the reactor cooling system which might inhibit the flow of cooling water or otherwise adversely affect the ability to cool the reactor core. The vent system itself should also have minimum potential for adverse effects on the safe operation of the plant. Regarding the disposition of material vented from the reactor cooling system, venting into the containment building is an acceptable alternative. Existing ventilation, cooling and filtering systems should be utilized to best advantage in minimizing the release of radioactive material to the environment.

The concept you propose might also be an acceptable alternative. It appears that your design represents an extension of the containment boundary. As such, it would be subject to design criteria similar to those for the containment (e.g., seismic resistance, leak testing, etc.). In any case, the NRC staff gives first priority to reviewing the designs submitted by current holders of operating licenses. You may want to contact them through the Electric Power Research Institute, Palo Alto, California and attempt to interest them in your proposal.

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Mr. Matthew C. Jay

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Thank you for expressing your concern about reactor safety and for providing a positive suggestion toward its improvement.

Sincerely,

Original signed by R. G. Smith

Lee V. Gossick  
Executive Director for Operations

cc: Hon. Bob Wilson  
U.S. House of Representatives

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