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OCT 12 1988

Mr. Mark V. Scott  
910 Ponce de Leon Avenue  
Atlanta, Georgia 30306

Dear Mr. Scott:

This is in response to your letter to Dr. J. Nelson Grace, dated September 3, 1988, in which you expressed concerns related to the Georgia Tech Research Reactor resuming operations and requested a hearing in this regard. Your request implies a concern regarding the ability of Georgia Tech to operate their reactor safely. The NRC shares your safety interest, and reasonable assurance of safe operation will be obtained by the NRC prior to allowing the Georgia Tech Reactor to restart. It is for this very reason that we issued an Order on January 20, 1988, to cease irradiation experiments and a Confirmatory Order on March 17, 1988, to cease reactor operations until all safety questions had been resolved to the NRC's satisfaction and the NRC approved resumption of operations.

When the NRC issued the Confirmatory Order on March 17, any party adversely affected by that Order was afforded an opportunity within twenty days of the date of the Order to request a public hearing. As no such request was filed within the required time, no hearing is required to be held. More importantly, the safety aspects of operating the reactor were all carefully reviewed at the time of licensing, and none of those considerations have been changed. The thrust of our efforts over the past few months have been to improve certain management and administrative practices that have deteriorated over time, and these issues will be resolved prior to giving our permission for restart. Thus, because of the relatively narrow, well-defined focus of the issues at hand, a hearing would not be useful from a safety standpoint. For these two reasons, we are denying your request.

The reactor at the Georgia Institute of Technology is used for research, development, educational training and experimental purposes. Its power level is much less than that of a commercial reactor used to produce electricity. Consequently, the amount of radioactivity contained in the core of the reactor that could be released in the event of an accident is very much less than that at a power reactor. The NRC has required, based on the potential credible accidents at the Georgia Tech reactor, engineering controls to limit the consequences of an accident (such as a containment building to prevent leakage of radioactive material to the environment) and an appropriate level of emergency planning to cover potential emergencies.

Even though there is only a very low probability of an accident causing significant consequences outside the containment at Georgia Tech, the NRC requires Georgia Tech to maintain an Emergency Plan to handle such an accident. As part of this Plan, Georgia Tech has established an Emergency Planning Zone (EPZ) of 100 meters from the reactor. The EPZ is the area for which planning is

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established to assure prompt and effective actions can be taken to protect the public in the event of an accident. In the case of Georgia Tech, this planning includes procedures for evacuation of the research center facility, measurements of radiation in the environment surrounding the facility, and notification of the City of Atlanta, the State of Georgia, and campus police to provide necessary help. The NRC has determined that this level of planning is adequate to respond to an emergency at the Georgia Tech research reactor.

The NRC conducted an independent analysis of highly unlikely but credible accidents at the Georgia Tech reactor. This analysis, calculated for locations 150 meters from the facility, shows that, in the first two hours following a design basis accident, the whole body radiation dose to a member of the public would be 0.9 Rem and the radiation dose to the thyroid would be 4 Rem. These doses are below the range of doses that the Environmental Protection Agency has recommended (1 to 5 Rem whole body and 5 to 25 Rem thyroid) to use as protective action levels for consideration of evacuation after an accident. The area within this 150 meter radius is Georgia Tech campus, and the area is principally classroom and laboratory space. I-75 and I-85 are well beyond this 150 meter distance.

We appreciate your concern in this matter and trust that we have been responsive to your letter.

Sincerely,

Malcolm L. Ernst  
Acting Regional Administrator

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