



Neely Nuclear Research Center  
900 Atlantic Drive  
Atlanta, Georgia 30332-0425  
(404) 894-3600 FAX: (404) 894-9325

March 22, 2000

Docket No. 50-160

United States Nuclear Regulatory Commission  
Mail Stop 012-D3  
Washington, D.C. 20555-0001

Attention: Mr. Marvin M. Mendonca, Senior Project Manager  
Non-Power Reactors and Decommissioning Project Directorate  
Division of Reactor Program Management  
Office of Nuclear Reactor Regulation

Subject: Request to Adopt the Currently Approved NRC Policy for Tritium and  
Iron-55 Release Limits for the Georgia Tech Research Reactor  
Decommissioning Project

References: 1. NRC Policy Issue, SECY-94-145, May 27, 1994.  
2. Georgia Institute of Technology Research Reactor Decommissioning  
Plan, June 1998

Dear Mr. Mendonca:

The purpose of this letter is to obtain your approval for the Georgia Tech Research Reactor (GTRR) Decommissioning Project to adopt the Nuclear Regulatory Commission Policy Paper SECY-94-145. By our adopting the NRC Policy, the total average surface contamination will be at levels for which a meaningful Site Specific Guideline Value can be developed for free release of the Georgia Tech reactor site to assure protection of the public. The justification for the surface contamination limits for H-3 and Fe-55 established in the NRC Policy Issue, which was approved for Shoreham and Fort St. Vrain reactor decommissioning, is applicable to the Georgia Tech decommissioning project. Further precedence for utilizing this policy was the adoption of the policy at several other NRC regulated sites since it was issued on May 27, 1994; including the Cintichem, Inc. decommissioning project and the Phillips Research Center Radiation Laboratory. Assuming this policy is approved for use, the estimated doses at the GTRR from H-3 and Fe-55 surface contamination are 1.0 and 0.11 mrem/y, respectively. These potential doses will be reduced as Fe-55 and H-3 decay with half-lives of 2.6 years and 12.2 years, respectively.

For removable contamination, we are also proposing to adopt the NRC approved levels for tritium and iron-55 as previously approved at the Phillips Research Laboratory as well as at the Fort St. Vrain decommissioning project. This removable limit would result in an annual dose of approximately 0.08 mrem at GTRR due to the tritium contamination. This dose is equivalent to that which may be received from the natural background radiation emitted from a concrete structure. Consideration for tritium and iron-55 as well as other not-readily detectable radionuclides for removable contamination will be handled through the site specific guideline calculations; however, the total dose associated with removable contamination from iron-55 and these other non-detectable radionuclides would be considerably lower than the annual dose from tritium contamination.

Therefore, your approval is requested for the Georgia Tech Research Reactor Decommissioning Project to adopt the NRC May 27, 1994 Policy Issue document with regard to total average surface contamination limits for tritium and iron-55 as well as the NRC approved removable contamination limits for tritium and iron-55.

The project is progressing well and IT will be prepared to begin some initial area final survey activities by mid-April. Therefore, we would appreciate your response within this time frame. We will be pleased to answer any questions you may have on the subject. Thank you for your timely consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Nolan E. Hertel". The signature is written in a cursive style with a long horizontal stroke extending to the right.

Nolan E. Hertel, P.E., Ph.D.  
Georgia Institute of Technology  
Director, Neely Nuclear Research Center

Cc: Mr. Craig Bassett, USNRC  
Jeff Bell, IT  
Robert S. Eby, CH2M HILL  
Georgia Tech Technical Safety Review Committee