September 16, 1997

Dr. Ratib A. Karam, Director
Neely Nuclear Research Center
Georgia Institute of Technology
Atlanta, Georgia 30332

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (TAC NO. M99370)

Dear Dr. Karam:

We are continuing our review of your submittal of August 7, 1997, for the possession only license for your research reactor. During our review, questions have arisen for which we require additional information and clarification. Please provide responses to the enclosed request for additional information within 60 days of the date of this letter. In accordance with 10 CFR 50.30(b), your response should be executed in a signed original under oath or affirmation. Following receipt of the additional information, we will continue our evaluation of your application.

This requirement affects nine or fewer respondents and, therefore, is not subject to Office of Management and Budget review under Public Law 96.511.

If you have any questions regarding this review, please contact me at (301) 415-1128.

Sincerely,

Original signed by:

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

Docket No. 50-160

Enclosure: As stated

cc w/enclosure:
See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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Enclosure: As stated

cc w/enclosure:
See next page

cc:

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ENCLOSURE

REQUEST FOR ADDITIONAL INFORMATION

GEORGIA TECH RESEARCH REACTOR

DOCKET NO. 50-160

1. Provide clarification for technical specification 1.5, "Decommissioning" that no decommissioning activities will be performed until after the NRC accepts a decommissioning plan. Also, provide additional detail on decommissioning activities which will not be allowed or undertaken.

2. Also, provide rationale for the technical specification 1.11 definition of the term "Reactor Component" and its need for being included in these Technical Specifications.

3. The definition of "Reportable Occurrence," technical specification 1.12.c refers to decommissioning activities, whereas reportable occurrences could occur prior to or at times other than when decommissioning activities are conducted. Provide clarification to ensure that reportable occurrences are considered at all times while the NRC license is in effect. Note that the minutes of the Nuclear Safeguards Committee Meeting of August 5, 1997, indicate that the Technical Safety Review Committee will oversee the reactor decommissioning and all aspects of the NRC possession only license. This should be also the case for all Technical Specification requirements. Clarify this point throughout the Technical Specifications. (Some of the following requests for additional information identify where this clarification may be needed.)

4. Provide clarification on the Technical Specification 2.2, "APPLICABILITY," in that other activities with the potential for airborne contamination or release should also have radiation monitoring in addition to that for decommissioning activities. Provide analyses to determine if there are other potential radiation conditions where monitoring should be required (e.g., decontamination activities and handling of tritiated water). Further, make applicability statements consistent with required specification throughout the proposed technical specification (i.e., should all specifications apply to decontamination and decommissioning activities). Additionally, provide radiation safety manual, procedures or other program documents that will be used to define when such activities exist so that it is clearly defined when the specification is applicable.

5. Provide changes to the proposed technical specification 2.2, "SAFETY SYSTEMS," to specify the type (Kanne, gas, filter bank or moving particulate monitors) and number of radiation monitors that are to be operable and alternatives for when they are not. Also, provide analysis that establishes the adequacy of this proposal (e.g., equipment effectiveness to limit occupational and public radiation exposures to within 10 CFR Part 20 limits including as low as reasonably achievable (ALARA)).

6. Provide clarification to the statement "in which high radiation areas could occur" from the "BASIS" for technical specification 2.2 (i.e., does this mean that radiation monitoring ensures identification of changing conditions due to any activities in the facility).

7. Technical specification 2.3, "APPLICABILITY," should specify when the specification is to be effective. In the "SPECIFICATION" section, the phrase "...during decontamination activities involving possible airborne contamination levels above background" does not include decommissioning activities which could also result in airborne contamination. Provide applicability statement considering above.

8. Technical specification 1.4.c specifies containment isolation requires that "controls, equipment and interlocks for isolation of the containment building are operable or the containment is isolated." Provide a specification in section 2.3 to identify the controls, equipment and interlocks that are necessary to ensure containment isolation and thus integrity. Additionally, in section 3 specify surveillance to verify operability of the controls, equipment and interlocks for when containment integrity.

9. Technical specifications 2.4.a, and 2.4.b indicate "...during decontamination activities..." whereas the requirement is applicable for any release of radioactive material to the sewer or environment. Provide specifications that are consistent with this requirement.

10. Technical specification 2.4.b(2) indicates "during decontamination activities involving possible production of airborne radioactivity, containment integrity shall be maintained." Specify other activities (e.g., decommissioning) as appropriately established by previously requested analyses which may result in airborne radioactivity. The "BASIS" for this specification indicates "...radioactivity releases due to decommissioning activities," but other activities (e.g., decontamination or handling of heavy water) also hold the potential for gaseous release and should be considered.

11. Technical specification 2.4.c(2) indicates "[d]uring decommissioning activities involving possible production of liquid radioactivity..." whereas the requirement is applicable for any generation of radioactivity under the reactor license. Provide specifications that are consistent with this requirement.

12. The "BASIS" for technical specification 2.4.a indicates that "...effluents released to the sewage on the basis of gross radioactivity are assumed not to contain Iodine - 129 and radium." Provide a bases for this statement or delete it as radioactive composition is determined by independent samples as discussed in the final sentence of this "BASIS."

13. Technical specification 3.1, Table 3.1, has eliminated the "Weekly Test" and the "Source Calibration Monthly" surveillances. Provide analysis to demonstrate acceptability of this reduced surveillance requirements or reinstate the previous surveillance requirements.

14. Technical specification 3.1, Table 3.1, footnote indicates applicability for decommissioning activities whereas decontamination activities and others may apply. Provide analyses or correction to include all potential conditions where radioactive release to the containment is credible to meet the requirements of 10 CFR Part 20 including ALARA.

15. Technical specification 5.1.a indicates for decommissioning activities whereas the organizational requirements apply as long as the NRC license is in effect. Provide technical specification clarification or analysis to address this issue.

16. Technical specification 5.1.a indicates that the Director, Neely Nuclear Research Center has the responsibility for operation of the reactor facility which infers operation of the reactor. Provide alternate wording to be consistent with facility status.

17. Technical specification 5.1.b indicates "Director, Nuclear Research Center" vice "Director, Neely Nuclear Research Center" in the previous specification. Provide clarification.

18. Technical specification 5.2.a refers to decommissioning when the specification is applicable as long as the NRC license is effective. Provide clarification.

19. Technical specifications 5.2.d(3) and 5.3.a specify the Technical and Safety Review Committee (Committee) review and approval of procedures and proposed changes for decommissioning activities. However, there may be other activities and the committee review should not be so limited. Propose appropriate review authority to encompass all license-related procedures or proposed changes.

20. Technical specification 5.2.d(7) specifies review of decommissioning or surveillance abnormalities having safety significance, although other activities could warrant review. Provide clarification to ensure that all facility abnormalities (e.g., radiation protection-, decontamination- and maintenance-related activities) are reviewed by the Committee. Technical specification 5.2.d(9) also seems to limit Committee audit activities to decommissioning and surveillance records. Provide clarification to ensure all facility records are acceptably audited.

21. Technical specification 5.3.b does not specify procedures for preventive and corrective maintenance which could have an effect on safety. Provide such specification.

22. With regard to reporting requirements, current guidance from American National Standards Institute/American Nuclear Society Standard 15.1, "Development of Technical Specifications for Research Reactors," and NRC's NUREG-1537, "Guidelines for Preparing and Reviewing Applications for the Licensing of Non-Power Reactors," indicates that there shall be a report of reportable occurrences not later than the following day to the NRC's Operations Center at (301) 816-5100, to be followed by a written report within 14 days to the Nuclear Regulatory Commission, Document Control Desk, Washington D.C., 20555. Provide clarification in comparison to the propose reporting requirements in technical specification 5.6.a.