

**NUCLEAR REACTOR LABORATORY**  
AN INTERDEPARTMENTAL CENTER OF  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY



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Activation Analysis  
Coolant Chemistry  
Nuclear Medicine  
Reactor Engineering

July 8, 1999

Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

Subject: The renewal of Operating License No. R-37, Massachusetts Institute of Technology  
Research Reactor, Docket No. 50-20.

Gentlemen,

The Massachusetts Institute of Technology hereby requests renewal of Reactor Operating License No. R-37. In addition, an increase in reactor power from 5000 kW to 6000 kW is requested. Enclosed per your letter of 24 August 1998 are the following:

1. Updated Safety Analysis Report (SAR)
2. Financial Qualifications
3. Environmental Report
4. Technical Specifications
5. Operator Requalification Program

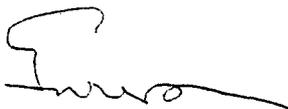
Neither the Emergency Plan nor the Physical Security Plan are enclosed because no changes are requested at this time.

The following should be noted relative to the above submission. First, the format used for the SAR was NUREG-1537 with the exception that all coolant systems are described in Chapter 5 (as opposed to Chapters 5 and 9) and information on nuclear medicine is in a separate section, Chapter 17. Second, financial information on the MITR is contained in Chapter 15 of the SAR. In addition, a copy of MIT's latest financial statement is enclosed.

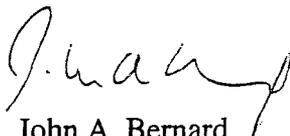
If our request for a power upgrade is approved, we will prepare and submit a plan for monitoring the power ascension.

Please contact Dr. Hu or Dr. Bernard at (617)258-5860 or (617)253-4202, respectively, should you require any further information.

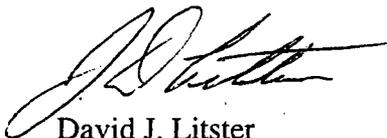
Sincerely,



Lin Wen Hu  
Reactor Relicensing Engineer



John A. Bernard  
Director



David J. Litster  
Vice-President for Research

cc: USNRC - Senior Project Manager,  
NRR/ONDD

USNRC - Region I - Project Scientist  
Effluents Radiation Protection Section (ERPS)  
FRSSB/DRSS