

April 10, 2000

Dr. John A. Bernard, Director  
Nuclear Reactor Laboratory  
Massachusetts Institute of Technology  
138 Albany Street  
Cambridge, MA 02139-4296

SUBJECT: MASSACHUSETTS INSTITUTE OF TECHNOLOGY - REQUEST FOR  
ADDITIONAL INFORMATION, RE: LICENSE RENEWAL (TAC NO. MA6084)

Dear Dr. Bernard:

We are continuing our review of your request for renewal of Facility Operating License No. R-37 for the Massachusetts Institute of Technology Research Reactor which you submitted on July 8, 1999. During our review of your request, questions have arisen for which we require additional information and clarification. Please provide responses to the enclosed request for additional information within 30 days of the date of this letter. In accordance with 10 CFR 50.30(b), your response must be executed in a signed original under oath or affirmation. Following receipt of the additional information, we will continue our evaluation of your request.

If you have any questions regarding this review, please contact me at 301-415-1127.

Sincerely,

*/RA/*

Alexander Adams, Jr., Senior Project Manager  
Events Assessment, Generic Communications and  
Non-Power Reactors Branch  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket No. 50-20

Enclosure: REQUEST FOR ADDITIONAL INFORMATION

cc w/enclosure:  
Please see next page

Massachusetts Institute of  
Technology

Docket 50-20

cc:

City Manager  
City Hall  
Cambridge, MA 02139

Assistant Secretary for Policy  
Executive Office of Energy Resources  
100 Cambridge Street, Room 1500  
Boston, MA 02202

Department of Environmental  
Quality Engineering  
100 Cambridge Street  
Boston, MA 02108

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REQUEST FOR ADDITIONAL INFORMATION  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY RESEARCH REACTOR  
DOCKET NO. 50-20

Please provide a copy of the following reference or background material that supports your application for license renewal:

1. Larger copies of the following figures:
  - a. SAR Figure 5-1
  - b. SAR Figure 5-2
  - c. SAR Figure 5-3.
2. A dimensioned copy of Figure 4-10.
3. The PARET Model Notebook for the reactivity transient analysis.
4. The RELAP5 Model Notebook for the reactivity transient analysis.
5. A copy of the Dutto and Evo PARET step reactivity insertion analysis report as referenced in SAR reference 13-14.
6. A copy of the Gaborieau RELAP5 step reactivity insertion analysis report as referenced in SAR reference 13-14.
7. A copy of the reactivity insertion analysis report that is the source of the results in SAR reference 13-15.
8. A copy of the following SAR references:
  - a. 4-6
  - b. 4-7
  - c. 4-10
  - d. 4-12
  - e. 4-24
  - f. 5-6
  - g. 6-1
  - h. 6-5
  - i. 9-1
  - j. 13-6
  - k. 13-7
  - l. 13-14
  - m. 13-15
  - n. 13-19
  - o. 13-20
  - p. 13-21
  - q. A-1

- r. A-2
- s. A-4
- t. 16-1
- u. 16-2
- v. 16-5.

- 9. A copy of - S. Sardy, Uncertainty Evaluations For MITR-III Applications, MITNE-305, Nuclear Engineering Department, Massachusetts Institute of Technology, April 1994.
- 10. A copy of - C. Kao, Simulation of MITR-II Primary System in Steady State, Nuclear Engineering Department, Massachusetts Institute of Technology, Special Project, 1992.
- 11. A copy of - K. Terry, Flow Coastdown and Time To SCRAM For MITR-II Special Report, Nuclear Engineering Department, Massachusetts Institute of Technology, 1993.