

# MIT NUCLEAR REACTOR LABORATORY

AN MIT INTERDEPARTMENTAL CENTER

Designated Original

John A. Bernard  
Director of Reactor Operations

Mail Stop: NW12-208a  
138 Albany Street  
Cambridge, MA 02139

Phone: 617 253-4202  
Fax: 617 253-7300  
Email: bernardj@mit.edu

January 15, 2008

U.S. Nuclear Regulatory Commission  
Washington, DC 20555  
Attn: Michael J. Case, Director  
Division of Policy and Relicensing  
Office of Nuclear Reactor Regulation

Re: NRC Special Inspection Report No. 50-020/2007-203 and Notice of Violation EA-06-113;  
Docket No. 50-20; License No. R-37

Dear Mr. Case

The Massachusetts Institute of Technology hereby submits the following response to the above referenced report and notice of violation.

One additional item of information has become available since the NRC prepared its report, and we note it here. The ring badge that was reported missing was located and sent to the vendor. Its reading is 210 mrem for the period 1 July 2007 to 15 August 2007.

The report noted two violations of NRC requirements. Corrective actions have been identified and implemented as follows:

a) **NOV #1 – Surveys:**

- i) Silicon procedures were revised to include requirements for periodic monitoring of work area dose rates. (Action completed 18 November 2007.)
- ii) Area monitors dedicated to the silicon project have been purchased and will be installed. These will provide silicon workers continuous indication of work area dose rates and also provide alarms at specific levels. (Action to be completed by 15 February 2008.)
- iii) A two person rule has been adopted for all silicon work pending the installation of the area monitors noted above. One role of the second person is to monitor background dose. (Action completed 26 November 2007.)
- iv) All silicon workers have participated or will participate in mandatory retraining and hands-on practicum sessions that include the performance of surveys. (Action completed for all workers except individual involved in the abnormal exposure by 29 November 2007. Action for the latter individual to be completed prior to resuming duties with anticipated completion date of 15 January 2008.)

DCO  
Rec'd on 1/23/08  
IEO1

b) **NOV #2 – Extremity Monitoring**

- i) All personnel who are issued dosimetry for the MIT Research Reactor (MITR) have been retrained on the proper use of extremity dosimeters. (Action completed 29 November 2007.)

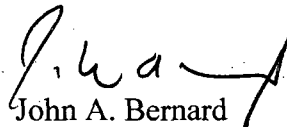
The NRC report dated 19 December 2007, listed a number of individual and programmatic factors that contributed to the cause of this abnormal exposure. MIT's internal review of the exposure identified these same factors, and we have developed corrective actions. These were reviewed by our Committee on Reactor Safeguards at its most recent regularly scheduled meeting (14 December 2007). We have either implemented these corrective actions or have established a schedule for so doing. Details of these changes to our program, as well as those taken in response to the NOV's, will be available for NRC to review during your next inspection.

Please contact John A. Bernard, Director of Reactor Operations, should you require any further information.

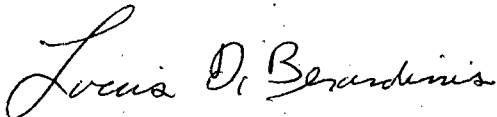
Sincerely,



Frederick McWilliams  
Reactor Deputy Director  
Office of Environment, Health & Safety



John A. Bernard  
Director of Reactor Operations  
MIT Nuclear Reactor Laboratory



Louis DiBerardinis  
Director  
Office of Environment, Health & Safety



David E. Moncton  
Director  
MIT Nuclear Reactor Laboratory

JAB/koc

cc: USNRC Johnny H. Eads, Branch Chief  
Research and Test Reactor Branch B  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

USNRC Senior Reactor Inspector  
Research and Test Reactors Section  
New, Research and Test Reactors Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

USNRC Senior Project Manager  
Same as above.