



NUCLEAR REACTOR LABORATORY

AN INTERDEPARTMENTAL CENTER OF
MASSACHUSETTS INSTITUTE OF TECHNOLOGY



Lin-Wen Hu, Ph.D.
Acting Director of Reactor
Operations

138 Albany Street, Cambridge, MA 02139-4296
Telefax No. (617)253-7300
Telephone No. (617)258-5860

Activation Analysis
Coolant Chemistry
Nuclear Medicine
Reactor Engineering

February 11, 2004

Alexander Adams, Jr., Senior Project Manager
Research and Test Reactors Section
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Response to Request for Additional Information; RE: EA-03-255

Dear Mr. Adams:

This is in response to your letter of 5 February 2004, in which you requested additional information concerning our reply to the Notice of Violation (NOV) issued to the Massachusetts Institute of Technology on 31 October 2003.

1. We have instituted corrective actions to address the underlying causes of degraded alertness. These are:
 - a) As reported to NRC earlier, we have increased emphasis in our training program on the need for adequate rest before assuming duties as either the reactor operator or the shift supervisor.
 - b) Our objective remains, as it always was, for all personnel to be rested adequately before assuming any shift and especially before transiting from a day or swing shift to a night shift. One option to achieve this would be to adopt a blanket policy under which anyone who is to transit from a day (0800-1600) or swing (1600-2400) shift to a night (0000-0800) shift would have at least 24 hours off duty. We are endeavoring to do that. For example, if an operator who regularly works the day or swing shift Monday-Friday is to cover the Saturday night shift, that individual would be off duty from 2400 on the previous Thursday. This practice has been in effect since October 2003, and it appears to be working well. However, we note that there may be circumstances under which this might not be possible. The person assigned to the night shift might become ill or otherwise be unavailable on short notice. Under such circumstances, the

AO20
IE01

Alexander Adams, Jr., Senior Project Manager
Nuclear Regulatory Commission
February 11, 2004
Page 2

Reactor Superintendent will verify with whomever is asked to cover the shift that such person is capable of so doing. If no such person is available, the reactor would be shut down.

2. We recognized from the outset the use of the audible alarm had both positive and negative considerations. The questions posed by NRC illustrate the negative. Our responses are as follows:
- a) The alarm is set to ring every thirty minutes on the hour and the half-hour, and is concurrent with the start of log readings.
 - b) Please see response to item question #1 above.
 - c) The alarm is a potential distraction under such circumstances. This issue was discussed at length before we decided to install the audible alarm, and we concluded that, on balance, installation of the alarm would be beneficial.

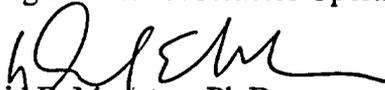
We have reassessed our evaluation of the audible alarm because of a recommendation from Dr. David Rorer who conducted an independent audit of reactor operations for the MIT Reactor Safeguards Committee in January 2004. We feel that the alarm did serve a useful purpose when it was originally installed. However, given that we now have the improved shift schedule in place (see response to question #1), the benefits of the alarm may now be outweighed by its drawbacks, and we request that approval be given to discontinue its use.

Please contact the undersigned or Dr. Bernard should you have any further questions.

Sincerely,



Lin-Wen Hu, Ph.D.
Acting Director of Reactor Operations



David E. Morfitt, Ph.D.
Director

JAB/koc

cc: Document Control Desk
Thomas F. Dragoun, Project Scientist