MASSACHUSETTS INSTITUTE OF TECHNOLOGY
MEDICAL DEPARTMENT
ENVIRONMENTAL MEDICAL SERVICE

77 MASSACHUSETTS AVENUE, 208-238
CAMBRIDGE, MASSACHUSETTS 02139

May 28, 1980

Hilbert W. Crocker, Acting Chief
Materials Radiological Protection Section
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pennsylvania 19406

Reference: Docket No. 030-~~0773~~ 0763

Dear Mr. Crocker:

This refers to your letter of 25 April 1980 regarding NRC inspection 80-01.

The information contained herein will be presented in the same sequence as the items contained in your letter.

1. Re: Radiological safety practices regarding drinking and smoking in radioisotope laboratories.

   The document entitled MIT Required Procedures For Radiation Protection specifies that there should be no smoking, eating, or storage of food in an area where unsealed and unpackaged sources of radioactive materials are being used, handled, transferred or stored.

   This requirement has been in effect since 1964 and our experience over the past 14 years has been excellent. Following is information relevant to the application of this requirement as an acceptable radiological safety practice.

   1) No smoking or eating within a High-level radioisotope laboratory is permitted.

   2) For Medium-level, Low-level, and Tracer-level radioisotope laboratories, smoking or eating is permitted only at desks or specific locations that are required to be maintained as areas where no radioactive material will be used, handled, transferred, or stored.

      These locations are monitored by the Radiation Protection Office as part of routine radioisotope laboratory survey program. The results of these surveys over the past 14 years have demonstrated that there has been no radioactivity contamination problem for any desk or specific location in any radioisotope laboratory where smoking or eating arrangements are permitted.

      On the basis of the above cited M.I.T. document and experience, and zonal control of the radioactive materials, we feel that M.I.T. is conforming to your referenced N.B.S. document (N.B.S. Handbook 92, Section 3.4, Page 18).

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2. Re: A device containing licensed materials was not labeled as required.

The reference device contained a ^{137}Cs source (2 mCi). The required label was affixed to the device on the date of the inspection.

The device is used to calibrate survey instruments. The technicians that utilize the source have been instructed to verify, each time the device is used, that the labels are firmly affixed and clearly visible. Full compliance was achieved on March 21, 1980.

3. Re: Requested comments concerning the frequency of removable contamination surveys in laboratory areas.

M.I.T.'s Required Procedures states: "During and immediately following the uses of radioactive material, personnel shall use an appropriate radiation detection instrument to establish that radiation exposure and contamination-spread are being adequately controlled".

In addition, the Radiation Protection Office (R.P.O.) personnel perform wipe tests during scheduled periodic surveys of each laboratory. These surveys are conducted on daily, weekly, monthly and quarterly frequencies depending on the classification of the laboratory. National Bureau of Standards Handbook 92 was used as a guide in establishing classification of the laboratories.

All wipe-test samples taken by R.P.O. are analyzed using instruments that are calibrated with N.B.S. traceable standards.

We believe the foregoing material clarifies and answers questions raised by Inspection 80-01.

Murray M. Bolton, Jr.
Acting Radiation Protection
Officer

MMB:bh

cc: Members of Radiation Protection Committee