

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 30-14984/85-01

Docket No. 030-14984

License No. 44-18388-01

Priority 3

Category E

Licensee: Institute for Medical Research of Bennington

110 Hospital Drive

Bennington, Vermont 05201

Facility Name: Institute for Medical Research of Bennington

Inspection At: Bennington, Vermont

Inspection Conducted: September 19, 1985

Inspectors:

Thomas Thompson
Thomas Thompson, Health Physicist

10/18/85
date

for John E. Glenn
John Miller, Health Physicist

10/18/85
date

Approved by:

John E. Glenn
John Glenn, Chief, Nuclear Materials
Safety Section B

10/18/85
date

Inspection Summary: Routine unannounced inspection of radiation safety program on September 19, 1985 (Report No. 30-14984/85-01).

Areas Inspected: Scope of operations, facilities and storage of materials.

Results: In the areas inspected, two apparent violations were identified: use of licensed material by unauthorized individuals (paragraph 4); and possession of licensee material in excess of limits specified on the license (paragraph 4).

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DETAILS

1. Persons Contacted

Peter A. Lalley, Ph.D., Director
Robert Constantino, Technician

2. Scope of Operations

The Institute for Medical Research of Bennington is authorized by NRC License No. 44-18388-01 to use millicurie quantities of hydrogen-3, carbon-14, phosphorus-32, phosphorus-33, sulfur-35, iodine-125, iodine-131, and chromium-51, in any form, for biochemical research, tissue culture and virological studies, autoradiography, chemical labeling of proteins, and animal studies.

3. Facility Description

The facility was as described in License Condition 15.

No violations were identified.

4. Tour of the Facility

Upon arriving at the Institute for Medical Research of Bennington on September 19, 1985, the inspectors asked the receptionist/secretary if they could speak with the two individuals authorized on License No. 44-18388-01. The receptionist stated that the two individuals in question left the Institute in the spring of 1984. The inspectors asked to see the person in charge, and the receptionist stated that she expected the Director to arrive shortly.

The inspectors toured the facility. Independent radiation level measurements were made by the inspectors in the laboratories and no significant radiation levels or areas of significant contamination were detected.

The inspectors interviewed the Director of the Institute when he arrived and asked him on two separate occasions if any work had been done at the Institute in the past year involving licensed material. Both times, the Director stated that no work had been performed using licensed material. The inspectors asked the Director why he had not had his license amended to authorize additional personnel to use the byproduct material on the Institute's license. The Director stated that he intended to amend his license and requested an application in his August 6, 1984 letter to the NRC, however, he stated he never received the application. The inspector informed the Director that the application with a licensing guide was sent with NRC Region I's September 28, 1984, reply to the licensee's August 6 letter. The Director stated that perhaps he did receive the

material but had misplaced it. The Director stated that since the Institute had had no call to use licensed material, he had not initiated a request for an amendment. He added that he intended to amend the license to add an authorized user whenever his program was ready to resume use of licensed material.

Following the discussion with the Director, the inspectors interviewed a technician who was working in the laboratory. The technician is supervised by the Director. When the technician was asked if he had used radioactive material during the past year he stated that he had used microcurie quantities of carbon-14 approximately one month ago. The inspectors asked the technician if he could determine the quantity of carbon-14 used and the date that it was used. The technician later reported to the inspectors that he had used three microcuries of carbon-14 on September 3, and three more microcuries on September 4, 1985.

A log book in one of the laboratories was reviewed by the inspectors and the records in the log indicated that the Institute had received five millicuries of chromium-51 on August 28, September 26, November 6, and November 20, 1984. The records also indicated that chromium-51 had been used at least eight times from August 29, 1984 to December 4, 1984 by a licensee employee who was not an authorized user.

Chromium-51 has a half life of 28 days; therefore, on November 20, 1984, the licensee apparently possessed at least 8.5 millicuries of chromium-51. Possession of 8.5 millicuries of chromium-51 is an apparent violation of License conditions 6.H., 7.H, and 8.H., which limit the amount of chromium-51 that the licensee may possess at any one time to a total of 5 millicuries.

The use of licensed material by the technician and another employee, who were neither authorized by License No. 44-18388-01 to use such material nor under the supervision of persons authorized by this license, is an apparent violation of Condition 12.

The inspectors questioned the Director concerning the use of carbon-14 and chromium-51 at his facility. He stated that he was not aware that an employee had used chromium-51. The Director also stated that he was not aware that the technician had used microcurie quantities of carbon-14 two weeks prior to this inspection. He added that he had asked the technician to perform a specific task and that this task could be accomplished by using either a radioactive or non-radioactive material. The Director stated that he had failed to specify to the technician exactly how to perform the task, but he did not specify to the technician that he was not to use carbon-14.

5. Storage of Materials

Licensed material was adequately secured in both restricted and unrestricted areas.

No violations were identified.

6. Exit Interview

The inspectors met with the licensee's Director at the conclusion of the inspection. The inspectors summarized the purpose and scope of the inspection and the violations identified.