

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 030-09831/85-02
030-10860/85-02
030-19978/85-02
070-01163/85-02

Docket Nos. 030-09831
030-10860
030-19978
070-01163

License Nos. 20-00805-10
20-00805-11
20-00805-13
SNM-1121

Priority II

Category F1A

Licensee: Boston University
Charles River Campus
Boston, Massachusetts 02215

Facility Name: Boston University

Enforcement Conference At: NRC Region I, King of Prussia, Pennsylvania

Enforcement Conference conducted: December 18, 1985

Prepared by: John E. Glenn 1/24/86
for John J. Miller, Health Physicist date signed

Approved by: John E. Glenn 1/24/86
John E. Glenn, Chief date signed
Nuclear Materials Safety Section B

Conference Summary: The findings documented in Inspection Report Nos. 030-09831/85-01, 030-10860/85-01, 030-19978/85-01, and 070-01163/85 were discussed. The licensee described planned corrective actions. The NRC's enforcement policy was explained.

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DETAILS

1.0 Persons Attending

Boston University

Dennis Berkey, Vice Provost
Stephen A. Williams, Assistant General Counsel
Joseph P. Mercurio, Vice President, Business Affairs
Robert E. Varnerin, Director - Life Safety
James W. Keating, Director - Physical Plant
James P. Miller, Radiation Safety Officer and Chairman
of the Radiation Safety Committee
Robert U. Johnson, Radiation Safety Consultant

U.S. Nuclear Regulatory Commission

James M. Allan, Deputy Regional Administrator
James H. Joyner, Chief, Nuclear Materials Safety and Safeguards Branch
John E. Glenn, Chief, Nuclear Materials Safety Section B
John J. Miller, Health Physicist
John T. Jensen, Health Physicist
Jay M. Gutierrez, Regional Counsel
Daniel J. Holody, Enforcement Specialist

2.0 Conference Summary

- 2.1 Introductions were made and Mr. Dennis Berkey, Vice Provost of Boston University, and the other licensee representative were welcomed to Region I by Mr. James M. Allan, Deputy Regional Administrator.
- 2.2 Mr. Allan explained the purpose of the Enforcement Conference. Mr. James H. Joyner, Chief, Nuclear Materials Safety and Safeguards Branch explained the format of the Enforcement Conference. Mr. Joyner stated that the conference was being held due to the number of apparent violations identified during the inspection conducted on September 26 and November 18 and 19, 1985 and the apparent lack of management control over the radiation safety aspects of the broad scope program. In addition, Mr. Joyner discussed the enforcement options available to the NRC.
- 2.3 Dr. John E. Glenn, Chief, Nuclear Materials Safety Section B, stated that, based upon the inspection findings, he had serious concerns about the control of this broad scope program. Based on these findings, it appeared to him that isotopes could have been ordered, received, used and transferred without the knowledge, review, or approval of the Radiation Safety Office.

2.4 Mr. Dennis Berkey stated that the NRC inspection exposed the absence of active academic management in the radiation safety program at the University. Mr. Berkey added that the following steps were being taken to rectify the situation:

- i. The Radiation Safety Officer will report directly to the Vice Provost of the University.
- ii The Vice Provost will meet regularly with the Radiation Safety Committee as an ex-officio member.
- iii. A member from each of the physics, biology, and chemistry departments who is actively using licensed material will serve on the Radiation Safety Committee and the three department heads will all serve as ex-officio members.

Mr. Berkey also stated that the University was aware that Dr. James P. Miller, the Radiation Safety Officer, (RSO), needed time and support in order for him to visit the authorized users and tend to the details involved with managing a radiation safety program. Mr. Berkey emphasized that he was speaking on behalf of the University Provost when he assured the group that Dr. Miller's academic responsibilities would be arranged in a manner that would permit him to devote sufficient time to his radiation safety duties. He stated that Dr. Miller had also been assured that whatever resources he needed to run the program, he would receive. Dr. Miller stated that he had been given a secretary to maintain the records associated with the radiation safety program.

2.5 Mr. Joyner asked the Boston University representatives how they would administratively control the procurement of radioactive material. Mr. Berkey stated that the Provost issued a directive requiring that all purchases of radioactive material be directed through the RSO. Dr. Miller (RSO) indicated that he had called purchasing and informed them to flag orders for radioactive material which he had not counter-signed.

2.6 Dr. Miller and Mr. Robert Johnson, Radiation Safety Consultant, addressed each apparent violation identified in Inspection Report No. 85-01. The RSO stated that he had approved the transfer of material from one user to another user (Item 7 of Inspection Report), although he was unable to recall this approval at the time of the inspection. A summary of the RSO's and Consultant's responses to the most significant violations are summarized as follows:

- 2.6.1 The RSO addressed the licensee's failure to secure licensed material stored in a refrigerator. He stated that he had the researcher remove the licensed material from the refrigerator until the door lock was repaired. The door lock was repaired the following day and the RSO has returned on several occasions to find the door properly locked.
- 2.6.2 The RSO reported that a complete survey of the current inventory of radioactive materials possessed by all authorized users has been performed to ensure that none possessed material in amounts exceeding their internal authorizations, or in excess of the BU broad license limits. No violations were noted. In addition, all users are required to submit new permit applications by January 1, 1986. These applications will be used by the Radiation Safety Committee to re-authorize all users of radioactive material at the University. Detailed handling protocols will be listed on each authorization and the process is to be completed by the end of January, 1986.
- 2.6.3 Concerning Laboratory 379, the RSO reported that a technician performed a survey of this laboratory on November 23, 1985, and only an isolated spot of contamination was found that was decontaminated to background. A dose assessment was performed for personnel who had failed to wear dosimetry while handling phosphorus-32. The safety consultant estimated a dose equivalent of 40 millirems to the whole body and 640 millirems to the extremities of the authorized user and something less to his assistant. Urinalysis was also required of these personnel and the results were negative. Permission to use phosphorus-32 by the personnel in Laboratory 379 was suspended until the RSC could approve their proposed protocols.
- 2.6.4 Concerning the use of licensed material by an unauthorized researcher, the RSO stated that the individual in question was instructed not to use licensed material until a permit application was completed and approved by the RSC. The RSC approved the investigator's application on November 26, 1985.
- 2.7 Mr. Allan thanked Mr. Berkey and his staff for coming and emphasized that their informative presentation would be considered during NRC management review of these incidents for subsequent enforcement action.