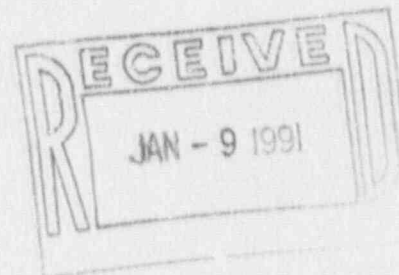




South Dakota State University  
 Box 2201  
 Brookings, SD 57007-2198

Vice President for Administration  
 (605) 688-6157

January 3, 1991



United States Nuclear Regulatory Commission - Region IV  
 ATTN: Mr. A. Bill Beach, Director  
 Division of Radiation Safety and Safeguards  
 611 Plaza Drive, Suite 1000  
 Arlington, TX 76011

REFERENCE: License: 40-02194-17  
 Docket: 030-13079/90-01

Dear Mr. Beach:

This is South Dakota State University's response to the Notice of Violations found during the radiation safety inspection carried out by Mr. Robert Brown on November 5-6, 1990, and reported in your letter of December 5, 1990.

A review of the violations cited by Mr. Brown has been completed by the Radiation Safety Committee, the office of Research and this office. This review concluded, in part, that additional staff resources are needed to support the requirements of a number of regulatory agencies, including specifically the Nuclear Regulatory Commission. The University was in the process of expanding its commitment in this area and will proceed forthwith, under the leadership of the Director of Research, in this regard.

With regard to the failure of the Radiation Safety Committee to meet regularly, we believe the additional staff support will facilitate more systematic preparation of agenda materials for the Committee so that it can meet at least on a quarterly basis. The pending license renewal application includes a commitment to quarterly meetings of the Radiation Safety Committee.

The University's response to each of the violations is as follows:

- A. Item H on page A3 of the application states that the radiation safety officer shall make two inspections each year of the various facilities using radioisotopes.

Contrary to the above, the radiation safety officer stated that he routinely did not perform two inspections per year of each facility using radioisotopes. He stated that some facilities were not inspected at all.

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**RESPONSE:**

1. **Reason for violation:** The limited time allocation was aggravated by the need to prepare and submit the Decommissioning Funding Plan in July. The development of this Plan took up most of the RSO's summer appointment except for the required routine of badge exchanges, receipt of shipments and training of new users.
2. **Corrective steps taken:** All areas where unsealed sources are used have been visited by the RSO since the NRC inspection. Smear tests have been taken. Smear test records have been checked. General adherence to the requirements of the radiation safety program was verified.
3. **Corrective action to be taken:** With augmentation of staffing in the Radiation Safety Office, it should be possible for the RSO or the technical assistant to make the required visits on a semiannual basis.
4. **Compliance date:** South Dakota State University is now in compliance. The employment of a technical assistant should ensure continued compliance.

- B. Item 11B of the application requires that calibration of survey meters be performed every 6 months.

Contrary to the above, the radiation safety officer stated that survey meters used in various research laboratories were not routinely calibrated every 6 months, but rather at 12-month intervals.

**RESPONSE:**

1. **Reason for violation:** The limited time allocation was aggravated by the need to prepare and submit the Decommissioning Funding Plan in July. The development of this Plan took up most of the RSO's summer appointment except for the required routine of badge exchanges, receipt of shipments and training of new users.
2. **Corrective steps taken:** The survey meters have been calibrated since the NRC inspection. The survey meter (Eberline ESP-1, #386) and probes (Eberline HP-260, #603285; Eberline HP-270, #605045; Ludlum 44-3, #PR 048203) used by the RSO were calibrated by Ludlum Measurements on September 6, 1990. A Ludlum Model 3 meter (#76062) with Model 44-7 probe (PR 069824) was calibrated on July 29, 1990, at the time of purchase. A total of 5 meters were in need of calibration.

3. **Corrective action to be taken:** With augmentation of staffing in the Radiation Safety Office, it should be possible for the RSO or the technical assistant to make required calibrations on a semiannual basis.
  4. **Compliance date:** South Dakota State University is now in compliance.
- C. Item 15D, No. 4, of the application requires, in part, that records be maintained of the dates and results of smear surveys.

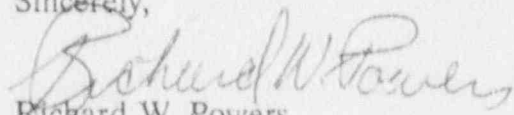
Contrary to the above, no records were maintained of smear surveys performed in the Winter Hardiness Laboratory since September 14, 1988.

**RESPONSE:**

1. **Reason for violation:** If semiannual visits by the RSO had been made on a timely basis, the lack of smear test records would have been discovered. The requirement for biweekly smear tests and maintenance of records was discussed during the training session held on May 15, 1990, for the workers in the Winter Hardiness Laboratory. It should be noted that P-32 usage in the laboratory began on May 30, 1990, approximately 5 months prior to the NRC inspection.
2. **Corrective steps taken:** Verbal and written instructions regarding the need and procedures for smear tests and records have been given to the Principal Investigator and the workers in this laboratory. The Principal Investigator has formally notified the RSO of the institution of corrective procedures and his intent to adhere to the requirements. Responsibility for taking and recording the tests has been assigned. The RSO has verified that smear testing has begun.
3. **Corrective steps to be taken:** Verification of continued adherence to requirements for smear tests and records will be made during the semiannual inspections by the RSO.
4. **Compliance date:** South Dakota State University is now in compliance. The employment of a technical assistant should ensure continued compliance.

The inspection by Mr. Brown was most helpful in that it focused University attention on the goals of its Radiation Safety Program. If you have any questions regarding this response, do not hesitate to contact me.

Sincerely,



Richard W. Powers

Vice President for Administration