

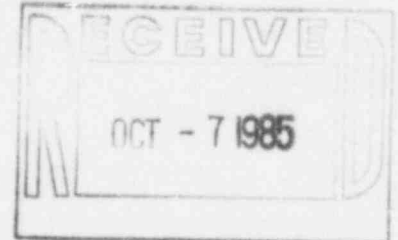


SOUTH DAKOTA STATE UNIVERSITY
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Office of the President
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September 30, 1985

United States Nuclear Regulatory Commission - Region IV
ATTN: Mr. R.E. Hall, Chief
Radiological and Safeguards Programs Branch
611 Plaza Drive, Suite 1000
Arlington, TX 76011



REFERENCE: Docket No. 30-13079
License No. 40-02194-17/85-01; 85-02

Gentlemen:

This is South Dakota State University's response to the Notice of Violations found during the radiation safety inspection carried out by Mr. L.T. Ricketson on June 26, 1985.

A review of the level IV and V violations cited by Mr. Ricketson has been completed, and South Dakota State University is now in full compliance with each item.

Subsequent to the June, 1983 application for license renewal, the former radiation safety officer retired. With the change in personnel, South Dakota State University moved to enhance its radiation safety program through appointment of an RSO with a specific portion of time dedicated to radiation safety and provided funding for the RSO to participate in an appropriate training program. Dr. Spinar was engaged in an effort to enhance radiation safety at the university through development of more complete written policies, procedures, and timetables when the inspection occurred. This review has been most helpful in identifying those areas where greater attention has been needed.

1. 10 CFR 20.201(b) requires that each licensee shall make or cause to be made such surveys as necessary to comply with 10 CFR Part 20. 10 CFR 20.105 specifies the radiation levels permissible in an unrestricted area.

Contrary to this requirement, on the date of inspection, radiation measurements had not been made in the unrestricted area, outside room 09E, in order to evaluate and show compliance with the limits stated in 10 CFR 20.105. Room 09E is an area used to store sources and perform classroom demonstrations.

Response:

(1) Reason for violation: It is believed that the Area Survey for 09E of Shepard Hall had been carried out by the previous Radiation Safety Officer but the records of the Survey could not be found.

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(2) Corrective steps taken: The Area Survey for 09E Shepard Hall has been completed and recorded. No radiation above background was detected in the unrestricted area.

(3) Corrective action to be taken: Area surveys will be made annually; or whenever there is a significant change in configuration. Area survey dates have been added to the spread sheets used to list the dates for leak tests. These dates are placed on the calendar of the RSO.

(4) Compliance date: South Dakota State University is now in compliance.

2. License Condition 13 requires that each sealed source containing licensed material, other than hydrogen-3, with a half-life greater than 30 days and in any form other than gas, shall be tested for leakage and/or contamination at intervals not to exceed 6 months.

Contrary to this condition, cobalt sources, serial numbers 1234 and 402, have not been tested from 1983 to the time of inspection, although they have been used during this period.

Response:

(1) Reason for violation: Leak tests on 27 other sealed sources in active use were carried out on the appropriate schedule. These two sources have limited usage in the instructional program, and were not on the regular testing schedule because of the level of activity associated with these sources. Procedures to limit exposures during testing by the RSO were being investigated. The inspection took place before the investigation was completed. An examination since the inspection indicates that the source number 402 was not used since 1983 although the records of the RSO did not indicate this. The correct serial number on the other source is 1243.

(2) Corrective steps taken: Procedures for conducting leak tests have been established and leak tests on these sources have now been completed.

(3) Corrective action to be taken: A spread sheet listing all units requiring periodic leak testing or calibration has been established. Dates when these tests are carried out are recorded. The dates for the next tests or calibrations are placed on the calendar for the RSO.

(4) Compliance date: South Dakota State University is now in compliance.

3. License Condition 23 requires that licensed activities shall be conducted in accordance with statements, representations, and procedures contained in the application dated June 14, 1983; letters dated November 9, 1983, January 18, 1984, and June 29, 1984.

a. Item 12, page 17 of the information appended to the application dated June 14, 1983, states that film badges are routinely made available to all who use byproduct material.

Contrary to this requirement, on the date of inspection, individuals in room 153 of the Animal Science Complex were using gamma emitting radioisotopes without the use of personnel monitoring.

Response:

(1) Reason for violation: The decision not to issue film badges to these workers had been made by the previous RSO and was not reviewed until the inspection.

(2) Corrective steps taken: All workers in this area are now an integral part of the monthly film badge service.

(3) Corrective action to be taken: In order to prevent oversights in the future, the "Authorization to Use Radioisotopes" form has been modified to include a line concerning the need for personnel monitoring. Any decision not to require personnel monitoring devices must be explained as a part of the approval process.

(4) Compliance date: South Dakota State University is now in compliance.

b. Item 15D states that smear tests will be performed in work areas to detect contamination.

Contrary to this requirement, smear tests had not been performed in room 152 of the Animal Science Complex from September, 1983 to the time of inspection.

Response:

(1) Reason for violation: Further investigation of why this occurred showed that the last recorded smear test was in September, 1983, at which time a graduate research project was completed. No work was carried out with radioisotopes in the area until April, 1985. No smear tests were made between April, 1985 and the inspection.

(2) Corrective steps taken: Smear tests are now being made and recorded.

(3) Corrective action to be taken: The RSO will verify that the smear tests are being completed and recorded during his semiannual visits to work areas.

(4) Compliance date: South Dakota State University is now in compliance.

c. Page A3 of the information appended to the application dated June 14, 1983, states that the Radiation Protection Officer will make inspections of user work areas, a minimum of two times each year.

Contrary to this requirement, the Radiation Protection Officer stated that he had been unable to visit all work areas the required two times per year.

Response:

(1) Reason for violation: This oversight resulted from the change in personnel referenced earlier.

(2) Corrective steps taken: The RSO has made visits to the work areas.

(3) Corrective action to be taken: Work area visits will be carried out as required by the license conditions. These visits have been added to the spread sheet used for leak tests and the dates added to the calendar of the RSO.

(4) Compliance date: South Dakota State University is now in compliance.

d. Page A3 of the Information appended to the application dated June 14, 1983, states that the Radiation Protection Officer will maintain records of semi-annual inventories of byproduct material possessed by each user.

Contrary to this requirement, inventories were not maintained for the period June 14, 1983, to the time of inspection.

Response:

(1) Reason for violation: Information from the Materials Receipt and Disposal Forms was entered into a computer based inventory system during the Summer, 1984. Because of the pressures to bring other aspects of the Radiation Safety Program into compliance on an orderly basis, verification of the accuracy of this information was not completed before the inspection took place.

(2) Corrective steps taken: As a result of a directive from the Vice President for Academic Affairs to all users that an inventory report be made to the RSO, a baseline inventory of materials on the campus as of August 1, 1985, has been established.

(3) Corrective action to be taken: These reports are being incorporated into a spread sheet program for use on a microcomputer by the RSO. This system will provide current inventories.

(4) Compliance date: South Dakota State University is now in compliance.

e. Item 15D, page 45, states that records shall be maintained of the dates and results of smear tests for contamination.

Contrary to this requirement, at the time of inspection, such records were not maintained by the user in room 153 of the Animal Science Complex.

Response:

(1) Reason for violation: Smear tests were being made but not recorded since the results were negative.

(2) Corrective steps taken: Procedures have now been changed so that all smear tests are being recorded.

(3) Corrective action to be taken: The RSO will verify that the smear tests are being completed and recorded during his semi-annual visits to the work areas.

(4) Compliance date: South Dakota State University is now in compliance.

4. 10 CFR 30.51(a) requires that each person who receives byproduct material pursuant to a license issued pursuant to the regulations in 10 CFR 30 through 35, shall keep records showing the receipt, transfer, and disposal of such byproduct material.

Contrary to this requirement, at the time of inspection, records of disposal were not available in room 152 of the Animal Science Complex where materials were disposed through the sanitary sewage system.

Response:

(1) Reason for violation: Until June, 1983, the former RSO was involved in the group using the radioisotopes and routinely maintained the records of disposal. Upon his retirement, the principal investigator was not aware of the need for him to now maintain the records of disposal.

(2) Corrective steps taken: Wastes are now being held until the RSO is available to monitor and record their disposal.

(3) Corrective action to be taken: The requirement for the RSO to be present when disposal is made through the sanitary sewage system is now a campus wide policy and has been disseminated to all users.

(4) Compliance date: South Dakota State University is now in compliance.

5. 10 CFR 71.5(a) requires, in part, that no licensee shall transport any licensed material outside the confines of his plant or to other place of use, or deliver any licensed material to a carrier for transport, unless the licensee complies with applicable requirements of the regulations appropriate to the mode of transport, of the Department of Transportation in 49 CFR Parts 170-189.

a. 49 CFR 173.394(a)(1) requires, in part, that each shipper of a Specification 7A package must maintain on file a complete certification and supporting safety analysis demonstrating that the construction methods, package design, and materials of construction are in compliance with the specification.

Contrary to this requirement, the licensee did not have the Specification 7A package certification for Type A quantities of licensed material shipped on the public highways of the State of South Dakota.

Response:

(1) Reason for violation: All containers used to transport the moisture gauges owned by South Dakota State University meet the Specification 7A packaging requirements. The supporting certifications were held by the users. Copies of the certificates were not in the possession of the RSO at the time of the inspection.

(2) Corrective steps taken: Copies of the Certification have been obtained for all units and are now on file in the office of the RSO.

(3) Corrective action to be taken: It is, and has been, University policy that all licensed material be received by the RSO. When material requiring Specification 7A packaging is received in the future, the RSO will keep a copy of the certification for his files.

(4) Compliance date: South Dakota State University is now in compliance.

b. 49 CFR 173.398(a), Note 1, requires, in part, that each shipper of special form radioactive material shall maintain on file for at least one year after the last shipment, a complete certification and supporting safety analysis demonstrating that the special form material meets the requirements of paragraph (a) of that section.

Contrary to this requirement, the licensee did not have the certification for the special form radioactive material transported on the public highways in the State of South Dakota.

Response:

(1) Reason for violation: All special form radioactive material owned by South Dakota State University meets the requirements of 49 CFR. The supporting certifications were held by the users. Copies of the certificates were not in the possession of the RSO at the time of the inspection.

(2) Corrective steps taken: Copies of the certification have been obtained for all units and are now on file in the office of the RSO.

(3) Corrective action to be taken: It is, and has been, University policy that all licensed material be received by the RSO. When special form material is received in the future, the RSO will keep a copy of the certification for his files.

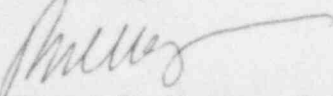
(4) Compliance date: South Dakota State University is now in compliance.

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For your further information, a time utilization and need survey of the activities of the Radiation Safety Officer is now in progress. South Dakota State University will allocate the resources necessary to have a Radiation Safety Program that meets the requirements of the Nuclear Regulatory Commission.

The inspection by Mr. Ricketson was most helpful and has served to focus university attention on the goals of our Radiation Safety Program. The understanding, courtesy, and helpfulness of Mr. Ricketson are very much appreciated. Likewise, we are most appreciative of the consideration shown by Mr. Bangart, Mr. Holland, and Mr. Everett.

Sincerely,



Robert T. Wagner, President
South Dakota State University

RTW:pk