

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

West Virginia University  
Morgantown, West Virginia

Docket No. 030-20199  
License No. 47-23035-01  
EA 85-134

During a Nuclear Regulatory Commission (NRC) inspection conducted on October 23-24, 1985, several violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1985), the Nuclear Regulatory Commission proposes to impose civil penalty pursuant to Section 234 of the Atomic Energy Act of 1954, as amended ("Act"), 42 U.S.C. 2282, PL 96-295, and 10 CFR 2.205. The particular violations and associated civil penalty are set forth below:

A. License Condition 24 requires that, except as specifically provided otherwise by this license, the licensee shall possess and use licensed material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in an application dated May 22, 1984; West Virginia University Radiation Safety Manual dated December 1981; letters dated July 30, 1984, December 12, 1984, and March 1, 1985; and attachments thereto.

1. Section 9.11.3 of the Radiation Safety Manual states that a baseline bioassay (i.e., urinalysis or thyroid scan) is to be performed on individuals prior to exposure to I-125. Further, a bioassay is to be conducted for such individuals between 6 and 48 hours after exposure to 1 mCi or greater of I-125 in a fume hood. Persons working in a laboratory which has on hand 10 mCi or greater of I-125 are to have a bioassay at least quarterly.

Contrary to the above:

- a. At least three researchers performed iodinations in a fume hood involving exposure to I-125 approximately every two weeks during the period from August 1984, to October 23, 1985, yet no baseline bioassay was conducted for these individuals during this period prior to their initial use of the material.
- b. One individual, who received a baseline bioassay on February 11, 1985, had not received any further bioassay as of October 23, 1985. During this period, the individual had performed iodinations with 1 mCi or greater quantities of I-125 and had worked in a laboratory which had on hand 10 mCi or greater of I-125.

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- c. As of October 23, 1985, four students who performed iodinations routinely for approximately 2 years did not receive either baseline or post-exposure bioassays.

- 2. Section 4.02.6 of the Radiation Safety Manual requires that surveys appropriate to the radionuclides be performed in laboratories either daily or following an experiment.

Section 9.7.4.1 of the Radiation Safety Manual requires that work areas be surveyed for contamination at least once per day.

Contrary to the above, as of October 23, 1985, surveys in laboratories were not performed either daily or following an experiment, and work areas were not surveyed at least once per day in that:

- a. Surveys have not been performed in Laboratory 3063 since April 19, 1985. Iodinations were performed in this Laboratory after this date and as recently as October 17, 1985.
- b. Since the date of initial licensing, only monthly surveys have been performed in Laboratory 3101 and no surveys were performed during October and December 1983, and during March, May, and November 1984, even though radionuclides have been used in this laboratory on a regular basis.

- 3. ALARA program Section III.a, which is in an appendix to the Radiation Safety Manual, requires that the Radiation Safety Officer perform quarterly and annual reviews of the Radiation Safety Program.

Contrary to the above, quarterly and annual reviews were not performed by the Radiation Safety Officer in 1983, 1984, and up to October 24, 1985.

- 4. Item 11 of the application dated May 22, 1984, requires that portable radiation survey instruments be calibrated quarterly.

Contrary to the above, as of October 24, 1985, portable radiation survey instruments in use in Laboratories 3101 and 3113 had not been calibrated quarterly. They were last calibrated February 20, 1985. The portable radiation survey instrument in use at Laboratory G013 was last calibrated August 20, 1984.

- 5. Section 3.5 of the Radiation Safety Manual requires that the Radiation Research Committee meet at least quarterly.

Contrary to the above, for the period of November 15, 1983, to June 4, 1985, Radiation Research Committee meetings were not conducted as evidenced by the fact that minutes of the Radiation Safety Committee did not indicate meetings were held.

- B. License Condition 14.C. requires that each sealed source containing licensed material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas, shall be tested for leakage and/or contamination at intervals not to exceed six months.

Contrary to the above, three sealed Nickel-63 sources (15 mCi) contained in gas chromatographs, a Cesium-137 sealed source (10 mCi) contained in a Troxler Moisture Density Gauge, and a Cobalt-60 sealed source (5.6 mCi) used to calibrate survey instruments were not tested for leakage or contamination during the period from December 1983 to October 24, 1985. Nickel-63, Cesium-137, and Cobalt-60 all have half-lives greater than thirty days and are all in a form other than gas.

- C. License Condition 20 requires that a physical inventory shall be conducted every six months to account for all licensed materials received and possessed under the license. Records of the inventories shall be maintained for two years from the date of the inventory and shall include the quantities and kinds of licensed material, location of sources, and the date of the inventory.

Contrary to the above, the licensee failed to perform physical inventories to account for all licensed material received and possessed under the license for the period January - October 23, 1985. Further, prior inventory reports, dating from the start of the license until January 1985, did not include licensed material contained in sealed sources and radioactive waste storage areas.

- D. 10 CFR 20.201(b) requires that each licensee shall make or cause to be made such surveys as may be necessary for the licensee to comply with the regulations in 10 CFR Part 20 and are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present.

10 CFR 20.202(a)(1) requires that each licensee shall supply appropriate personnel monitoring equipment for individuals who enter restricted areas and who may receive a dose in any calendar quarter in excess of 25 percent of the value specified in 10 CFR 20.101(a).

Contrary to the above, as of October 23, 1985, the licensee failed to identify and evaluate the need to provide extremity monitoring devices to persons using millicurie quantities of Phosphorus-32, which could have led to an individual receiving a dose in excess of 25 percent of the value specified in 10 CFR 20.101(a).

- E. 10 CFR 20.401(b) requires a licensee to maintain records showing the results of surveys required by 10 CFR 20.201(b).

10 CFR 20.201(b) requires a licensee to make such surveys as may be necessary for the licensee to comply with the regulations in 10 CFR Part 20 and are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present.

License Condition 24 requires that the licensee possess and use licensed material in accordance with the West Virginia University Radiation Safety Manual.

Section 4.02.6 of the Radiation Safety Manual requires that surveys appropriate to the radionuclides be performed in laboratories either daily or following an experiment.

Contrary to the above, as of October 23, 1985, the licensee had not maintained records of surveys performed in Laboratory 3113 since May 14, 1985.

Collectively, these violations have been evaluated in the aggregate as a Severity Level III problem (Supplements IV and VI).  
(Cumulative Civil Penalty - \$1,250 - assessed equally among the violations.)

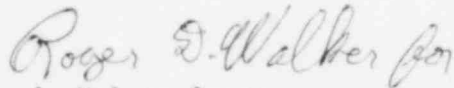
Pursuant to the provisions of 10 CFR 2.201, West Virginia University is hereby required to submit to the Director, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region II, 101 Marietta Street, N.W., Suite 2900, Atlanta, Georgia 30323, within 30 days of the date of this Notice a written statement or explanation including for each violation: (1) admission or denial of the violation, (2) the reasons for the violation if admitted, (3) the corrective steps which have been taken and the results achieved, (4) the corrective steps which will be taken to avoid further violations, and (5) the date when full compliance will be achieved. If an adequate reply is not received within the time specified in this Notice, the Director, Office of Inspection and Enforcement, may issue an order to show cause why the license should not be modified, suspended, or revoked or why such other action as may be proper should not be taken. Consideration may be given to extending the response time for good cause shown. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, the response shall be submitted under oath or affirmation.

Within the same time as provided for the response required above under 10 CFR 2.201, West Virginia University may pay the civil penalty by letter addressed to the Director, Office of Inspection and Enforcement, with a check, draft, or money order payable to the Treasurer of the United States in the cumulative amount of One Thousand Two Hundred Fifty Dollars (\$1,250) or may protest imposition of the civil penalty in whole or in part by a written answer addressed to the Director, Office of Inspection and Enforcement. Should West Virginia University fail to answer within the time specified, the Director, Office of Inspection and Enforcement, will issue an order imposing the civil penalty in the amount proposed above. Should West Virginia University elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalty, such answer may: (1) deny the violations listed in this Notice in whole or in part, (2) demonstrate extenuating circumstances, (3) show error in this Notice, or (4) show other reasons why the penalty should not be imposed. In addition to protesting the civil penalty in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the five factors addressed in Section V.B of 10 CFR Part 2, Appendix C, should be addressed. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201 but may incorporate parts of the 10 CFR 2.201 reply by specific reference (e.g., citing page and paragraph numbers) to avoid repetition. West Virginia University's attention is directed to the other provisions of 10 CFR 2.205 regarding the procedure for imposing a civil penalty.

Upon failure to pay the penalty due, which has been subsequently determined in accordance with the applicable provisions of 10 CFR 2.205, this matter may be referred to the Attorney General, and the penalty, unless compromised, remitted, or mitigated may be collected by civil action pursuant to Section 234c of the Act, 42 U.S.C. 2282.

FOR THE NUCLEAR REGULATORY COMMISSION

  
J. Nelson Grace  
Regional Administrator

Dated at Atlanta, Georgia  
this 28 day of January 1986