

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Youngstown State University
Youngstown, Ohio

Tickets Nos. 030-18335;
040-08819; 070-03007;
and 999-90003

Licenses Nos. 34-14187-02
SUD-1417; SNM-1941; and
General License 10 CFR 31.5

EA 91-022

During an NRC inspection conducted on January 30 and 31, 1991, 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 (1990), the Nuclear Regulatory Commission proposes to impose a civil penalty pursuant to Section 234 of the Atomic Energy Act of 1954, as amended (Act), 42 U.S.C. 2282, and 10 CFR 2.205. The particular violations and associated civil penalty are set forth below:

A. Violations Associated with License No. 34-14187-02

1. 10 CFR 30.51(a) requires that each licensee keep records showing the receipt, transfer, export, and disposal of byproduct material.

Contrary to the above, the licensee did not keep records of the receipt and disposal of byproduct material. Specifically, the licensee did not keep receipt records of in-vitro kits containing byproduct material received between January 1986 and January 31, 1991 and did not keep any records of disposals made between January 1986 and August 1990.

2. 10 CFR 30.3 requires, in part, that except for persons exempted, no person shall possess or use byproduct material except as authorized by a specific or general license issued pursuant to Title 10, Chapter 1, Code of Federal Regulations.

Contrary to the above, on January 31, 1991, the licensee possessed a 165 microcurie americium-241 source without authorization in a general or specific license and was not exempted from requiring a license.

3. Former License Condition 20, which was in effect from September 19, 1983, until superseded on May 1, 1989, by License Condition 22, required that licensee material be possessed and used in accordance with statements, representations and procedures contained in a letter dated September 2, 1983 and other referenced documents.

Item 7 of the letter dated September 2, 1983 required that the Licensee follow the procedures delineated in "Model Procedures for Safely Opening Packages Containing Radioactive Material," Appendix F, Regulatory Guide 10.8, "Guide for the Preparation of Applications for Medical Use Programs," Revision 1, October 1980.

Item 2 of Appendix F, Regulatory Guide 10.8, Revision 1 required that the licensee survey each incoming package of radioactive material and record the results of those surveys.

Contrary to the above, between January 1986 and April 30, 1989, the licensee did not record survey results of any incoming packages of radioactive material.

4. License Condition 16 (formerly License Condition 25) requires, in part, that the licensee conduct a physical inventory every six months to account for all sealed and foil sources received and possessed under the license.

Contrary to the above, between October 27, 1987, and August 1990, the licensee had not conducted a physical inventory of any sealed or foil sources received and possessed under the license.

5. License Condition 12 (formerly License Condition 13) requires, in part, that each sealed source containing licensed material, unless otherwise excepted in this Condition, be tested for leakage and/or contamination at intervals not to exceed six months. Records of leak test results shall be maintained for inspection by the Commission.

Contrary to the above, between December 22, 1987 and May 7, 1989 and between May 9, 1989 and July 25, 1990, the licensee did not test a nominal 10 millicurie nickel-63 source for leakage and the source was not otherwise excepted from leak testing. In addition, records of the results of the leak test conducted on July 26, 1990 were not maintained for inspection by the Commission.

6. License Condition 22, which became effective on May 1, 1989, requires that licensed material be possessed and used in accordance with statements, representations and procedures contained in an application dated August 23, 1988, and other referenced letters.

Item 8(d) of the August 23, 1988 application requires, in part, that the Responsible Person (RP) performs surveys and wipe tests in the laboratory facilities at the conclusion of each experiment. The use of millicurie quantities of iodine-131 (I-131) and chromium-51 (Cr-51) also requires monthly RSO surveys, the use of sub-millicurie quantities of hydrogen-3 (tritium) requires surveys by the RSO every six months, and the use of microcurie quantities of iodine-125 (I-125) requires quarterly surveys by the RSO. Records of all surveys and monitoring conducted will be maintained by the RSO.

Former License Condition 20, which was in effect from September 19, 1983 until superseded on May 1, 1989, by License Condition 22, required that licensed material be possessed and used in accordance with statements, representations and procedures contained in an application dated May 13, 1983 and other referenced letters.

Item 15(e) of the May 13, 1983 application required, in part, that the RSO survey and monitor each laboratory other than Ward Beecher Hall, Room 322 at the conclusion of each experiment.

Contrary to the above, several laboratories where unsealed sources of radioactive material were used had not been surveyed as required. Specifically:

- a. In Cushwa Hall, Rooms No. 2125 and 2127, where millicurie quantities of I-131 were used in the Fall 1987 and in the Fall 1988, RSO surveys were not conducted at the conclusion of each experiment. In addition, RP surveys were not conducted at the conclusion of each Fall 1989 experiment and monthly RSO surveys were not conducted.
 - b. In Ward Beecher Hall, Room No. 4019, where at least 250 microcuries of tritium were used in the Fall of 1986, no RSO surveys had been conducted at the conclusion of each experiment.
 - c. In Cushwa Hall, Rooms No. 2095 and 2096, where microcurie quantities of I-125 were used quarterly, RSO surveys were not conducted at the end of each experiment between January 1984 and April 30, 1989. Additionally, quarterly RSO surveys were not conducted between May 1989 and August 1990.
 - d. In Cushwa Hall, Room No. 2095a, microcurie quantities of tritium were periodically used. As of August 1990, required RSO surveys had not been conducted. In addition, RP surveys had not been conducted between May 1, 1989 and January 31, 1991 at the conclusion of each experiment.
7. License Condition 22 requires that licensed material be possessed and used in accordance with statements, representations and procedures contained in an application dated August 23, 1988, and other referenced letters.

Item 8(d) of the application dated August 23, 1988, requires, in part, that housekeeping, security, central receiving and maintenance personnel be instructed both at hire and annually thereafter in the radiation protection topics specified in this item.

Former License Condition 20, which was in effect from September 19, 1983, until superseded on May 1, 1989, by License Condition 22, required that licensed material be possessed and used in accordance with statements, representations and procedures contained in a letter

dated September 2, 1983, and other referenced documents. Item 6(b) of the September 2, 1983, letter required the same training as that specified in Item 8(d) of the August 23, 1988 application.

Contrary to the above, between January 1986 and January 31, 1991, the Licensee had not instructed any of the housekeeping, security, central receiving, and maintenance personnel in the specified topics.

8. License Condition 22 requires that licensed material be possessed and used in accordance with statements, representations and procedures contained in an application dated August 23, 1988, and other referenced letters.

Item 10(a) of the August 23, 1988 application requires that all purchases of radioisotopes be approved in advance by the Radiation Safety Officer and processed by the purchasing department of the University. Additionally, all radioisotopes purchased must be delivered to the Radiation Safety Officer who will then deliver them to the appropriate security area.

Former License Condition 20, which was in effect from September 19, 1983, until superseded on May 1, 1989, by License Condition 22, above, required that licensed material be possessed and used in accordance with statements, representations and procedures contained in an application dated May 13, 1983, and other referenced documents. Item 15(a) of the May 13, 1983, application required the same procedures as Item 10(a) of the August 23, 1988, application.

Contrary to the above, between January 1986 and January 31, 1991, purchases of byproduct material to be used in Cushwa Hall, Rooms No. 2095 and 2096, were not approved in advance by the Radiation Safety Officer. In addition, between January 1986 and January 31, 1991, radioactive materials purchased to be used in Cushwa Hall, Rooms No. 2095 and 2096, and in Ward Beecher Hall, Room No. 4042A, were not delivered to the Radiation Safety Officer. Specifically, the materials were delivered to the individuals who purchased them.

B. Violation Associated with License No. SNM-1941

License Condition 16 requires that licensed material be possessed and used in accordance with statements, representations and procedures contained in an application, with attachments, dated July 10, 1989, and a letter dated July 13, 1990.

Item 10(f)(3) of the attachments to the July 10, 1989, application, requires that housekeeping, security and maintenance personnel are instructed at hire and annually thereafter in, among other things, the emergency procedures to be used during a fire or a high risk to exposure to neutron radiation.

Former License Condition 16, which was in effect from September 18, 1984 until superseded on August 16, 1989, by License Condition 16, above, required that licensed material be possessed and used in accordance with statements, representations and procedures contained in an application dated May 3, 1984, and other referenced letters. Item 15(f)(3) of the May 3, 1984, application required the same training as Item 10(f)(3) of the attachment to the July 10, 1989, application.

Contrary to the above, between January 1986 and January 31, 1991, the licensee had not instructed any of the housekeeping, security, or maintenance personnel in the specified emergency procedures.

C. Violations Associated with License No. SUD-1417

1. License Condition 14 requires that licensed material be possessed and used in accordance with statements, representations and procedures contained in an application dated November 25, 1987, and a letter dated July 13, 1990.

Item 10 of the November 25, 1987 application requires that, twice each year, the neutron fluxes and gamma ray dose rates be checked outside the reactor.

License Condition 14, which was in effect from December 29, 1982 until superseded on February 24, 1988 by License Condition 14, above, required that licensed material be possessed and used in accordance with statements, representations and procedures contained in an application dated April 29, 1982, and other referenced letters. Item 12 of the April 29, 1982 application requires the same flux and dose rate checks as Item 10 of the November 25, 1987 application.

Contrary to the above, between January 1986 and January 31, 1991, the neutron fluxes outside the reactor had not been checked. Prior to August 1990, the gamma ray dose rates outside the reactor had not been checked.

2. License Condition 13 requires that survey instruments be calibrated on an annual basis.

Contrary to the above, between February 24, 1988 and January 31, 1991, the licensee's neutron survey instruments had not been calibrated.

D. Violation Associated with General License

10 CFR 31.5(c)(2) requires, in part, that any person who acquires, receives, possesses, uses or transfers byproduct material in a device pursuant to a general license shall assure that the device is tested for leakage of radioactive material at no longer than six month intervals or at such other intervals as are specified on the label.

Contrary to the above, between October 2, 1987 and January 31, 1991, a generally licensed gauging device containing 30 millicuries of curium-244 and 30 microcuries of americium-241, as sealed sources, was not tested for leakage at the three year testing frequency specified on the label.

This is a Severity Level III problem (Supplement VI).
Cumulative Civil Penalty - \$625 (assessed equally among the 12 violations).

Pursuant to the provisions of 10 CFR 2.201, the Youngstown State University (Licensee) is hereby required to submit a written statement of explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each alleged violation: (1) admission or denial of the alleged violation, (2) the reasons for the violation if admitted, and if denied, the reasons why, (3) the corrective steps that have been taken and the results achieved, (4) the corrective steps that will be taken to avoid further violations, and (5) the date when full compliance is achieved. If an adequate reply is not received within the time specified in this Notice, an order may be issued to show cause why the license should not be modified, suspended, or revoked or why such other actions 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, this response shall be submitted under oath or affirmation.

Within the same time as provided for the response required under 10 CFR 2.201, the Licensee may pay the civil penalty by letter addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer payable to the Treasurer of the United States in the amount of the civil penalty proposed above, or may protest imposition of the civil penalty in whole or in part, by a written answer addressed to the Director, Office of Enforcement, U. S. Nuclear Regulatory Commission. Should the Licensee fail to answer within the time specified, an order imposing the civil penalty will be issued. Should the Licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalty, in whole or in part, such answer should be clearly marked as an "Answer to a Notice of Violation" and 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 factors addressed in Section V.B of 10 CFR Part 2, Appendix C (1990), 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

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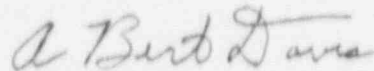
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page and paragraph numbers) to avoid repetition. The attention of the Licensee is directed to the other provisions of 10 CFR 2.205, regarding the procedure for imposing a civil penalty.

Upon failure to pay any civil penalty due which subsequently has been 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. 2282c.

The responses noted above (Reply to Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region III, 799 Roosevelt Road, Glen Ellyn, Illinois 60137.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Bert Davis
Regional Administrator

Dated at Glen Ellyn, Illinois
this 4th day of March 1991