

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

University of Michigan
Ann Arbor, Michigan

Docket No. 030-01988
License No. 21-00215-04
EA 92-185

During an NRC inspection conducted on September 16, 17, and 23, 1992, 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, 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:

I. Violations Assessed a Civil Penalty

- A. License Condition No. 22.A as contained in Amendment No. 69 dated August 26, 1991, states, in part, that the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in an application dated May 24, 1988.

Item 10, Attachment 7, of the application dated May 24, 1988, is the Radiation Safety Manual, 2nd edition, June 1984.

The section of the Radiation Safety Manual titled, "General Rules for Working with Radioactive material," page 8, states, "Before leaving the laboratory, wash hands, check hands and shoes with an appropriate survey instrument."

Contrary to the above, between September 11 and 13, 1992, individuals who worked with radioactive materials consisting of unsealed phosphorus-32 (P-32) in Rooms 7514 and 7516 of Medical Science Research Building I (MSRB-I) failed to check their shoes with a survey instrument before leaving the laboratory. As a result, licensed material consisting of unsealed P-32 which had been inadvertently spilled on the floor in Room 7514 of MSRB-I, was subsequently spread by individuals' contaminated footwear through unrestricted areas in MSRB-I and to individuals' homes, clothing and vehicles.

- B. License Condition No. 22.B as contained in Amendment No. 69, dated August 26, 1991, states, in part, that the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in a letter dated June 15, 1990.

The letter dated June 15, 1990, states, in part, that Contamination limits for unrestricted (non-contamination controlled) areas will be compatible in level of safety with those for release of facilities and equipment for unrestricted use as specified in NRC "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material." The acceptable surface contamination levels for beta-gamma emitters is 5,000 dpm/100cm² (average), 15,000 dpm/100cm² (maximum), and 1,000 dpm/100cm² (removable).

10 CFR 20.201(b) requires that each licensee make such surveys as may be necessary to comply with the requirements of Part 20 and which are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

Contrary to the above, the licensee did not perform adequate surveys to assure compliance with this license condition or NRC requirements. Specifically, from September 11 through at least September 16, 1992, the licensee did not make the necessary or comprehensive surveys to determine the presence of P-32 contamination in unrestricted areas of MSRB-I, or individuals' clothes, vehicles, and homes, to assure that contamination limits in these unrestricted areas were not exceeded and complied with NRC guidelines. In addition, as noted in the licensee's letter dated October 19, 1992, NRC and Radiation Safety Services personnel performed a survey of a home and found contamination ranging up to 30,000 dpm/100cm² even though the Radiation Safety Officer had previously indicated that no contamination had been detected in the home.

This is a Severity Level III problem (Supplement IV).
Cumulative Civil Penalty - \$3,750.

II. Violations Not Assessed a Civil Penalty

- A. License Condition No. 22.A as contained in Amendment No. 69 dated August 26, 1991, states, in part, that the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in an application dated May 24, 1988.

Item 10, Attachment 7, of the application dated May 24, 1988, is the Radiation Safety Manual, 2nd edition, June 1984.

The section of the Radiation Safety Manual titled, "Criteria for Requiring Extremity Monitoring," page 22, requires, in part, that extremity monitoring (normally ring dosimeters) is required when an individual uses certain radionuclides above the limits specified by the Radiation Safety Manual under circumstances that make it likely for that individual to receive a calendar quarter dose in excess of 25 percent of the applicable limits as defined in 10 CFR 20.101(a). The Radiation Safety Manual normally requires extremity monitoring for personnel using P-32 when the usage level is above one millicurie.

Contrary to the above, on September 11, 1992, two individuals used quantities of P-32 greater than one millicurie and did not wear extremity monitoring.

This is a Severity Level IV violation (Supplement VI).

- B. License Condition No. 22.A, as contained in Amendment No. 69 dated August 26, 1991, states, in part, that the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in an application dated May 24, 1988.

Item 10, Attachment 7, of the application dated May 24, 1988, is the Radiation Safety Manual, 2nd edition, June 1984.

The section of the Radiation Safety Manual titled, "Amending an Existing Authorization," page 4, states, in part, that major changes, such as changes in physical places of use (new laboratories) normally require submission of a supplemental Form RCS-101. (The authorization allows an authorized individual to use materials at specific locations for specific purposes.)

Contrary to the above, on September 11, 1992, two individuals used radioactive materials in Room 7514 of MSRB-I, a location not approved by the Authorization, and a supplemental Form RCS-101 was not submitted.

This is a Severity Level IV violation (Supplement VI).

- C. 10 CFR 20.207(a) requires that licensed materials stored in an unrestricted area be secured against unauthorized removal from the place of storage. 10 CFR

20.207(b) requires that materials in an unrestricted area and not in storage be under constant surveillance and the immediate control of the licensee. As defined in 10 CFR 20.3(a)(17), an unrestricted area is any area access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials.

10 CFR 20.301 prohibits licensees from disposing of licensed material except by authorized means.

Contrary to the above, on August 11, 1992, a researcher left a package containing licensed material consisting of 1.3 millicuries of unsealed P-32 in an unrestricted area (MSRB-I hallway) and the package was not secured against unauthorized removal and was not under constant surveillance and immediate control of the licensee. The radioactive material was subsequently removed from the hallway of MSRB-I as normal trash and believed to be buried in a landfill.

This is a Severity Level IV violation (Supplement IV).

Pursuant to the provisions of 10 CFR 2.201, the University of Michigan (Licensee) is hereby required to submit a written statement or 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 or a demand for information may be issued as to 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.

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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 violation 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, 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. 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 14 day of December 1992

University of Michigan

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