

INSPECTION RECORD

Region III Inspection Report No. 03000818/12001(DNMS)

License No. 21-06885-01 Docket No. 030-00818

Licensee (Name and Address):

Eastern Michigan University
106 Welch Hall
Ypsilanti, Michigan 48197

Licensee Contact: Dr. Steven Francoeur – RSO Telephone No. 734 487-0049

Priority: 5 Program Code: 01110

Date of Last Inspection: 5/21/2007 Date of This Inspection: 9/17-18/2012 with continued in-office review until 10/18/12 to review the licensee's inventory of sealed sources

Type of Inspection: Initial Announced Unannounced
 Routine Special

Next Inspection Date: 9/2017 Normal Reduced

Summary of Findings and Actions:

- No violations cited, clear U.S. Nuclear Regulatory Commission (NRC) Form 591 or regional letter issued
- Non-cited violations (NCVs)
- Violation(s), Form 591 issued
- Violation(s), regional letter issued
- Followup on previous violations

Inspector Andrew M. Bramnik
Andrew M. Bramnik, Health Physicist

Date 10/25/2012

Approved Tamara E. Bloomer
Tamara E. Bloomer, Chief, Materials Inspection Branch

Date 10/26/12

PART I-LICENSE, INSPECTION, INCIDENT/EVENT, AND ENFORCEMENT HISTORY

1. AMENDMENTS AND PROGRAM CHANGES:

<u>Amendment No.</u>	<u>Date</u>	<u>Subject</u>
29	June 28, 2012	License renewal and new RSO

2. INSPECTION AND ENFORCEMENT HISTORY:

No violations were identified during the previous two routine inspections on May 21, 2007, and November 16, 2001.

3. INCIDENT/EVENT HISTORY:

None

PART II - INSPECTION DOCUMENTATION

1. ORGANIZATION AND SCOPE OF PROGRAM:

Management Structure:

Susan W. Martin, Ph.D, President
James J. Carroll, III, Associate Provost and Interim Associate Vice President
for Research
Kathryn E. Wilhoff, Environmental Health and Safety Director
Steven N. Francoeur, Ph.D, Associate Professor and Radiation Safety Officer
Anne Casper, Ph.D, Assistant Professor and Chair, Radiation Safety Committee

The licensee was a public university of approximately 24,000 students and 700 faculty members. Starting in 2010, the licensee's Mark Jefferson Science Facility was renovated. As part of the renovation, the licensee decommissioned two laboratories in the facility and consolidated all storage and use of licensed materials to a single laboratory in the basement. At the time of the inspection, the licensee had authorized ten individuals to work as authorized users under the terms of their license of broad scope; however, only four individuals were working as principal investigators and only one faculty member was actively using licensed materials. The licensee primarily used microcurie quantities of unsealed carbon-14, hydrogen-3, and phosphorus-32 for in-vitro research and for student teaching purposes. The licensee also possessed several dozen sealed sources in storage that had previously been associated with the university's former radiochemistry program. Since the previous inspection, the licensee had disposed of a californium-252 sealed source.

2. SCOPE OF INSPECTION:

Inspection Procedure(s) Used: 87126

Focus Areas Evaluated: Sections 03.01 through 03.07

The licensee's program had decreased in size and scope since the previous NRC inspection. Specifically, the entire radioactive materials program had been consolidated to one laboratory with an attached storage room. The inspector reviewed the licensee's close-out surveys for two laboratories that had been decommissioned since the previous inspection and identified that wipe samples were indistinguishable from background. The inspector also reviewed the records associated with the licensee's Cf-252 source disposal. The inspector toured the licensee's facility and observed one student (supervised) user during a counting experiment using P-32. Interviews of the student, the RSO, and available staff revealed an adequate level of understanding of emergency and material handling procedures and techniques. The licensee successfully described or demonstrated package receipt, area surveys, and waste handling and disposal procedures. The inspector confirmed that these activities were routinely and successfully completed by reviewing selected records since the previous inspection.

Licensed material was adequately secured and not readily accessible to members of the general public. Personal whole body and extremity dosimetry badges were observed being worn by the RSO and the student researcher during the inspection, and records did not indicate doses in excess of 10 of the Code of Federal Regulations (CFR) Part 20 limits. Dosimetry records indicated that the highest annual whole body and extremity readings since the previous inspection were 5 millirem and 11 millirem, respectively.

The inspector toured the licensee's storage room and identified several dozen sealed sources. The majority of sources were exempt from the requirements for a license in accordance with 10 CFR 30.18; however, the licensee could not verify the type and quantity of activity for several sources during the on-site inspection. Therefore, the inspector reviewed the licensee's most recent physical inventory during an in-office review. Through the in-office review and e-mail correspondence with the RSO, the inspector determined that the licensee was authorized to possess all of the sources in storage, and did not violate any license conditions or regulatory requirements. The RSO informed the inspector that the licensee will be disposing of most of the sources in the near future because they have not been used for several years.

3. INDEPENDENT AND CONFIRMATORY MEASUREMENTS:

Independent measurements taken at the licensee's facility did not indicate readings in excess of the limits in 10 CFR Part 20 in restricted or unrestricted areas. The licensee possessed a radiation survey meter that was calibrated, operational, and performed comparably to readings from an NRC survey meter.

4. VIOLATIONS, NCVs, AND OTHER SAFETY ISSUES:

- A. Condition 22 of NRC License No. 21-06885-01 states, in part, that the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the Application dated October 20, 2011.

Item 10.2 of the Application dated October 20, 2011 states, in part, that the Radiation Safety Officer (RSO) prepares an annual summary of radiation-related matter on EMU campus (e.g. information on reports submitted to various agencies, waste disposal information etc.) and submits to members of the committee via email.

Contrary to the above, between January 31, 2011, and September 18, 2012, the licensee failed to prepare and to provide to the members of the committee an annual summary of radiation-related matters on the Eastern Michigan University campus.

The RSO's misunderstanding about the annual summary requirement was the root cause of the violation. Specifically, the RSO informed the inspector that he believed minutes of the Radiation Safety Committee (RSC) meetings were sufficient to fulfill this requirement. As corrective actions, the RSO will conduct an audit of the radiation protection program at EMU and will prepare an annual summary as required. The RSO stated his intent to complete the summary by October 31, 2012, and submit it to members of the RSC via email. The RSO also committed to create a schedule of radiation protection program requirements, such as the annual summary, by October 31, 2012.

- B. Condition 15 of NRC License No. 21-06885-01 states that the licensee shall conduct a physical inventory every 6 months, or at other intervals approved by the NRC, to account for all sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 5 years from the date of each inventory, and shall include the radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.

Contrary to the above, between April 12, 2010 and May 11, 2012, the licensee failed to conduct a physical inventory to account for all sources and/or devices received and possessed under the license, a period of greater than 6 months.

This issue was identified by the licensee during a review of their program by an outside consultant. The consultant service performed a physical inventory of the licensee's sealed sources on May 11, 2012. As long-term corrective actions, the RSO committed to create a schedule of radiation protection program requirements, such as the physical inventories, by October 31, 2012.

This item is being treated as a Non-Cited Violation (NCV), consistent with Section 2.3.2 of the Enforcement Policy because the violation was licensee-identified, corrected by the licensee, non-repetitive, and non-willful.

5. PERSONNEL CONTACTED:

- * James J. Carroll, III, Associate Provost
- * Kathryn E. Wilhoff, Environmental Health and Safety Director
- *& Steven N. Francoeur, Ph.D, Associate Professor and Radiation Safety Officer
- Anne Casper, Ph.D, Assistant Professor and Chair, Radiation Safety Committee
- Student researchers as available

- * Individual present at September 18, 2012 preliminary exit meeting
- & Individual present at October 18, 2012 final telephone exit meeting

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