OP 79.08: RADIATION SAFETY

PURPOSE

This policy establishes the Mississippi State University ("University") Radiation Safety Committee (RSC). The RSC is required as a condition of the University's Type A Broad Scope Educational Radioactive Materials License pursuant to 10 CFR 33.13(c)(1). The RSC reports to the Vice President for Research and Economic Development (VP for ORED).

The RSC provides for effective, efficient, and safe policies and procedures for University procurement, use, storage, and disposal of all radioactive materials and equipment that are sources of ionizing radiation.

POLICY

The University is committed to full compliance with the terms and conditions set forth in all radioactive materials licenses and x-ray registrations issued to the University, the applicable sections of the *Regulations for Control of Radiation In Mississippi*, Title 49 Code of Federal Regulations (or equivalent standards for shipments by air), Title 40 Code of Federal Regulations, and Title 10 Code of Federal Regulations as applicable to University work involving radioactive materials. The responsible department head or director shall assure that work conducted is in compliance with all applicable licenses and regulations. Compliance with the terms and conditions of x-ray registrations issued to the University is the responsibility of the authorized users specified on the registration and the department head or director.

Most radioactive materials work on campus is conducted under Educational Broad Scope License MS-EBL-02. All proposed uses of radioactive materials under MS-EBL-02 must be approved by the University's Radiation Safety Committee as required by the license. The University's Radiation Safety Officer (RSO) shall manage daily duties associated with the radiation safety program and other such duties as specified in license MS-EBL-02. The VP for ORED is responsible for administrative matters associated with the license and other duties as required by regulation. Guidance for individuals responsible for the radiation safety program can be found in NUREG 1556 Vol. 11, Section 8.7.

In addition to radioactive materials specifically licensed to the University under MS-EBL-02, the committee shall have jurisdiction over radioactive materials considered to be generally licensed by the US Nuclear Regulatory Commission. This may include, but is not limited to, devices containing radioactive sources such as electron capture detectors and liquid scintillation counters, devices that utilize exempt quantities of radioactive materials such as polonium-210 static eliminators, and small quantities of source material such as uranium covered by 10 CFR 40.22.

Definitions

Radioactive Materials – also known as radionuclides or radioisotopes, are substances that contain unstable atoms that emit ionizing radiation as they decay. Ionizing Radiation – Particles or photons with sufficient energy to ionize atoms or molecules by removing electrons. Ionizing radiation includes both particles (alpha, beta, proton, neutron, and electron radiation) and photons (x-ray and gamma radiation).

Radiation Safety Committee (RSC)

The university Radiation Safety Committee members are appointed by the VP of Research and Economic Development. Members must satisfy the requirements of MS-EBL-02. Efforts will be made to select committee members to represent the various departments within the University that use radioactive materials and to bring expertise to the committee necessary to thoroughly evaluate all proposed uses of radioactive materials. Additional members may be appointed for their expertise involving uses of ionizing radiation-producing devices and potentially hazardous sources of non-ionizing radiation. The RSC jurisdiction encompasses:

a. The committee shall have jurisdiction over x-ray machines, fluoroscopy systems, particle accelerators, and any other equipment or device designed to emit ionizing radiation. The committee is responsible for reviewing and approving proposed uses of ionizing radiation-producing equipment. Examples of use may include analytical, research, veterinary healing arts, and human healing arts. Devices designed to emit ionizing radiation shall be covered by the radiation safety program as prescribed by the *Regulations for Control of Radiation in Mississippi, Subchapter 4.*
b. The committee shall have jurisdiction over sources of non-ionizing radiation where those sources present unique hazards including, but not limited to, Class 3B lasers, Class 4 lasers, and MRI machines.
c. If the committee determines a safety matter under the jurisdiction of the committee poses an immediate hazard to property or persons, an immediate notification will be made to responsible parties and the appropriate vice president(s).

Mississippi State University Radiation Safety Manual

a. The *Mississippi State University Radiation Safety Manual* has been developed by the University's Radiation Safety Officer (RSO) and Radiation Safety Committee. The Radiation Safety Manual has been approved by the Mississippi State Department of Health Division of Radiological Health (MSDH) and incorporated into the University's radioactive materials license.
b. The manual is minimally reviewed on an annual basis and updated as necessary.
c. Major modifications or programmatic changes to the manual are reviewed and approved by the RSC prior to submittal to MSDH for final approval.

REVIEW

The university Radiation Safety Officer, the Chair of the RSC, and Vice President for Research and Economic Development will review this operating policy every four years or when circumstances require an earlier review.

REVIEWED BY:

/s/ Heather Hewitt — 01/17/2025
Radiation Safety Officer — Date

/s/ Peter Allen — 01/17/2025
Risk and Compliance Officer — Date

/s/ Julie Jordan — 04/15/2025
Vice President for Research and Economic Development — Date

/s/ Tracey N. Baham — 04/15/2025
Associate Vice President, Institutional Strategy & Effectiveness — Date

/s/ Joan Lucas — 08/18/2025
General Counsel — Date

APPROVED BY:

/s/ Mark E. Keenum — 08/25/2025
President — Date