



MISSISSIPPI STATE DEPARTMENT OF HEALTH

Portable Moisture-Density Gauge Operating & Safety Procedures

I. Management Responsibility

Each application shall be signed by the applicant, licensee, or a person duly authorized to act for and on the behalf of the applicant or licensee. If it is not clear whether the application was signed by someone duly authorized to act for and on the behalf of the applicant or licensee, Mississippi State Department of Health (MSDH) license reviewers may ask for additional assurances that the individual that signed the application is duly authorized to act for and on the behalf of the applicant or licensee. The signature on an application acknowledges the licensee's commitments and responsibilities for the following:

- A. Radiation safety, security, and control of radioactive materials and compliance with regulations.
- B. Knowledge about the contents of the license and application.
- C. Compliance with current MSDH and U.S. Department of Transportation (DOT) regulations and the licensee's operating, emergency, and security procedures.
- D. Commitment to provide adequate resources (including space, equipment, personnel, time, and, if needed, contractors) to the radiation protection program to ensure that the public and workers are protected from radiation hazards and compliance with regulations is maintained.
- E. Selection and assignment of a qualified individual to serve as the radiation safety officer (RSO) for licensed activities and confirmation that the RSO has independent authority to stop unsafe operations and will be given sufficient time to fulfill radiation safety duties and responsibilities.
- F. Commitment to ensure that radiation workers have adequate training.
- G. Commitment to obtain MSDH's prior written consent before transferring control of the license.

II. Radiation Safety Officer

The radiation safety officer shall:

- A. Assure the safe use of the gauge(s) at all times.
- B. Assure compliance with the requirements of the Regulations for Control of Radiation in

Mississippi.

- C. Assure that radioactive materials possessed conform with materials authorized by the license.
- D. Assure that the gauge(s) are used only by persons identified as users under this license.
- E. Assure that all users wear personnel monitoring devices (film badge, OSL, or TLD) while using the gauge(s).
- F. Assure the gauge is properly secured against unauthorized removal at all times.
- G. Serve as a point of contact and give assistance in case of emergency and to ensure that all proper authorities are notified promptly in case of an accident or incident.
- H. Assure that the leak tests are performed at the required intervals as specified by the license condition.
- I. Assure that survey meter calibrations are performed at twelve (12) month intervals.
- J. Assure that all required records are kept and reviewed periodically for compliance with regulations. These records include source certificates, leak test records, gauge inventory records, survey meter calibrations, personnel exposure reports, and records of receipt and transfer of radioactive materials.

III. Handling Procedures

- A. The source shall always be kept in the "safe" position when not in use.
- B. Each portable nuclear gauge shall have a lock designed to prevent unauthorized or accidental removal of the sealed source from its shielded position.
- C. The gauge source lock shall be in place when not in use.
- D. The gauge shall be stored only in an approved storage area and the area locked.
- E. No one shall operate, attempt to operate, or transport the gauge unless listed on the radioactive material license as an authorized user.
- F. No person shall use or transport a gauge unless dosimetry is affixed to person (film badge, OSL, or TLD).
- G. When performing tests at temporary job sites, the authorized user shall not leave the moisture/density gauge unattended. Upon completion of tests, the device shall be secured in the licensee's vehicle or a building by two independent (2) physical controls forming tangible barriers to prevent unauthorized use, loss, or theft.
- H. The gauge shall be operated in a manner so as to prevent unnecessary exposure from the unshielded source to the operator or others.
- I. The operator shall keep all unauthorized persons out of the operating area- fifteen (15) feet away, if possible.

- 3. The manufacturer of the gauge.
- B. In the event of physical damage to the gauge, an exclusion area with a radius of fifteen (15) feet around the gauge shall be maintained until the extent of source damage (if any) is determined. If a vehicle is involved, it shall be stopped- and remain stopped- until the appropriate authorities can determine the extent of the contamination hazard.
- C. If visual examination of the instrument and source indicates damage to the source, including fracture of the weld, a radiation survey must be performed by the RSO to determine the radiation dose rate of the damaged device.

VII. Repairs and Maintenance

Repairs and maintenance on gauge electronics may be performed by the radiation safety officer. All repairs and maintenance on the sealed source(s) shall be performed by the manufacturer.

VIII. Leak Test

The leak test shall be performed using _____leak test kit (or other similarly approved leak test kit) following the manufacturer's instructions.

IX. Security and Storage

The storage area and storage container shall be physically secured to prevent tampering or removal by unauthorized personnel. Locks shall be maintained on the equipment to prevent accidental exposure of the sealed source when not under the direct supervision of authorized personnel. The storage area must be:

- A. Fifteen (15) feet from any duty station;
- B. Accessible only to persons authorized to use the gauge(s); and
- C. Locked when an authorized user is not physically present.

Submit a diagram of the facility to include the storage and work areas.

Printed Name _____ **Job Title** _____

Signature _____ **Date** _____