

RADIATION SAFETY PROCEDURES FOR NON-MEDICAL RADIATION PRODUCING DEVICES

These are basic radiation safety procedures intended for a broad range of non-medical radiation producing devices and in no way are intended to modify or detract from any requirements of any governmental or other authority or operating manual.

1. Individuals under the age of 18 years are restricted to an occupational dose of 500 mR/yr.
2. Personnel monitoring devices will be issued to any individual who is likely to receive more than 10% of the permissible dose limit set forth in the Virginia Rules and Regulations for restricted areas.
3. When protective clothing or devices are worn on portions of the body and a monitoring device is required, at least one such monitoring device shall be utilized as follows:
 - a. When an apron is worn and only one monitoring device is in use, the device shall be worn at the collar outside the apron.
 - b. The dose to the whole body or the maximum dose attributed to the most critical organ shall be recorded. If more than one device is used, each dose shall be recorded and identified with the area where the device was worn on the body.
 - c. The position on the body at which a particular monitoring device is worn and used shall not be changed during any calendar quarter.
4. Exposing of a personnel monitoring device to deceptively indicate a dose delivered to an individual is prohibited.
5. If an X-ray badge is lost or damaged during a monitoring period, the individual's exposure over the last 3 months should be averaged and that average added to the annual dose for the mission period.
6. Ensure that all recommended operating and use procedures by the manufacturer of the radiation producing equipment are followed.
7. Ensure that no person commits any acts that causes unsafe conditions to exist when the X-ray system is in operation (for example, defeating safety interlocks, exposing an part of the body to the X-ray beam, or covering the X-ray ON lights or the X-ray warning signs)
8. No person shall create physical or mechanical conditions that ultimately make the X-ray system unsafe to operate.
9. All employees, operators and maintenance personnel must forbid unauthorized individuals from remaining near an operating X-ray system longer than is warranted.
10. The operators of any X-ray system must:
 - a. Receive training, authorized by the system owner or designee, on the operation and X-ray safety relevant to the X-ray inspection system(s) intended for use
 - b. Demonstrate their competence in the operation of the X-ray system and a working knowledge of safe operational procedures to the system owner or designee
 - c. Read and understand all applicable radiation safety guidelines and proper operation procedures prescribed by the system owner or designee, and by the appropriate radiation protection regulatory authority, before operating any x-ray inspection system
 - d. Stop the operation of the X-ray inspection system if any radiation accidents and/or unsafe events occur and immediately notify the system owner or designee of such conditions
 - e. Acknowledge that persons who operate an X-ray inspection system are responsible for carrying out the work in a safe manner in order to ensure their own protection and that of others.