General safeguards

In order to achieve an acceptable level of protection, X-ray facilities must include the following safeguards:

- Allocate a room, or portion thereof, in order to isolate the X-ray emitting device. The entrance to the room must display an approved sign indicating the presence of X-ray Emitting Device's (XEDs) (see Section 4.5)
- Access to the room housing the XED should be restricted to authorized X-ray workers and lab personnel whenever the X-ray equipment is in use (Note: For hand-held XRF devices, maintain a 1m "safe-zone").
- Establish in low traffic area.
- For operations not requiring constant user supervision or surveillance, the analytical equipment must be adequately secured to prevent access by unauthorized individuals.
- Personnel must not expose any part of the body to the primary beam. If and when alignment of analysis accessories requires the use of an open X-ray beam, specific precautions must be exercised to reduce or eliminate radiation exposures to the extremities and other parts of the body. Long-handle forceps or remote handling devices, low X-ray tube current and fluorescent beam-definers of higher radiation sensitivity should be employed.
- The maximum permissible dose limits must not be exceeded by any maintenance personnel and in general the radiation exposure should be kept As Low As Reasonably Achievable (ALARA).
- All protective apparel and safeguards, including the radiation survey meter(s), must be tested regularly to ensure proper working and functional conditions. Proper documentation of conducted tests should be maintained.