

# Inspecting Lead PPE

## REQUIREMENTS

Departments are required to inspect lead personal protective equipment (PPE) such as aprons and gloves, at least annually and upon request by a user. Some departments may opt to inspect more frequently based upon use (and abuse) of the aprons.

The results of the inspections must be sent to Radiation Safety for tracking and disposal of failed lead PPE.

All lead PPE must be uniquely identified with:

- an identification number,
- date of the most recent inspection, and
- due date for the next inspection

## PROCEDURE

1. Verify the PPE item is labelled with the required information.
2. A combination of visual, physical and fluoroscopic inspection may be employed to ensure the integrity of the garments.
  - Physically examine all lead PPE for gross defects such as tears, perforations, and thinning creases.
  - Fluoroscopy is not required unless physical examination does not seem adequate.
3. Immediately remove defective lead PPE from service.
4. Report the results of the inspection to Radiation Safety and inform them of any defective lead PPE that needs to be collected.

## FLUOROSCOPY TESTING

If you choose to examine your lead aprons fluoroscopically, use manual settings and low technique factors (e.g., 80 kVp). Do not use automatic brightness control, as this will drive the tube current and high voltage up, resulting in unnecessary radiation exposure to personnel and wear on the tube. Note that shielded areas will appear dark and defects, seams, and stitching will appear light.

## REJECTION CRITERIA

The following criteria should be used to determine if lead PPE is defective, but remember, a small defect in a lead garment will not lead to a large radiation dose.

**Keeping the worker protected is the number one priority**, and wearing a slightly defective apron is better than not wearing one at all.

- Cracks or tears that are detectable through a manual inspection or fluoroscopy and are greater than 15 mm<sup>2</sup> (1.5 cm<sup>2</sup>)
- Loss or thinning of shielding material within the integrated lead garment visible under fluoroscopy
- Failure of fastening devices (ties or Velcro)

**For questions about lead apron inspections, contact EH&S at 206.543.0463.**