DEPARTMENT OF
ENVIRONMENTAL HEALTH AND
SAFETY (EHS) & SECURITY
“Due diligence is what we promote, risk management is what we support”

OBTAINING X-RAY EQUIPMENT & SETTING UP AN X-RAY LAB

STEP 1 - Obtaining X-ray Equipment

- Planning - A crucial step that will affect how quickly you can get your project(s) underway

All x-ray devices (medical and Non-medical) in Canada must be certified for use in Canada by the Consumer and Clinical Radiation Protection Bureau of Health Canada. In addition, all locations where an x-ray device is used must be approved by provincial regulatory bodies prior to installation of the device. Here in Ontario, it is the Ministry of Labour. Since many of these processes require time, it is very important to plan ahead and notify the Ryerson radiation safety officer at the CEHSM as soon as possible of your intent to obtain an x-ray device in order to avoid delays with your project(s).

- Contact Radiation Safety Officer of intent to purchase an x-ray device

  Web: http://www.ryerson.ca/cehsm/programs/rad_xray.html
  E-mail: vphelan@gwemail.ryerson.ca
  Telephone: ext. 4212

- Obtain Health Canada Certification

  Manufacturers that have already sold their x-ray products in Canada may already be certified. Simply ask them to supply you with the appropriate documentation to that effect. Manufacturers that have never sold their products in Canada will have to contact the Health Canada Consumer and Clinical Radiation Protection Bureau and obtain certification directly from them. This process takes approximately 4 to 6 weeks, but in some cases may be longer. Those planning to design their own systems and/or enclosures must also go directly through Health Canada’s Consumer and Clinical Radiation Protection Bureau to receive certification.
Barrier Planning

This must be done before the project cost is being quoted, since lead shielding and its installation is extremely expensive. Contractors also need significant advance notice of shielding requirements since lead doors and windows may take several weeks to be manufactured and shipped.

Note that cabinet x-ray devices are self-shielded and generally do not require special shielding provisions although they still must undergo the registration process. Canadian, American and other foreign regulations may differ on what is accepted as being a cabinet x-ray device, therefore early consultation with the Radiation Protection Officer is advised when purchasing cabinet systems to avoid regulatory entanglements and unforeseen costs.

Registration with Ministry of Labour (through the CEHSM Radiation Safety Officer)

The Ontario Ministry Of Labour (MOL) requires the following documentation:

- The application (MOL Forms 2 and 3b)
- Shielding specification, e.g.
  - Cabinet units: Proof of compliance with self-shielding requirements.
  - All other devices: Calculations supporting the safety of shielding provisions for the device.
- Scale drawing (must be no less than 1:100 scale) of the room planned to hold the x-ray device(s) and an indication of occupancy and use of the surrounding areas.
Every area where a mobile x-ray device might be used must be registered with the MOL, even for one time exposure.

The registration process by the MOL for simple devices may take between 2 - 4 weeks. Complex devices may take several weeks. This assumes that the equipment is already certified for use in Canada. The Radiation Safety Officer will notify the owner of the x-ray equipment as soon as approval has been granted by the MOL. Once the approval has been given, the x-ray equipment may be installed.

---

**Step 2 - Setup**

- **Radiation Protection Planning - General Process and Procedure**
  - Installation - Shielding
  - Training - Applications
  - Training - Worker X-ray Safety
  - Training - Technical
  - Worker enrolment in dosimetry program
  - Installation - X-Ray Equipment
  - Acceptance
  - QC Benchmarking
  - Record Keeping
  - Signage