GENERAL INFORMATION FOR OWNERS & OPERATORS OF X-RAY FACILITIES

Ontario

X-ray machines in Ontario that are used for the irradiation of a human being for therapeutic or diagnostic purposes are regulated under the *Healing Arts Radiation Protection (HARP) Act* and Regulation 543—X-Ray Safety Code. This applies to X-ray machines used by medical, dental, chiropractic, and podiatric facilities and hospitals. Some of the key requirements under this legislation are described below.

PLAN APPROVAL AND EQUIPMENT REGISTRATION

For more information, please refer to one of the following appropriate pamphlets:

- 'Dental X-ray Facilities: Approval of Plan for Radiation Shielding'
- 'Medical X-ray Facilities: Approval of Plan for Radiation Shielding'

RADIATION PROTECTION OFFICER (RPO)

The owner of the X-ray machine(s) must designate a person as an RPO on **Form 2**. Form 2 is submitted at the time a new plan application is made. Responsibilities of an RPO include but are not limited to:

- Establishing and maintaining procedures and quality tests for the safe operation of the X-ray equipment.
- Ensuring that the X-ray equipment is maintained and meets the standards prescribed by the regulations.
- Ensuring that all X-ray operators are qualified according to the HARP Act.

Only certain professions meet the criteria to become RPOs. Please carefully review **section 9 of the HARP Act** and **section 8 of Regulation 543** for a full list of qualifications, duties and responsibilities of an RPO.

EQUIPMENT TESTING

Acceptance Testing

Acceptance tests are performed on all new and used X-ray equipment to:

- Determine a baseline performance to be used as a comparison standard for future maintenance and quality testing.
- Verify equipment performance and ensure safety.
- Ensure the equipment meets legislated standards as specified in the HARP Act and Regulation 543.

It is recommended that acceptance testing be performed immediately after installation and before first use on patients as a best practice. The RPO must ensure acceptance results are submitted to the Director within 60 days of installation.

Quality Testing

Quality testing is performed on all new and used X-ray equipment to:

- Ensure patient safety.
- Confirm that equipment meets the requirements of the HARP Act and Regulation 543.
- Detect any trends/deterioration in equipment performance that could affect the quality of radiographs.

FREQUENCY OF TESTING

Quality testing must be conducted at the following frequencies as outlined in Regulation 543:

- Medical Facilities (Including hospitals, clinics, and chiropractic offices): *Every 6 months* and upon alteration or servicing of the machine.
- Dental Facilities: *Every 12 months* and upon alteration or servicing of the machine.
- Podiatric Facilities: *Every 12 months* and upon alteration or servicing of the machine. Patient entrance exposure measurements are conducted *every 24 months*.
- All Facilities: Quality testing on the processor(s)' operation, i.e. photographic quality control, must be conducted *every operational day.*

Please refer to Regulation 543, Tables 3-5, for a detailed list of quality tests and frequency of testing.

RECORDS RETENTION

Please retain copies of the following documents as part of your facility's records:

- Up-to-date **approved Plan** for radiation shielding
- Quality Test Results up to **6 years old**
- **Form 1** – X-ray Equipment Registration
- Proof of staff qualifications (valid professional membership, i.e. RCDSO, CDHO, CMRTO, etc)

It is advised that during a merger or acquisition of the facility, the appropriate records are acquired as part of the transfer of assets.

GUIDANCE ON XRIS INSPECTIONS

An X-ray Inspection Service (XRIS) inspector at the ministry may make **unannounced** visits to any X-ray facility to inspect the operations, examine records, and conduct tests pertaining to the installation and use of X-ray equipment to determine compliance with the *HARP Act.*

Examples of copies of documents that must be readily available onsite and presented to the XRIS Inspector for review are listed in the box, entitled 'RECORDS RETENTION'. It is recommended that all facility staff are aware of the exact location of these documents for easy accessibility.

Please refer to section 20 of the HARP Act for more information on an inspector's authority.

PERSONAL RADIATION MONITORS

Personal radiation monitors ('dosimeters') are obtained from Health Canada's National Dosimetry Services and regulated by Ontario's Ministry of Labour under the *Occupational Health and Safety Act*. Please contact the Radiation Protection Services at the Ministry of Labour for more information.

CONTACT INFO AND LINKS

X-Ray Inspection Service (XRIS)
Ministry of Health and Long-Term Care
1075 Bay Street, 11th Floor, Toronto ON M5S 2B1
Telephone: (416) 327-7937 Fax: (416) 327-8805

Submission of Plan documents (which includes Form 2): xrisplans@ontario.ca

General inquiries: xris@ontario.ca

As of February 2014, new versions of Form 1 and 2 are made available at:

www.forms.ssb.gov.on.ca

Copies of the HARP Act and Regulation 543 can be found at:

www.e-laws.gov.on.ca

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