Radiation & X-Ray Safety Policy

This model is based on a policy used by an Ontario university for use of x-ray technology and equipment for research but can be adapted for other work settings and the radiation requirements of the jurisdiction's OHS laws.

1. **POLICY**

The Principal of ABC University has appointed the Radiation Committee ("Committee") to carry the advisory responsibility for the overall operation of the University Radiation Safety Program. The details are delineated in the Terms of Reference and Responsibilities of the Committee. It is the policy of ABC University that all activities involving ionizing radiation or radiation emitting devices be conducted so as to keep hazards from radiation to a minimum. Persons involved in any activities involving X-rays are expected to comply fully with the Ontario Regulation for X-ray Safety (Reg. 263/84), under the Occupational Health and Safety Act ("OHS Act").

2. **SCOPE**

This Radiation Safety Policy will apply to all activities which utilize radionuclides and radiation emitting devices including:

- University teaching programs and research projects;
- Research involving the use of University facilities;
- Research funded by other agencies through the

University;
- Any other projects that the Committee deems are within the jurisdiction of the Committee.

3. **THE COMMITTEE**

3.1. Committee Authority

The Committee has authority from the Principal:

- To advise concerning the authorization and control of the use of radiation producing devices at the University in compliance with the X-ray registrations issued by the Ontario Ministry of Labour and OHS Act;
- To advise the suspension when necessary of the use of any X-radiation producing devices at the University, regardless of the source or authorization.

3.2. Committee Responsibilities

The Committee is responsible for:

- Developing University policy on safe use of techniques capable of producing hazardous emissions, including X-rays, lasers and electromagnetic radiations such as microwave and other potentially hazardous emissions such as ultrasound;
- Advising the University, its faculties, departments, cross-appointees and researchers of the Committee’s policy and of the special requirements relating to research and teaching involving the use of X-rays;
- Making recommendations to the University concerning the actions to be taken on specific aspects of radiation matters as they arise;
- Advising on the development of appropriate procedures for handling emergency situations relating to radiation within the University;
- Serving on behalf of the University as reviewing agency for all permits for installations involving X-rays;

- Providing at appropriate intervals to the University and to external agencies, as required, reports on:
    - Situations and activities involving X-rays; and
    - All radiation incidents and accidents that require reports on safety aspects.
- Acting as a resource body for the University and its staff to provide:
    - Dissemination of up-to-date information regarding current government regulations concerned with licencing, training procedures and other related matters as they arise;
    - Arrangement for providing monitoring facilities, for both personnel and equipment;
    - A library resource;
    - Instructional services in radiation safety technology;
    - Relevant planning advice for new construction and modification of University buildings;
- Providing liaison with the Radiation Committees of the Hospital regarding items of mutual concern.

4. **RADIATION SAFETY COORDINATOR**

4.1. Safety Coordinator Authority

The Radiation Safety Coordinator (“Safety Coordinator”)will work under the advice of and report to the chairman of the Committee and the Director of Environmental Health and Safety on all matters pertaining to radiation safety. The Safety Coordinator will assume control in an emergency involving radiation hazards and take such actions as may be necessary to ensure the safety of personnel, property, and equipment, and report these actions at the earliest possible time to the Chairman of the Committee.

The Safety Coordinator will have the authority to shut down

temporarily any process or laboratory that is considered to be in violation of University policy or Government regulations.

The Safety Coordinator will have authority to enter research areas to conduct tests required for monitoring safe handling and disposal of radiation sources.

4.2. Safety Coordinator Responsibilities

The Safety Coordinator will report to the Committee or to its Executive at the discretion of the Chairman on his/her activities, including advice given and actions taken or recommended, and exercise the following responsibilities:

- Administering the policy of the University and its Radiation Safety Programme and acting as liaison with regulatory agencies;
- Reviewing all applications for X-ray use;
- Reviewing orders for the purchase of X-radiation devices to ensure that the x-rays have been registered;
- Maintaining a campus-wide inventory of X-radiation sources by location and project;
- Inspecting and surveying laboratories and other sensitive areas in which X-radiation emitting devices are used;
- Administering the Health Canada personnel dosimeter service and maintaining all necessary records;
- Advising the Committee on new and proposed Federal and Provincial legislation or items which may affect the use of radiation on campus;
- Serving as the Committee representative when plans are being formulated for new radiation laboratory facilities or alterations to existing laboratories.

5. **X-RAY SUPERVISORS**

X-ray supervisors will be responsible for the education and training requirements for x-ray safety, the potential x-ray hazards and associated control measures for all x-rays under

the supervisor’s authority. The supervisor must be familiar with general operating procedures of x-rays under their control. Other responsibilities will include:

- Instructing all workers, prior to employment in X-ray radiation laboratories, to make them aware of the potential hazards of X-ray radiation, including genetic effects;
- Arranging for adequate facilities, equipment, instruments, supervision and instruction in compliance with the University’s radiation protection standard;
- Ensuring that personnel wear appropriate protective equipment, radiation monitoring badges and/or pocket dosimeters as required;
- Allowing only authorized persons to enter rooms that are specified as restricted areas;
- Ensuring that the Safety Coordinator has an up-to-date listing of all users;
- Posting of warning signs and labels as required by the Committee Policy;
- Reporting all radiation incidents to the Safety Coordinator in accordance with Committee Policy;
- Informing all students involved in courses or research activities in X-ray laboratories of the procedures to be adopted during any authorized use of X-ray equipment and ensure that the student is fully aware of those procedures by requiring him to indicate this by his signature in the X-ray laboratory record book;
- Supplying the Safety Coordinator with a copy of the written instructions on safety procedures to be followed at each X-ray installation.

6. **USERS OF X-RAY EQUIPMENT**

Users of X-ray equipment are responsible for complying with the Committee’s Policy and Procedures, and Regulation 721 of the Public Health Act of Ontario, Regulation 263/84 of the OHS Act, as well as the owner’s instructions regarding the use of

the X-ray producing equipment.

7. **NEW X-RAY EQUIPMENT**

New X-ray devices must be appropriately registered by completing the ABC University Registration Form for X-Ray Devices, and the X-Ray supervisor must complete the Ministry of Labour “Form 2 – Application for Review of Permanent X-ray Location”, Parts A & B. The above forms must be forwarded to the Safety Coordinator after completion.

8. **MOVING LOCATION OF X-RAY EQUIPMENT**

If X-ray is moving to a permanent location, the forms required under section 7 above must be completed and forwarded to the Safety Coordinator. For portable units the new storage location must be emailed to the Safety Coordinator.

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APPENDIX 1-X-RAY WORKER REGISTRATION FORM

The undersigned worker will participate in the ABC University X-Ray Safety Program.

The undersigned has read and is familiar with the contents of the ABC University X-Ray Safety Manual as well as the Standard Operation Procedures for the X-ray(s) listed below.

The undersigned has the personal protective equipment described in the Standard Operating Procedure available to them and is familiar with their care and use.

Description of X-Ray(s)

Location _____ Manufacturer _____ Model _____ Description _____

__ Manufacturer _____ Model _____ Description _____

__ Manufacturer _____ Model _____ Description _____

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Supervisor _____ Signature_____

Worker _____ Signature_____

Date _____