

ANNUAL SURVEY AND INSPECTION OF X-RAY MACHINES

Inspection Date	
Building and Room	
Health Physics Inventory Number	MUX-
Facility Manager	
Contact Information	
Inspection Performed By	

General inspection items:

Description	Compliance	Comments
Location <ul style="list-style-type: none"> Location of the x-ray machine matches the approved plan (room number, location within room, etc.) 		
X-Ray Machine <ul style="list-style-type: none"> Ensure there have been no unapproved changes to the x-ray machine, target or other components 		
Entrance Signage <ul style="list-style-type: none"> All entrances to the x-ray room have proper signage. Signs are consistent with those issued by Health Physics 		
Room Security <ul style="list-style-type: none"> Entrances are secure. Doors are kept locked when authorized users are not in attendance. Proper key/password control in place 		
Warning Lights <ul style="list-style-type: none"> "X-ray ON" light present and functional on the machine "X-ray ON" light present and functional at the entrance to the enclosure (open-beam machines only) 		

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<p>Dosimetry</p> <ul style="list-style-type: none"> • Users have current dosimetry and are wearing their badges (non-cabinet machines) • Environmental dosimeters are in the proper location and are current (cabinet machines) 		
<p>Authorized User List</p> <ul style="list-style-type: none"> • List of all current authorized users for the machine is posted in the room • List is up to date 		
<p>Safety System Check Records</p> <ul style="list-style-type: none"> • Interlock and safety system checks are performed quarterly. • Emergency off devices are tested annually • Records are kept in the room. • User demonstrates that interlocks and safety systems are operational¹ 		
<p>SOP</p> <ul style="list-style-type: none"> • X-ray machine operating manual or other standard operating procedures kept in the room for access by users 		
<p>Clean Work Area</p> <ul style="list-style-type: none"> • No evidence of consumption of food or beverages • Room allows for safe working space for using equipment 		

¹ For open-beam x-ray machines, safety systems include:

- Audible or visual pre-exposure warning (10-30 seconds)
- Audible or visual “beam-on” indicators within the enclosure
- Appropriate emergency “x-ray-off” devices within the enclosure

Follow-up records review:

Description	Compliance	Comments
<p>Dosimetry</p> <ul style="list-style-type: none"> All staff on the authorized users lists are assigned dosimetry (if required) Review dosimetry results for the users/area and confirm no Administrative Control Levels (ACLs) have been exceeded 		
<p>Training</p> <ul style="list-style-type: none"> All staff on the authorized users lists have completed required health physics training 		

Additional requirements for x-ray machines used on people (Ministry of Health):

Description	Compliance	Comments
<p>Supervision</p> <ul style="list-style-type: none"> Confirm contact information for Radiation Protection Officer Confirm contact information for supervisors for the use of the machine, if it is operated other than by medical radiation technologists or a physician 		
<p>QC tests</p> <ul style="list-style-type: none"> Ensure that quality control tests are performed each day that the machine is used 		

Radiation Survey:

Survey Instrument Model	
Serial Number	
Calibration Due	
Background Reading	
Date Survey Performed	
Survey Performed By	

X-ray Machine Operating Characteristics:

Tube Voltage:	
Tube Current:	

Cabinet machines:

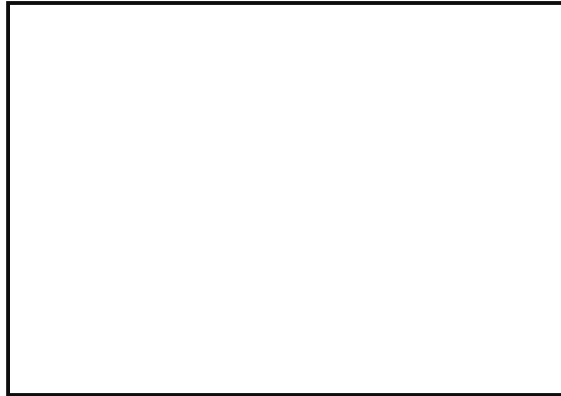
For cabinet x-ray machines, survey around all sides of the machine. Record the highest result and the location. The reading at 5 cm from any surface is not to exceed 5 $\mu\text{Sv/h}$.

Highest reading	
Location	

Open beam:

Use a diagram to indicate the measurement points. Include the control console and any adjacent rooms/areas. Record the values in the table below.

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Point	Dose rate	Notes