

## Licensing of Medical Diagnostic X-ray Equipment

Medical use of X-rays for diagnosis has proven to be immensely beneficial to the society at large. However, unsafe use of X-ray radiation has health risks associated with it and hence it is required that proper care is exercised while its operation.

The Atomic Energy (Radiation Protection) Rules-2004, promulgated under the Atomic Energy Act, 1962, provides the legal framework for the safe handling of radiation generating equipment (in this context - X-ray equipment). As per Rule 3 of Atomic Energy (Radiation Protection) Rules-2004 it is mandatory for all users of X-ray equipment, to obtain requisite 'Licence for Operation' from AERB for ensuring radiation safety of patients, occupational workers and members of public.



AERB Licence for Medical Diagnostic X-ray equipment ensures that:

### Equipment meets the quality requirements:



AERB has standardised requisite Quality Assurance (QA) tests requirements to ensure that acceptable diagnostic image is obtainable with optimal radiation dose to patient. QA tests of X-ray equipment are performed to ensure that the equipment functioning is safe to the patient and the operator. There are AERB recognized QA agencies for conducting QA tests.

Compliance of QA tests to the stipulated standards are verified prior to issuance of Licence. Licensed equipment is also subject to periodic QA tests.

### Qualified/trained staff is available:



In order to carryout diagnostic procedure effectively, requirement of staff (such as X-ray Technologist/Medical Practitioner) with appropriate qualification/training and safety accessories (e.g. TLD badge, etc) is prescribed by AERB.

Before issuance of Licence, it is verified that qualified/trained staff is available at the Medical Diagnostic X-ray facility.

### Adequate shielding is provided to X-ray room:



Adequate shielding is required to be provided to X-ray room for radiation safety of people in the vicinity. The shielding adequacy of X-ray room is assessed through verifying the room layout/results of radiation survey around X-ray room during review of Licence applications.