

## **Regulatory Requirements for Obtaining Licence**

The licensing process includes issuance of consent by the Competent Authority at various stages such as siting, construction, commissioning for operation of the facility, source replenishment, modification during routine operation, and Decommissioning.

### **1.0 Site Approval**

- (i) The applicant shall submit details of the proposed site to the Regulatory Body in the prescribed format.
- (ii) The applicant shall demonstrate that the site meets the requirements specified in the AERB Safety Standard on 'Land-based Stationary Gamma Irradiators' [No. AERB/RF-IRRAD/SS-6 (Rev.1), 2007] for GRAPF installation. The site requirements of IARPF are provided in **Requirements for IARPF**

### **2.0 Approval for Design and Construction**

- 2.1 The GRAPF shall be designed as per the requirements stipulated by AERB Safety Standard on 'Land-based Stationary Gamma Irradiators' [AERB/RF-IRRAD/SS-6 (Rev.1), 2007]. The design requirements of IARPF are provided in **Requirements for IARPF**.
- 2.2 An application in the prescribed format shall be submitted to the Regulatory Body along with Preliminary Safety Assessment Report (PSAR) including the quality assurance program during construction.
- 2.3 Construction of the facility shall not be undertaken before obtaining approval from the Regulatory Body.
- 2.4 The facility shall be constructed in accordance with the design approved by the Regulatory Body.
- 2.5 Quality assurance program shall be ensured during construction of the facility. The reports on the same shall be submitted periodically to the Regulatory Body.
- 2.6 Approval from Regulatory Body shall be obtained for any modifications of approved design, if required to be done during construction.
- 2.7 The Regulatory Body should carry out inspection of the facility during its construction to check the quality assurance documents and to verify that the facility is constructed in accordance with the approved design.

### **3.0 Consent for Commissioning/Approval for First Source Loading**

- 3.1 The applicant shall perform functional tests on each operating and safety systems as specified by the manufacturer/designer after completion of installation of facility. The applicant shall ensure that the built-in design safety features are incorporated in the facility as per the Preliminary Safety Assessment Report (PSAR) approved by the Regulatory Body.

- 3.2 Acceptance Test Reports (ATR) specifying the results of the functional tests conducted on all the systems of the facility shall be submitted to the Regulatory Body in the prescribed format.
- 3.3 Appropriately trained and certified facility operators and a Radiological Safety Officer shall be available while submitting the application for obtaining initial radioactive source procurement and loading permission from Regulatory Body.
- 3.3.1 Authorized inspectors of the Regulatory Body carries out an inspection of the facility to verify the submitted ATR. Based on the findings of the inspection approval may be issued to the applicant for:
- 3.3.2 a) initial source loading at the facility for carrying out commissioning trial operations such as radiation protection survey and dosimetry studies in case of GRAPF and (b) carrying out trial operations with accelerated electron beam in case of IARPF.

#### **4.0 Licence for Operation**

- 4.1 The application for obtaining the licence for operation of the RPF shall be submitted to the Regulatory Body in the prescribed format. The application shall be accompanied by the Final Safety Analysis Report (FSAR) along with Quality Assurance Manual (QAM) of the design and systems installed in the facility and the Radiation Protection Manual (RPM) in the prescribed formats.
- 4.2 The facility should conform to the security guidance as provided in the AERB Safety Guide No. 'Security of Radioactive Sources in Radiation Facilities' [No. AERB/RF-RS/SG-1]
- 4.3 Based on the review of information provided in the application and the inspection carried out by the authorized inspectors of the Competent Authority, licence may be issued to the applicant for operation of the facility under the provisions of the Atomic Energy (Radiation Protection) Rules, 2004.

#### **5.0 Additional Requirements**

- 5.1 Radiation processing facilities planning to carry out radiation processing of food and allied products shall comply with additional provisions as prescribed in the Atomic Energy (Radiation Processing of Food and Allied Products) Rules, 2012.
- 5.2 All applicable statutory requirements of other relevant authorities shall be duly satisfied by the Radiation Processing Facility before commencing the routine operation of the facility.

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