



भारत सरकार
Government of India
भाभा परमाणु अनुसंधान केंद्र
Bhabha Atomic Research Centre
भा.प.अ. केंद्र संरक्षा परिषद
BARC Safety Council

क्लमेंट सी. वर्गीस/Clement C. Verghese
अध्यक्ष, भापअ केंद्र संरक्षा परिषद
Chairman, BARC Safety Council
संदर्भ: बीएससीएस/बी-५/२०२५/२५

बी.एस.सी. सचिवालय/BSC Secretariat,
सेन्ट्रल काम्पलेक्स/Central Complex,
ट्रॉम्बे/Trombay

Ref: BSCS/B-5/2025/25

May 15, 2025

Sub: Regulatory Clearance for Commissioning and Operation of 7 MeV X-ray Generator and ⁶⁰Co Gamma Ray Exposure Device at HERA-LAB, HIRUP

Refer:

- i. Application for regulatory clearance for commissioning and operation of 7 MeV (peak) X-ray Generator (Betatron) and ⁶⁰Co Gamma Ray Exposure Device from Associate Director, RC&IG vide Ref. No. ITIS/BARC/ dated May 01, 2025
 - ii. Recommendation of OPSRC vide Ref. No. BSCS/C-1/2025/C-142 dated February 28, 2025
 - iii. ATR on recommendations of OPSRC vide Ref. No. IT&IS/BARC/7/27 dated March 24, 2025
 - iv. Radiation Protection Manual for HERA-Lab, October, 2024
1. High Energy Radiation Application Lab (HERA-LAB), HIRUP primarily houses X-ray Generator (Betatron) of 7 MeV (peak) and ⁶⁰Co Gamma Ray Exposure Device (COCAM-120) for R&D and industrial radiography applications. The HERA lab consists of an enclosure of concrete walls with 1.6 m thickness on all sides and 500 mm at roof for shielding from X-rays from Betatron and gamma rays from COCAM-120. Associate Director, RC&IG (Facility Authority-FA) submitted an application seeking regulatory clearance for commissioning and regular operation of Betatron and COCAM-120, along with recommendation of OPSRC (Ref. i & ii). The FA submitted ATR on the recommendations of OPSRC (Ref. iii). It is analytically demonstrated that the enclosure provides sufficient shielding and radiation dose rates are within permissible level at controlled area for occupational workers (Ref. iv).
 2. Based on the submissions made by the FA and the recommendation of OPSRC, the Council hereby grants regulatory clearance for Commissioning and Regular Operation of 7 MeV (peak) X-ray Generator (Betatron) and ⁶⁰Co Gamma Ray Exposure Device (COCAM-120) at High Energy Radiation Application Lab (HERA-LAB), HIRUP with the following stipulations.

- i. Recommendations of Safety Committees shall be complied in a time bound manner.
- ii. The facility shall be operated as per the intent of Safety Manual.
- iii. All industrial safety, fire safety and radiological safety precautions shall be followed.
- iv. Periodic safety status report of the facility shall be submitted to OPSRC/ULSC-RO.
- v. Any events and significant events shall be reported as per standard procedures.
- vi. The Regulatory Clearance is valid up to May 31, 2030.


(Clement C. Verghese)
Chairman, BSC

Associate Director, RC&IG

- cc:
- (i) Director, BARC
 - (ii) Members, BSC
 - (iii) Chairman and Member-Secretary, OPSRC
 - (iv) Chairman and Member-Secretary, ULSC-RO
 - (v) Head, IT&IS