

PROCEDURES FOR REPLACEMENT OF TELECOBALT SOURCE

The source of a telecobalt unit needs to be replaced, when the output of the unit becomes low and is clinically not acceptable because of the increase in treatment time. The unit should not be used for the clinical purposes if the output at the normal treatment distance is below 50 cGy/min. The procedures need to be followed for replacement of telecobalt source is as follows:

Performance Evaluation of Telecobalt Unit

1. To take a decision whether it is advisable to replace the telecobalt source, carry out thorough performance evaluation of the telecobalt unit. Based on the outcome of performance evaluation and past records of the unit performance, the decision has to be taken by the management, whether it is worth replacing the telecobalt source or the unit needs to be decommissioned. If the unit is found to be fit and expected to perform as per the specifications after source loading for at least one half-life of the source, following procedures need to be followed for replacement.

Authorisation to procure Telecobalt Source

2. Obtain authorisation from RSD, AERB by sending the filled in form [AERB/RSD/RT/ATH](#) along with all the necessary documents mentioned therein including the [AERB/RSD/RT/UT-ATH](#) for procurement of telecobalt source. The form must be filled in carefully and providing all information and documents required, so as to avoid undue delay.
3. Place order for procurement of telecobalt source, on receipt of Authorisation letter from AERB as per the specifications mentioned in the authorisation letter. Please note that in case of imported source undertaking need to be obtained from the supplier of the source to take back the source after its use.

Contact various Agencies

4. Contact the supplier of the telecobalt unit to assist in replacement of the telecobalt source.
5. Concurrence need to be obtained from the supplier of the old telecobalt source to take back the decayed source

Road Transport Approval

6. Obtain road transport permission from RSD, AERB for transporting the radioactive source from the airport/port to the institution, incase of imported source

Receipt of Sources

7. Intimate regarding the receipt of the source to RSD, AERB by filling in the form [AERB/RSD/RT/SRI](#) within 15 days of its receipt

Loading the Source

8. The certified service engineer under supervision of the Medical Physicist/RSO, who has been authorised by AERB for the supervising the source transfer operation, shall load the telecobalt source. To obtain the authorisation for supervising the source loading operation the Medical Physicist/RSO should submit the duly filled in form [AERB/RSD/RT/SSA](#) prior to 15 days of actual date of source transfer. Incase the Medical Physicist is not having prior experience in source transfer operation of Telecobalt unit, the institution may seek assistance of Medical Physicist from any other Radiotherapy Centre under intimation to his/her employer. In such a case a consent letter from the Medical Physicist with endorsement from his/her employer must be attached along with the filled in form [AERB/RSD/RT/SSA](#). The telecobalt source shall not be loaded, if the authorised Medical Physicist(s) are not present. After loading the telecobalt source, the source transfer report is to be submitted by the Medical Physicist/RSO in the prescribed format [AERB/RSD/RT/ST-REPORT](#).

9. Before Loading of the source ensure that all the persons involved in the source loading, operation and testing of the unit have personnel monitoring badges.
10. After loading the source, it is the responsibility of the RSO to carryout radiation protection survey of the installation prior to any other radiation tests.

Quality Assurance Tests

11. Carryout thorough Quality Assurance Tests of the telecobalt unit and keep all the test results in the hospital records, which is to be produced while inspection of Radiotherapy Department of your institution by AERB personnel.

Commissioning Approval for Patient Treatment after replacement of telecobalt source

12. Obtain commissioning approval for restarting the unit for patient treatment from RSD, AERB by (i) submitting undertaking regarding the performance of the unit in the prescribed format [AERB/RSD/RT/UT-COM](#), and (ii) intimating regarding the availability personnel, associated equipments etc. by sending the filled in form [AERB/RSD/RT/COM](#). Commissioning permission shall not be granted unless adequate number of full-time staff in Radiotherapy Department, personnel monitoring badges for all the radiation workers and all the required associated instruments/accessories are available. **Please note that no patient treatment should be started without obtaining the commissioning approval from RSD, AERB**

Periodic Performance/ Quality Assurance test

13. Carryout performance tests of the unit and survey of the radiation installation periodically and maintain all the records, which are to be produced while inspection of Radiotherapy Department of your institution by AERB personnel.

Annual Status Report

14. Send Annual Report on Status of Radiation Safety in Radiotherapy Department in the prescribed format [AERB/RSD/RT/ASR/2K1](#) to RSD, AERB so that it reaches by the end of each calendar year. **Please note that it is a mandatory requirement to submit the report every year.**

All regulatory forms are available at our website www.aerb.gov.in

For Radiotherapy forms the link is as given below

Link: www.aerb.gov.in/t/forms/regforms/radiotherapy/Radiotherapy_forms.html