

## **APPENDIX-3E**

**(Refer section 3.2.2.5 for IARPF and PARF<10 MeV)**

**(Refer section 3.7.8.3 for IAF-NDT)**

### **FORMAT FOR RADIATION PROTECTION MANUAL FOR ALL ACCELERATOR FACILITIES [IARPF, IAF-NDT AND PARF <10MeV]**

**(OPERATION, MAINTENANCE, EMERGENCY ASPECTS)**

#### **A. ADMINISTRATION AND SAFETY ASSURANCE**

- (a) Administrative hierarchy/organisational set up
- (b) Authorised personnel - Training and qualification of facility personnel, their knowledge in radiation safety, responsibilities of each of personnel, their availability in adequate number, policies in case of long leave/absence of certified personnel
- (c) Local safety committee: constitution, functions and responsibilities
- (d) Procedures for reporting to the regulatory agency on unusual occurrences and periodic radiation safety status
- (e) Procedures in case of change or repairs of H.V. system, safety system/ interlocks, certification of log book entry by RSO
- (f) Record of maintenance - maintenance schedule, radiation monitoring, and calibration of survey meters, etc.
- (g) Industrial safety aspects - fire equipment, safety accessories etc.
- (h) Facility security arrangements, fencing and personnel movement control etc.
- (i) Removal and storage of contaminated material, if any.
- (j) Medical assistance - First aid facility, location, periodic medical examination (once a year), medical facilities and treatment facilities for radiation incidents

#### **B. MONITORING**

- (a) Radiation monitoring - Type of area monitors, sensitivity range, location, interlock alarm set levels
- (b) Contamination monitoring - On line monitoring and sample measurement, method of collecting samples

- (c) Personnel monitoring - Number of PM badges, procedure for their issuance, safe place for storage, etc.

**C. OPERATION PROCEDURES**

'Beam ON' procedures be established, documented and displayed in the console area

**D. MAINTENANCE PROCEDURE FOR SAFETY SYSTEMS/INTER-LOCKS**

- (a) Periodic maintenance - Daily/weekly/monthly/quarterly/yearly (Items, procedures and schedules)
- (b) Procedure for maintenance of cooling water used for cooling target beam line components, etc
- (c) Procedure for maintenance of air cooling mechanism maintenance and checking of alarm/warning devices

**E. EMERGENCY PLANNING AND PROCEDURES**

- (a) Organisational structure and communication links
- (b) Name, address and telephone numbers of agencies to be contacted in case of emergency
- (c) Emergency contact telephone/ telex nos. and address of
  - (i) Head of Institution
  - (ii) Facility-in-charge
  - (iii) Radiological safety officer (RSO)
  - (iv) Regulatory agency (AERB)
  - (v) Fire safety officer (Local)
  - (vi) Local fire station
  - (vii) Local police station
  - (viii) Local medical hospital, radiation therapy hospitals (nearest)
- (d) Type of emergencies envisaged - Prevention/handling of emergencies, investigation methods, etc. during explosion or fire or smoke, radiation emergency, crisis management in case of emergency, earthquake, floods, other natural calamities.