

EMERGENCY RESPONSE PLANS AND PREPAREDNESS

1.0 Emergency Response Plan

- 1.1** The licensee, in consultation with Radiological Safety Officer, shall prepare emergency response plan and ensure emergency preparedness measures.
- 1.2** Emergency response plans shall be made available to mitigate any consequences of emergencies. The response plan shall address the events such as:
 - a. Radioactive source rack stuck in an unshielded position
 - b. Radioactive contamination- (detection of leaking radioactive sources, contamination of source storage water pool)
 - c. Fire, explosion or gas leakages inside the accelerator equipment area, radiation cell or product storage area
 - d. Loss of source shielding (e.g. very low water level in GRAPFs)
 - e. Malfunctioning or deliberate defeat of the safety interlock systems and access control systems
 - f. Accidental radiation exposure of individual(s) in excess of dose limits
 - g. Breach of security, natural occurrences such as earthquake, flood, tornadoes etc.

2.0 The emergency plan shall be specific to each situation and shall include, as appropriate:

- 2.1** Identification of reasonably foreseeable accidents and other incidents or occurrences and their predicted consequences
- 2.2** Communication procedures, including an emergency call out list, recommended actions for specified situations, a list of persons identified for implementing the specified action plan, and specification of situations requiring evacuation together with procedures for implementation
- 2.3** A statement regarding immediate life-saving actions, statutory responsibilities and the names of persons identified for implementing actions to discharge them
- 2.4** Availability of emergency equipment, including a list of the equipment available and their locations
- 2.5** Availability of first aid equipment, including a list of the equipment available, their locations and the names of persons trained to use them (where applicable)
- 2.6** An outline of the post-emergency recovery procedures designed to restore normal operating conditions.

3.0 Response Measures

- 3.1** The response measures shall be concise, unambiguous, easily practicable and aimed at restoring normal operation keeping exposures to individuals ALARA.
- 3.2** In case of injury to any individual, medical attention shall be accorded priority.

3.3 In case of external emergency, measures shall be taken to cordon off and decontaminate the area.

3.4 Response to an emergency shall consist of initial actions to be implemented immediately and follow up actions subsequently.

4.0 Emergency Preparedness

4.1 Contact numbers of responsible emergency response persons including Licensee/Employer, RSO, fire services, ambulance, medical center, manufacturer and the Competent Authority shall be displayed at control panel and other relevant locations.

4.2 Periodic review of emergency plans shall be carried out to enhance the effectiveness of the plans.

4.3 The employer shall report every unusual event to the Competent Authority immediately and certainly within 24 hours of its occurrence. The details shall include

- (i) Date and time of occurrence
- (ii) Status of RPF at the time of incident
- (iii) Source activity at the time of incident
- (iv) Brief description of the event
- (v) Action implemented
- (vi) Probable cause of the incident.

4.4 The immediate notification shall be followed by a detailed report after carrying out investigations.

4.5 The Manufacturer/Supplier shall provide assistance to handle any emergency situations involving radiation source.

The licensee shall conduct an emergency exercise at least once in a year and report of the exercise shall be prepared immediately upon completion of exercise and made available to the Competent Authority, when required