









TABLE 1. SUGGESTED RADIUS OF INNER CORDONED AREA (SAFETY PERIMETER) FOR A RADIOLOGICAL EMERGENCY

Situation	Initial inner cordoned area (safety perimeter)
<b>Initial determination - outside</b>	
Unshielded or damaged potentially dangerous source <sup>18</sup>	30 m around <sup>19</sup>
Major spill from a potentially dangerous source	100 m around <sup>19</sup>
Fire, explosion or fumes involving a potentially dangerous source	300 m radius <sup>19</sup>
Suspected bomb (potential RDD), exploded or unexploded	400 m radius or more to protect against an explosion <sup>20</sup>
<b>Initial determination - inside a building</b>	
Damage, loss of shielding or spill involving a potentially dangerous source	Affected and adjacent areas (including floors above and below)
Fire or other event involving a potentially dangerous source that can spread materials throughout the building (e.g. through the ventilation system)	Entire building and appropriate outside distance as indicated above
<b>Expansion based on radiological monitoring<sup>21</sup></b>	
Ambient dose rate of 100 $\mu\text{Sv/h}$ <sup>22</sup>	Wherever these levels are measured

The actual boundaries of the safety and security perimeters should be defined in the way that they are easily recognizable (e.g. roads) and secured. However, the safety perimeter should be established at least as far from the source as indicated in Table 1, until the radiological assessor has assessed the situation.

**Incident commander actions in response to general radiological emergency (1)**

- ❑ Stand off, observe and assess.
- ❑ Determine inner cordoned area.
- ❑ Reposition response personnel, vehicles and equipment.
- ❑ Follow personnel protection guidelines.
- ❑ Take life saving actions.
- ❑ Establish an ICP and staging area.
- ❑ Consider terrorism/bomb/second event.
- ❑ Check and identify packages, people, papers and vehicles.
- ❑ Mark inner cordoned area.
- ❑ Evacuate public from inner cordoned area.
- ❑ Request radiological assessor – get phone advice on radiation issues.

**Incident commander actions in response to general radiological emergency (2)**

- ❑ Request initial assessment from first responder monitor.
- ❑ Establish response areas/facilities.
- ❑ Account for all response personnel.
- ❑ Manage field triage, registration, monitoring and decontamination.
- ❑ Establish a security perimeter at scene and other facilities.
- ❑ Limit spread of contamination.
- ❑ Notify transport/medical facilities.
- ❑ Notify national EOC. Consider need for full response (specialised teams).
- ❑ Brief requested teams upon arrival.
- ❑ Keep the public informed through a single official source.
- ❑ Treat scene as a crime scene.
- ❑ Do not attempt recovery or decontamination of the scene.

### **Actions of all first responders in a radiological emergency (1)**

- Protect yourself.
- Operate under the IC.
- Follow personnel protection guidelines (on back of card).
- Ensure that public follows public protection guidelines.
- Do not delay life saving actions due to presence of radiation.
- Direct media inquires to the public information officer.
- Treat scene as a crime scene.
- Follow your specific action guide.

### **Personnel protection guidelines (2)**

- Follow your standard safety procedures.
- Be visually identifiable.
- Minimize time near a potentially dangerous source.
- Do not touch/hold suspected radioactive items.
- If applicable use available respiratory protection.
- Keep hands away from mouth, do not smoke, eat or drink and wash hands regularly.
- Ensure your name/activities performed are recorded.
- Get monitored and registered.
- Shower and change clothing as soon as possible.

### **Local hospital actions in radiological emergency (1)**

- Operate under the IC. Follow personnel protection guidelines.
- Brief health care staff on negligible risk in treating contaminated patients if appropriate precautions are followed.
- Have law enforcement provide a cordoned area around the hospital(s) to redirect worried-well to the secondary location.
- Prepare ambulance reception area and treatment area.
- Set up a controlled area and control lines.
- Prepare the medical staff. Use universal precautions.
- Assess and manage injuries (assumed to be contaminated):  
(1) Medical stabilization first; (2) Radiological survey (if possible); (3) Physical examinations and blood tests (CBC with differential) promptly. If internal contamination is suspected take nasal swabs.

### **Local hospital actions in radiological emergency (2)**

- If the patient could not be checked for contamination, have him/her take a shower and change clothing as soon as possible (if will not adversely affect patient's medical status).
- If the patient is contaminated — perform full decontamination.
- Survey and transfer the uncontaminated patient to the clean area.
- Control the spread of contamination: Before exiting /removing from contaminated area (1) Survey staff, remove contaminated clothing and shower. (2) Survey equipment.
- Conduct clean up under direction of radiological assessor.
- Don't release areas and ambulance for normal use until approved by radiological assessor.
- Assess needs and request additional resources.