SCHEDULE 8

REQUIREMENTS FOR RADIOACTIVE MATERIALS
AND FOR PACKAGINGS AND PACKAGES

PART X

REQUIREMENTS FOR TYPE A PACKAGES

1. A Type A package must meet the requirements of Part IV of this Schedule.

2. The smallest overall external dimension of the package must not be less than 10 cm.

3. The outside of the package must incorporate a feature such as a seal, which is not readily breakable and which, while intact, will be evidence that it has not been opened.

4. Any tie-down attachments on the package must be so designed that, under both normal and accident conditions of transport, the forces in those attachments do not impair the ability of the package to meet the requirements of these Regulations.

5. The design of the package must take into account temperatures ranging from −40°C to 70°C for the components of the packaging, giving attention to freezing temperatures for liquid contents and to the potential degradation of packaging materials within the given temperature range.

6. The design and manufacturing techniques must be in accordance with national or international standards, or other requirements, acceptable to the Secretary of State

7. The design must include a containment system securely closed by a positive fastening device which cannot be opened unintentionally or by a pressure which may arise within the package.

8. Special form radioactive material may be considered as a component of the containment system.

9. If the containment system forms a separate unit of the package, it must be capable of being securely closed by a positive fastening device which is independent of any other part of the packaging.

10. The design of any component of the containment system must take into account, where applicable, the radiolytic decomposition of liquids and other vulnerable materials and the generation of gas by chemical reaction and radiolysis.

11. The containment system must retain its radioactive contents under a reduction of ambient pressure to 60 kPa.

12. All valves, other than pressure relief valves, must be provided with an enclosure to retain any leakage from the valve.

13. A radiation shield which encloses a component of the package specified as a part of the containment system must be so designed as to prevent the unintentional release of that component from the shield. Where the radiation shield and such component within it form a separate unit, the radiation shield must be capable of being securely closed by a positive fastening device which is independent of any other packaging structure.

14. A package must be so designed that, if it were subjected to the tests specified in paragraphs 7 to 12 of Part IV of Schedule 9, it would prevent—

(a) loss or dispersal of the radioactive contents; and

(b) loss of shielding integrity which would result in more than a 20% increase in the radiation level at any external surface of the package.

15. The design of a package intended for liquid radioactive material must make provision for ullage to accommodate variations in the temperature of the contents, dynamic effects and filling dynamics.

16. A Type A package designed to contain liquids must,in addition—

(a) be adequate to meet the conditions specified in paragraph 14 if the package is subjected to the tests specified in paragraph 13 of Part IV of Schedule 9; and

(b) either—

(i) be provided with sufficient absorbent material to absorb twice the volume of the liquid contents (such absorbent material must be suitably positioned so as to contact the liquid in the event of leakage); or

(ii) be provided with a containment system composed of primary inner and secondary outer containment components designed to ensure retention of the liquid contents, within the secondary outer containment components, even if the primary inner components leak.

17. A package designed for gases must prevent loss or dispersal of the radioactive contents if the package were subjected to the tests specified in paragraph 13 of Part IV of Schedule 9. A package designed for tritium in gaseous form or for noble gases with contents not exceeding A_2 is excepted from this requirement.