
STATUTORY INSTRUMENTS

2002 No. 1093

The Radioactive Material (Road Transport) Regulations 2002

PART I

CITATION, COMMENCEMENT AND APPLICATION

Citation and commencement

1. These Regulations may be cited as the Radioactive Material (Road Transport) Regulations 2002 and shall come into force on 1st May 2002.

Interpretation etc

2.—(1) These Regulations give effect to an international agreement on the provision of an acceptable level of control of the radiation, criticality and thermal hazards to persons, property and the environment associated with the transport of radioactive material comprised in the Regulations for the Safe Transport of Radioactive Material (1996 Edition (Revised)) published by the International Atomic Energy Authority (“IAEA 1996”)(1) and as adapted by the European Agreement concerning the international carriage of dangerous goods by road (“ADR”)(2) with any amendments up to 1st July 2001, and by Council Directive 96/29/EURATOM(3) and Commission Directive 2001/7/EC(4).

(2) In these Regulations—

“1996 Regulations” means the Radioactive Material (Road Transport) (Great Britain) Regulations 1996(5);

“A₁” means the activity value of special form radioactive material specified in Table 1 in Schedule 1 or calculated in accordance with regulation 29;

“A₂” means the activity value of radioactive material (other than special form radioactive material) specified in Table 1 in Schedule 1 or calculated in accordance with regulation 29;

“accident conditions of transport” means conditions of transport involving more than minor mishap;

“ADR journey” has the meaning given in regulation 4(3);

“the Act” means the Radioactive Material (Road Transport) Act 1991(6);

“carrier” means any person (including a government) undertaking the transport of radioactive material and includes carriers for hire or reward and on their own account whether under contract or not;

(1) No. TS-R-1 (ST-1, Revised) (ISBN 92-0-100500-8).

(2) 2001 (ISBN 92-1-139069-9).

(3) O.J. L159, 29.6.96, p.1.

(4) O.J. L30, 1.2.01, p.43.

(5) S.I. 1996/1350.

(6) 1991 c. 27 as amended as respects section 1(1)(a) by the Radioactive Material (Road Transport) (Great Britain) (Definition of Radioactive Material) Order 2002 1092.

- “competent authority” has the meaning given in regulation 14(2);
- “compliance assurance” means a systematic programme of measures applied by the Secretary of State aimed at ensuring that the provisions of these Regulations are met in practice and which is more fully described in regulation 18;
- “confinement system” means the assembly of fissile material and packaging components specified by the designer and agreed by the competent authority as intended to preserve criticality safety;
- “consignee” means any person (including a government) that receives a consignment;
- “consignment” means any package, or load of radioactive material, presented by a consignor for transport;
- “consignor” means any person (including a government) that prepares a consignment for transport and is named as consignor in the transport documents, or a freight forwarder acting as agent for such a person;
- “containment system” means the assembly of components of the packaging specified by the designer as intended to retain the radioactive material during transport;
- “contamination” means the presence of a radioactive substance on a surface in quantities in excess of 0.4 Bq/cm² for beta and gamma emitters and low toxicity alpha emitters or in excess of 0.04 Bq/cm² for all other alpha emitters; “non-fixed contamination” means contamination that can be removed from a surface during routine conditions of transport and “fixed contamination” means contamination other than non-fixed contamination;
- “contracting party country” has the meaning given in regulation 4(8);
- “conveyance”, in relation to road transport, means any mechanically propelled vehicle (including an articulated vehicle) intended or adapted for use on roads and, for the purposes of these Regulations, each trailer or semi-trailer forming part of a larger vehicle shall be treated as a separate conveyance;
- “Criticality Safety Index” (or “CSI”) assigned to a package, overpack or freight container containing fissile material, means a number that is used to provide control over the accumulation of packages, overpacks or freight containers containing fissile material and is determined in accordance with regulation 45;
- “the Dangerous Goods Recommendations” means the eleventh revised edition of “The United Nations Recommendations on the Transport of Dangerous Goods” prepared by the United Nations Committee of Experts on the Transport of Dangerous Goods as published by HMSO;
- “depleted uranium” means uranium containing a lesser mass percentage of uranium-235 than in natural uranium;
- “design” means the description of special form radioactive material, low dispersible radioactive material, package or packaging which enables that item to be fully identified; the description may include specifications, engineering drawings, reports demonstrating compliance with regulatory requirements and other relevant documentation;
- “driver” means the driver of any conveyance;
- “enriched uranium” means uranium containing a greater mass percentage of uranium-235 than in natural uranium;
- “excepted package” means a package meeting the requirements of Part V of Schedule 8 and to which the controls set out in regulations 41 and 42 apply;
- “exclusive use” has the meaning given in regulation 20(2);
- “fissile material” means uranium-233, uranium-235, plutonium-239, plutonium-241 (or any combination thereof) but does not include unirradiated natural uranium, unirradiated depleted

uranium, or natural uranium or depleted uranium, either of which has been irradiated in thermal reactors only;

“fissile package” means a package meeting the requirements of paragraphs 4 to 10 of Part XIV of Schedule 8;

“freight container” means an article of transport equipment designed to facilitate the transport of goods (either packaged or unpackaged) by one or more modes of transport without intermediate reloading, which is of a permanent enclosed character, rigid and strong enough for repeated use, and fitted with devices facilitating its handling particularly in transfer between conveyances and from one mode of transport to another; and a “small freight container” is a freight container that has either an overall outer dimension of less than 1.5m or an internal volume of not more than 3m³ and any other freight container is a “large freight container”;

“goods compartment” means a part of a conveyance intended or adapted for the transport of goods or burden;

“Great Britain journey” has the meaning given in regulation 4(2);

“industrial package” means a package, being either—

- (a) an industrial package of Type 1 (Type IP-1) meeting the requirements of Part VI of Schedule 8;
- (b) an industrial package of Type 2 (Type IP-2) meeting the requirements of Part VII of Schedule 8;
- (c) an industrial package of Type 3 (Type IP-3) meeting the requirements of Part VIII of Schedule 8.

“intermediate bulk container (IBC)” means a portable packaging that—

- (a) has a capacity of not more than 3m³;
- (b) is designed for mechanical handling;
- (c) is resistant to the stresses produced in handling and transport (as determined by performance tests); and
- (d) is designed to conform to the standards in the chapter on Recommendations on Intermediate Bulk Containers (IBCs) of the Dangerous Goods Recommendations;

“the ISO classification document” means the International Organization for Standardization document, “Sealed radioactive sources – Classification” published by the British Standards Institution (BSI) and HMSO (Reference No. ISO 2919: 1980 (E));

“the ISO freight containers document” means the International Organization for Standardization document, “Series 1 Freight Containers – Specifications and Testing – Part 1: General Cargo Containers” published by the BSI and HMSO (Reference No. ISO 1496:1-1990(E));

“the ISO leak test document” means the International Organization for Standardization document, “Radiation Protection – Sealed Radioactive Sources – Leak Test Methods” published by the BSI and HMSO (Reference No. ISO 9978:1992 (E));

“low dispersible radioactive material” means either a solid radioactive material or a solid radioactive material in a sealed capsule that has limited dispersibility and is not in powder form;

“low specific activity material” (or “LSA material”) means radioactive material that by its nature has a limited specific activity or for which limits of estimated average specific activity (disregarding external shielding materials surrounding the radioactive material) apply, and such material has the following categories—

- (a) “LSA-I” meaning LSA material comprising—

- (i) ores containing uranium or thorium or mixtures of uranium and thorium (and concentrates of such ores) and other ores containing naturally occurring radionuclides that are intended to be processed for the use of these radionuclides;
 - (ii) solid unirradiated natural uranium or depleted uranium or natural thorium or their solid or liquid compounds or mixtures;
 - (iii) radioactive material for which the A_2 value is unlimited, excluding fissile material in quantities not excepted under paragraph 3 of Part XIV of Schedule 8; or
 - (iv) other radioactive material in which the activity is distributed throughout and the estimated average specific activity does not exceed 30 times the values for activity concentration specified in regulation 28(c) and or calculated in accordance with regulation 29, excluding fissile material in quantities not excepted under paragraph 3 of Part XIV of Schedule 8;
- (b) “LSA-II” meaning LSA material comprising—
- (i) water with tritium concentration up to 0.8 TBq/L; or
 - (ii) other material in which the activity is distributed throughout and the estimated average specific activity does not exceed $10^{-4} A_2/g$ for solids and gases, and $10^{-5} A_2/g$ for liquids;
- (c) “LSA-III” meaning LSA material comprising solids (such as consolidated wastes and activated materials), excluding powders in which—
- (i) the radioactive material is distributed throughout a solid or a collection of solid objects, or is essentially uniformly distributed in a solid compact binding agent (such as concrete, bitumen and ceramic.);
 - (ii) the radioactive material is relatively insoluble, or is intrinsically contained in a relatively insoluble matrix and which is of such a nature that if the entire contents of a package containing the material were subjected to the test specified in Part I of Schedule 8 the activity in the water used in the test would not, at the end of the test, exceed $0.1 A_2$; and
 - (iii) the estimated average specific activity of the solid, excluding any shielding material, does not exceed $2 \times 10^{-3} A_2/g$;

“low toxicity alpha emitter” means—

- (a) natural uranium;
- (b) depleted uranium;
- (c) natural thorium;
- (d) uranium-235;
- (e) uranium-238;
- (f) thorium-232;
- (g) thorium-228;
- (h) thorium-230;

when contained in ores or physical and chemical concentrates; or

- (i) alpha emitters with a half-life of less than 10 days;

“maximum normal operating pressure” means the maximum pressure above atmospheric pressure at mean sea level that would develop in the containment system in a period of one year under the conditions of temperature and solar radiation corresponding to environmental

conditions during transport, in the absence of venting, external cooling by an ancillary system or operational controls;

“multilateral approval” has the meaning given in regulation 14(1)(a);

“natural uranium” means chemically separated uranium containing the naturally occurring distribution of uranium isotopes;

“naturally occurring distribution of uranium isotopes” means approximately 99.28% uranium-238 and 0.72% uranium-235 by mass, but including a very small mass percentage of uranium-234;

“non-ADR journey” has the meaning given in regulation 4(4);

“normal conditions of transport” means conditions of transport involving minor mishaps;

“the Northern Ireland Regulations” means regulations for the time being in force for Northern Ireland under an Order in Council under paragraph 1(1)(b) of Schedule 1 to the Northern Ireland Act 1974(7) that contains the statement specified in section 8 of the Act;

“overpack” means an enclosure (such as a box or bag) that is used by a single consignor to facilitate as a handling unit a consignment of one or more packages for convenience of handling, stowage and transport;

“package” means the packaging (together with its radioactive contents) as presented for transport and may be of the following types—

- (a) excepted package;
- (b) industrial package Type 1 (Type IP-1);
- (c) industrial package Type 2 (Type IP-2);
- (d) industrial package Type 3 (Type IP-3);
- (e) Type A package;
- (f) Type B(U) package;
- (g) Type B(M) package; or
- (h) Type C package.

“packaging” means the assembly of components necessary to enclose the radioactive contents completely and may be a box, a drum or similar receptacle, or a freight container, tank or intermediate bulk container; in particular, packaging may consist of one or more receptacles, absorbent materials, spacing structures, radiation shielding and service equipment for filling, emptying, venting and pressure relief, and devices for cooling, absorbing mechanical shocks, handling and tie-down and thermal insulation and service devices integral to the package;

“personnel compartment” means a driver’s compartment in a conveyance or a part of a conveyance intended or adapted for the carriage of persons in the conveyance;

“quality assurance programme” means a systematic programme of controls and inspections by any organisation or body involved in the transport of radioactive material that is aimed at providing adequate confidence that the standard of safety prescribed in these Regulations is achieved in practice and is more fully described in regulation 18;

“radiation level” means the corresponding dose rate expressed in mSv per hour;

“radiation protection programme” means the programme to provide adequate consideration of radiation protection measures more fully described in regulation 24;

“radioactive contents” means radioactive material together with any contaminated or activated solids, liquids and gases within the packaging;

“road” means a road within the meaning providing adequate confidence that the standard of safety prescribed in these regulations is achieved in practice and which of section 192(1) of the Road Traffic Act 1988(8);

“routine conditions of transport” means conditions of transport that are incident free;

“shipment” means the specific movement of a consignment from origin to destination where that movement includes transport in Great Britain;

“special arrangement” means those provisions approved by the Secretary of State under which consignments that do not satisfy all the applicable requirements of these Regulations may be transported;

“special form radioactive material” means either an indispersible solid radioactive material or a sealed capsule containing radioactive material that meet the requirements set out in Part II of Schedule 8;

“specific activity” means, in relation to a radionuclide, the activity per unit mass of that nuclide and, in relation to a material, the activity per unit mass or volume of the material in which the radionuclides are essentially uniformly distributed;

“surface contaminated object” or “SCO” means a solid object that is not itself radioactive but which has radioactive material distributed on its surfaces and being one of the following—

- (a) SCO-I, a solid object on which—
 - (i) the non-fixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 4 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, or 0.4 Bq/cm^2 for all other alpha emitters; and
 - (ii) the fixed contamination on the accessible surface, averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed $4 \times 10^4\text{ Bq/cm}^2$ for beta and gamma emitters and low toxicity alpha emitters, or $4 \times 10^3\text{ Bq/cm}^2$ for all other alpha emitters; and
 - (iii) the non-fixed contamination plus the fixed contamination on the inaccessible surface, averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed $4 \times 10^4\text{ Bq/cm}^2$ for beta and gamma emitters and low toxicity alpha emitters, or $4 \times 10^3\text{ Bq/cm}^2$ for all other alpha emitters;
- (b) SCO-II, a solid object on which either the fixed or non-fixed contamination on the surface exceeds the applicable limits specified for SCO-I in (a) above and on which—
 - (i) the non-fixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 400 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, or 40 Bq/cm^2 for all other alpha emitters; and
 - (ii) the fixed contamination on the accessible surface, averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed $8 \times 10^5\text{ Bq/cm}^2$ for beta and gamma emitters and low toxicity alpha emitters, or $8 \times 10^4\text{ Bq/cm}^2$ for all other alpha emitters; and
 - (iii) the non-fixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does

not exceed 8×10^5 Bq/cm² for beta and gamma emitters and low toxicity alpha emitters, or 8×10^4 Bq/cm² for all other alpha emitters;

“tank” means a portable tank, a road tank vehicle or a receptacle and may also mean a tank container, each of which has a capacity of not less than 450 litres to contain liquids, powders, granules, slurries or solids which are loaded as gas or liquid and subsequently solidified, and not less than 1000 litres to contain gases; and a “tank container” means a vessel which is capable of being carried on land or on sea and of being loaded and discharged without the need of removal of its structural equipment, possessing stabilising members and tie-down attachments external to the shell, and capable of being lifted when full;

“Transport Index (TI)” means a number that is used to provide control over radiation exposure and is determined in accordance with regulation 44 and assigned to a package, overpack, or freight container, or to unpackaged LSA-I or SCO-I;

“transport of a consignment” has the meaning given in regulation 4(5);

“unilateral approval” has the meaning given in regulation 14(1)(b);

“unirradiated thorium” means thorium containing not more than 10-7 g of uranium-233 per gram of thorium-232;

“unirradiated uranium” means uranium containing not more than 2 kBq of plutonium per gram of uranium-235, not more than 9 MBq of fission products per gram of uranium-235 and not more than 5mg of uranium-236 per gram of uranium-235;

(3) Unless the context otherwise requires, any other expressions used in these Regulations that are also used in IAEA 1996 or ADR have the meaning given to them in those Regulations or in that Agreement.

(4) In these Regulations, unless the context otherwise requires, any reference to—

- (a) a numbered regulation or a numbered Schedule is a reference to the regulation or Schedule bearing that number in these Regulations;
- (b) a numbered paragraph is a reference to the paragraph bearing that number in the regulation or Schedule in which the reference appears; and
- (c) a Part is a reference to a Part in these Regulations.

Continued applicability of other Regulations

3. Radioactive material that is also to be transported by any other mode of transport must meet the requirements of the Regulations that are applicable to that mode of transport.

Scope of Regulations

4.—(1) Subject to regulation 5 (non-application of regulations), these Regulations apply to the transport of a consignment—

- (a) that is performed by a conveyance;
- (b) where the journey is commenced after these Regulations come into force;
- (c) where the journey involved is by road; and
- (d) where the journey is either
 - (i) a Great Britain journey,
 - (ii) an ADR journey, or
 - (iii) a non-ADR journey.

(2) A “Great Britain journey” is one that takes place entirely within Great Britain.

(3) An “ADR journey” is one where the entire journey takes place only in Great Britain and in the territory of a contracting party country.

(4) A “non-ADR journey” is one where any stage of the journey takes place in Great Britain but any other stage of the journey takes place in the territory of a country that is not a contracting party country.

(5) The “transport of a consignment” means the specific movement of a consignment from origin to destination and includes

- (a) any stops necessitated by transport conditions;
- (b) any period spent by the consignment in the vehicle by reason of traffic conditions before, during or after movement of the consignment;
- (c) any intermediate temporary storage of the consignment in order to change either the mode or means of transport (but only where the transport documents showing the place of dispatch and the place of reception are presented on request and the consignment is not opened during the storage otherwise than for checking by a competent authority); and
- (d) all operations and conditions associated with and involved in the movement of that consignment, including—
 - (i) the design, manufacture and maintenance and repair of packaging,
 - (ii) the preparation, consigning, loading, carriage (including in-transit storage), unloading and receipt at the final destination of loads of radioactive material and packages,
 - (iii) the routine, normal and accident conditions of transport by road encountered in carriage and in storage during transit, and
 - (iv) the transport by road that is incidental to the use of the radioactive material.

(6) “Performed by a conveyance” includes a shipment that involves several different conveyances.

(7) “Journey” includes a journey—

- (a) that is performed in stages by different modes of transport (carriage by sea, rail, inland waterway or air),
- (b) that is performed by one carrier or by successive carriers or under a single contract of carriage or a series of contracts of carriage, or
- (c) where a section of it is subject to other international rules.

(8) “contracting party country” means a country that, at the time the relevant journey is commenced, is a party to ADR.

Non-application of Regulations

5.—(1) These Regulations do not apply to or in relation to—

- (a) radioactive material that is an integral part of the means of transport;
- (b) radioactive material moved within an establishment that is subject to appropriate safety regulations in force there and where the movement does not involve the use of public roads;
- (c) radioactive material implanted into the body of a person (whether alive or dead) or of a live animal for diagnosis or treatment;
- (d) radioactive material in consumer products if those products have been approved by the relevant regulatory authority and have then been sold to a consumer;
- (e) natural material and ores containing naturally occurring radionuclides that are not intended to be processed for use of those radionuclides if, but only if, the activity concentration of

such material or ores does not exceed 10 times the values specified in respect of exempt material in column (4) of Table 1 in Schedule 1; and

- (f) radioactive material where
 - (i) the activity concentration does not exceed the value specified in paragraph (c) of regulation 28 (basic radionuclide values), or
 - (ii) the total activity in the consignment does not exceed the value specified in paragraph (d) of regulation 28 (basic radionuclide values).

(2) When the transport of a consignment of radioactive material is made on behalf of a Department of the Government of the United Kingdom or is made in connection with the execution of a contract entered into with any such Department, these Regulations do not apply to the transport of that material if it forms part of an instrument of war or if it is required for research into the development or production of any such instrument (or part of such an instrument) or if it is produced in the course of or in connection with such a development or production.

(3) When the transport of a consignment of radioactive material is made on behalf of a visiting force or is made in connection with the execution of a contract made with any such force, these Regulations do not apply to the transport of that material if it is, or forms part of, an instrument of war; a “visiting force” is any such body, contingent or detachment of the forces of any State to which the provisions of the Visiting Forces Act 1952⁽⁹⁾ apply by virtue of section 1(1)(a) or section 1(1)(b), and any order in Council made under section 1(2) of that Act.

(4) These Regulations do not apply to, or in relation to, the transport of a consignment—

- (a) undertaken by, or under the supervision of, the emergency services (including by breakdown vehicles carrying vehicles that have been involved in accidents or have broken down and which contain radioactive material);
- (b) in an emergency intended to save human lives or to protect the environment, provided that all measures are taken to ensure that such transport is carried out in complete safety;
- (c) where the journey involved is an ADR journey and the transport is the subject of a bilateral or multilateral special agreement to which the United Kingdom is a signatory made under the terms of paragraph 3 of article 4 of ADR, to the extent that is necessary to meet the terms of that special agreement; or
- (d) where the transport conforms with the terms of any derogations approved under article 6(9) and (10) of Council Directive 94/55/EC⁽¹⁰⁾, to the extent that is necessary to meet the terms of that derogation.

Derogations: maritime and air transport

6.—(1) Subject to paragraph (2), where a package does not entirely meet the requirements of these Regulations but it is in conformity with either the International Maritime Dangerous Goods Code (“the IMDG Code”)⁽¹¹⁾ or the Technical Instructions for the safe Transport of Dangerous Goods by Air (“the ICAO Technical Instructions”)⁽¹²⁾, that package shall be accepted for carriage where the journey is performed in stages by different modes of transport (including maritime or air carriage) if—

- (a) the package (not being marked or labelled in accordance with regulation 48, (responsibilities of consignors)) does bear markings and danger labels in accordance with the requirements of either the IMDG Code or the ICAO Technical Instructions;

⁽⁹⁾ 1952 c. 67.

⁽¹⁰⁾ O.J. No. 319, 12.12.94, p.7.

⁽¹¹⁾ Implementing Chapter VII, Part A, of the International Convention for the Safety of Life at Sea, 1974 (SOLAS Convention), published by the International Maritime Organisation (IMO), London.

⁽¹²⁾ Complementing Annex 18 to the Chicago Convention on International Civil Aviation (Chicago 1944), published by the International Civil Aviation Organisation (ICAO) in Montreal.

- (b) where there is mixed packing within the package, the requirements of the IMDG Code or the ICAO Technical Instructions with respect to mixed packing are complied with;
- (c) for a package involved in transport including maritime carriage, the package (not being marked and labelled in accordance with regulation 48, (responsibilities of consignors)) is marked and labelled in accordance with Chapter 5.3 of the IMDG Code;
- (d) the transport document in respect of the package includes the statement: “Carriage in accordance with 1.1.4.2 of ADR”;
- (e) where in the transport of a freight container the stage of carriage by sea is preceded by another mode of transport, a container packing certificate conforming to section 5.4.2 of the IMDG Code is provided with the transport document; and
- (f) where the vehicle involved is placarded as required by paragraph 30 of Schedule 6.

(2) The derogation allowed under paragraph (1) does not apply (and accordingly, these Regulations do apply) to a package containing goods that, although considered as non-radioactive material according to the applicable requirements of the IMDG Code or the ICAO Technical Instructions, are classified as radioactive material according to these Regulations.

Relationship of Regulations to other safety controls

7.—(1) Nothing in these Regulations is to be taken as specifying, or as being a substitution for, controls (including those concerned with the planning of routes or physical safety) which apply to the transport of radioactive material for reasons other than of radiological safety and, accordingly, such controls—

- (a) must still take radiological and non-radiological hazards into account, but
- (b) shall not be taken as detracting from any of the standards of safety provided for in these Regulations.

(2) For the avoidance of any doubt, in matters—

- (a) involving the subsidiary risks arising from radioactive material, and
- (b) relating to the transport of radioactive material with other dangerous goods,

the relevant provisions governing the transport of dangerous goods contained in or under the Health and Safety at Work Act(9)(13) remain applicable in addition to the provisions of these Regulations.

Revocation of 1996 Regulations

8. The 1996 Regulations shall be revoked and, subject to Part II, shall cease to have effect in relation to the transport of radioactive material by road commenced on or after the date these Regulations come into force.

PART II

SAVINGS AND TRANSITORY PROVISIONS FOR CERTAIN MATTERS UNDER EARLIER INTERNATIONAL REGULATIONS

General

9.—(1) In this Part—

“IAEA 1973” means the 1973 or the 1973 (As Amended) Editions of the Regulations for the Safe Transport of Radioactive Material published by The International Atomic Energy Agency, Vienna, (1973 Safety Series No. 6 and 1979 Safety Series No. 6); and

“IAEA 1985” means the 1985 or the 1985 (As Amended 1990) Editions of the Regulations for the Safe Transport of Radioactive Material published by The International Atomic Energy Agency, Vienna, (1990 Safety Series No. 6 (as amended 1990)).

Packages not requiring competent authority approval of design under IAEA 1985

10.—(1) This regulation has effect in relation to the following types of packages—

- (a) Excepted packages;
- (b) Industrial packages of Type IP-1;
- (c) Industrial Packages of Type IP-2;
- (d) Industrial Packages of Type IP-3; and
- (e) Type A packages.

(2) A package within paragraph (1) that did not require approval of the package design by a competent authority and which meets the requirements of IAEA 1985 may continue to be used for the transport of radioactive material if, in relation to that package—

- (a) all the requirements of the quality assurance programme set out in regulation 18 (quality and compliance assurance programmes; etc) are met; and
- (b) the activity limits and material restrictions contained in Part V (activity limits and material restrictions) are fulfilled.

(3) Any modification to the packaging must be made in accordance with, and meet all the requirements of, these Regulations, unless—

- (a) the modification is made in order to, and does, improve the safety of the packaging,
- (b) the packaging is manufactured before 31 December 2003, and
- (c) the modification is made in accordance with, and meets all the requirements of, IAEA 1985.

(4) A package within paragraph (2) may be prepared for the transport of radioactive material at any time before 31 December 2003 in accordance with the requirements of IAEA 1985, but on or after 1 January 2004 all such packages must be prepared for transport in accordance with these Regulations.

Packages approved under IAEA 1973

11.—(1) This regulation has effect in relation to packagings that have been manufactured to a package design approved by a competent authority in accordance with IAEA 1973.

(2) Such packagings of which the construction began before the 1st January 1996 may continue to be used for the transport of radioactive material if, in relation to that packaging—

- (a) the package design has received multilateral approval;
- (b) all the applicable requirements of the quality assurance programme set out in regulation 18 (quality and compliance assurance programmes etc) are met;
- (c) the activity limits and material restrictions contained in Part V (activity limits and material restrictions) are fulfilled.

(3) For the purposes of—

- (a) paragraph (1), an approval certificate that a package design meets the requirements of IAEA 1973 shall be in the form issued by a competent authority certifying that the design meets the requirements of IAEA 1973, irrespective of any period of limitation on the certificate, and
 - (b) paragraph (2)(a), an approval certificate that a package design meets the requirements of IAEA 1973 shall be in the form issued by the Secretary of State certifying that the design meets the requirements of IAEA 1973.
- (4) If any changes are made to the design of a packaging or in the nature or quantity of the authorised radioactive contents of a packaging that, in the opinion of the Secretary of State, would significantly affect safety, those changes must meet all the requirements of these Regulations.
- (5) Before use, the packaging must be marked with a serial number in accordance with paragraph 5 of Schedule 6.

Packages approved under IAEA 1985

12.—(1) This regulation has effect in relation to packagings that have been manufactured to a package design approved by a competent authority in accordance with IAEA 1985.

(2) Such packaging may continue to be used for the transport of radioactive material until 31st December 2003 if in relation to that packaging—

- (a) all the requirements of the quality and compliance assurance programme etc set out in regulation 18 (quality and compliance assurance programme etc) are met;
- (b) the activity limits and the material restrictions contained in Part V (activity limits and material restrictions) are fulfilled.

(3) For the purposes of paragraph (1), an approval certificate that a package design meets the requirements of IAEA 1985 shall be in the form issued by a competent authority certifying that the design meets the requirements of IAEA 1985 irrespective of any period of limitation on the certificate.

(4) The packaging may continue to be used in the transport of radioactive material on or after 1st January 2004 if, in addition to the conditions mentioned in paragraph (2) being satisfied in relation to that package, there has been multilateral approval of the package design.

(5) For the purposes of paragraph (4), an approval certificate that a package design meets the requirements of IAEA 1985 shall be in the form issued by the Secretary of State certifying that the design meets the requirements of IAEA 1985.

(6) If any changes are made to the design of a packaging or in the nature or quantity of the authorised radioactive contents of a packaging that, in the opinion of the Secretary of State, would significantly affect safety, those changes must meet all the requirements of these Regulations.

(7) The manufacture of all packaging commencing on or after 1 January 2007 must meet the requirement of these Regulations in full.

(8) For the purpose of paragraph (7), the manufacture of a packaging shall not be regarded as having commenced on or after 1st January 2007 if all the components which that packaging needs in order to completely enclose the radioactive material to be contained in it have already been delivered to the place of manufacture before that date.

Special form radioactive material approved under IAEA 1973 or IAEA 1985

13.—(1) This regulation has effect in relation to any special form radioactive material that has been manufactured to a design approved by a competent authority in accordance with either IAEA 1973 or IAEA 1985.

(2) Such special form radioactive material may continue to be transported if, in relation to that material, all the applicable requirements of the quality assurance programme set out in regulation 18 (quality and compliance assurance programmes; etc) are met.

(3) All special form radioactive material manufactured on or after 1 January 2004 must meet the requirements of these Regulations in full.

(4) For the purpose of paragraph (3), the manufacture of special form radioactive material shall not be regarded as having commenced on or after 1 January 2004 if all the components which that special form radioactive material needs have already been delivered to the place of manufacture before that date.

PART III

GENERAL PROVISIONS RELATING TO THE REGULATION OF TRANSPORT

Types of regulatory approvals

14.—(1) The following types of approval are relevant for the purpose of these Regulations, namely—

- (a) multilateral approval, meaning the approval of a design or shipment by the relevant competent authority not only of the country of origin of that design or shipment but also at least of each country through or into (but not over) which the consignment is to be transported;
- (b) unilateral approval, meaning the approval of a design which is required to be given only by the competent authority of the country of origin of that design.

(2) A “competent authority” means such national or international regulatory body or authority of a contracting party country as is designated or otherwise recognised as such for any purposes in connection with IAEA 1996 and, in relation to Great Britain, references in these Regulations to actions or decisions of the Secretary of State shall be taken as being the action or decision of a competent authority.

General prohibition

15.—(1) No person shall—

- (a) undertake the design of any packaging or package,
- (b) operate or maintain any packaging or package, or
- (c) transport, or cause or permit to be transported in any packaging or package any radioactive material,

otherwise than in accordance with the provisions of, and in compliance with the requirements of, these Regulations.

(2) “Requirements” includes any conditions, limitations or restrictions.

(3) There shall be no transport of a consignment into Great Britain from Northern Ireland unless, prior to the commencement of the first section of its journey in Great Britain, the carrier knows (or has reasonable grounds to believe) that the consignment meets the requirements of the Northern Ireland Regulations as to its labelling and transport documents.

General duty to exercise reasonable care

16. Without prejudice to any other regulation, the consignor, carrier and the driver of a consignment must exercise reasonable care to ensure that in the course of the transport of a consignment no injury to health or any damage to property or to the environment is caused.

General exception

17. There is no contravention of or failure to comply with these Regulations by a person who neither knew nor had reasonable grounds for believing that the material was in question was radioactive.

Quality and compliance assurance programmes; prohibitions etc

18.—(1) In order to ensure compliance with these Regulations—

- (a) a programme of quality assurance shall be established in accordance with paragraphs (2) to (5), and
- (b) the powers and procedures set out in paragraphs (6) to (9) shall apply as respects compliance assurance.

(2) As respects the design, manufacture, testing, documentation, carriage, use, maintenance and inspection—

- (a) of all special form radioactive material,
- (b) of all low dispersible radioactive material,
- (c) of all packages and packaging, and
- (d) for transport and in-transit operations,

the user must establish and maintain a quality assurance programme to ensure that the requirements of these Regulations are complied with and provide evidence of the efficacy of such a programme to an inspector upon request.

(3) Where these Regulations require that a design or a shipment be approved by the Secretary of State, no such approval shall be given until the Secretary of State is satisfied as to the adequacy of the quality assurance programme for that design or shipment.

(4) The user, when so requested by an inspector, must—

- (a) provide him with facilities to inspect the package, packaging or material during its construction and use;
- (b) demonstrate to him that the construction methods and materials used for the construction of all packaging, special form radioactive material or low dispersible radioactive material are in accordance with the approved design specifications;
- (c) demonstrate to him that all packagings or special form radioactive material or low dispersible radioactive material manufactured to an approved design are periodically inspected as appropriate and, as necessary, repaired and maintained in good condition so that they continue to comply with all the requirements of these Regulations, even after repeated use; and
- (d) in the case of a design specification that has been fully implemented, produce to him a certificate to that effect.

(5) In paragraphs (2) to (4)

“requirements” includes any conditions, limitations and restrictions;

“design authority” means any person responsible for the design of a package or packaging, special form radioactive material and low dispersible radioactive material; and

“user” includes a consignor, consignee, carrier, owner, freight forwarder, design authority, and any person associated with manufacture, testing, maintenance and inspection of packages, packagings, special form radioactive material and low dispersible radioactive material.

(6) The powers and procedures referred to in paragraph (1)(b) apply as respects—

(a) the design, manufacture, testing, inspection and maintenance of—

(i) packagings,

(ii) special form radioactive material,

(iii) low dispersible radioactive material,

and

(b) the transport of a consignment.

(7) If it appears to an inspector that any person engaged in—

(a) any of the operations set out in paragraph (6)(a), or

(b) the transport of a consignment,

is not, or is not likely to, comply with any of the requirements of these Regulations and that as a result there is a risk of injury to health or damage to property or to the environment, he may as respects that person either—

(i) impose a prohibition, or

(ii) serve a notice

in accordance with the following provisions of this regulation.

(8) A prohibition imposed under sub-paragraph (b)(i) of paragraph (7) may apply absolutely or for a specified purpose and either without any limitation or for a specified period and shall come into force as soon as a written notice is handed or sent (by post, facsimile or any electronic means) to the person concerned; and the notice imposing it must—

(a) state whether the prohibition applies absolutely or for a specified purpose (and if the latter, specifying the purpose); and

(b) state whether the prohibition applies without limitation of time or for a specified period.

(9) In a notice served under sub-paragraph (b)(ii) of paragraph (7), an inspector must—

(a) give particulars identifying what the non-compliance or likely non-compliance is;

(b) state that it is his opinion that such non-compliance or likely non-compliance gives, or could give, rise to a risk of injury to health or damage to property or environment;

(c) specify the steps (including any temporary measures that are thought to be appropriate) that are to be taken to remedy or to avert the non-compliance; and

(d) stipulate the period within which those steps or measures must be taken.

(10) “Requirements” in paragraph (7) includes any conditions, limitations and restrictions.

(11) Any person upon whom either a prohibition is imposed or a notice is served under paragraph (7) must comply with that prohibition or notice.

Transport of consignments under special arrangement

19.—(1) Where, in relation to the transport of a consignment, all or some of the requirements of these Regulations cannot be complied with, the transport of that consignment is prohibited unless undertaken in accordance with an approval given under the following paragraphs.

(2) In the case of a Great Britain journey, if the Secretary of State is satisfied—

- (a) that the non-compliance with the requirement is on grounds of impracticability of compliance as respects that consignment, and
- (b) that a commensurate level of safety to that which would be provided in relation to that consignment by the application of any relevant provision of these Regulations can be provided by alternative means,

he may give an approval for the transport of that consignment.

(3) Application for an approval by the Secretary of State pursuant to paragraph (2) shall be made in accordance with the provisions of regulation 61 (approval of shipments under special arrangement) and may be made in respect of a single consignment or of a planned series of multiple consignments.

(4) The approval by the Secretary of State pursuant to paragraph (2) shall be given by a special arrangement approval certificate which shall set out the conditions under which (and only under which) the transport of that consignment may be made.

Transport of consignments under exclusive use

20.—(1) No person shall transport, or cause to be transported, any consignment under exclusive use unless the radiation level of the consignment is within the limits set out in paragraph 8 of Schedule 7.

(2) “Exclusive use” means the sole use, by a single consignor, of a conveyance or of a large freight container, in respect of which all initial, intermediate and final loading and unloading is carried out in accordance with the directions of the consignor or of the consignee.

Prohibition on persons travelling in vehicles transporting radioactive material

21. No person except the driver and his assistant or assistants may travel in a vehicle transporting packages, overpacks or freight containers bearing category II-YELLOW or III-YELLOW labels.

Transport of consignments containing packages not designed in a contracting party country

22.—(1) Before the transport of a consignment that contains a package, the design of which originates in a non-contracting party country and which requires unilateral approval pursuant to these Regulations, is commenced—

- (a) a certificate must have been issued in respect of the package by an authority in that non-contracting party country proving that the package satisfies the technical requirements of ADR; and
- (b) this certificate must have been countersigned by the competent authority of a contracting party country.

(2) In a case where neither the certificate required under paragraph (1) above nor an existing package design approved by a contracting party country is provided, the transport of the consignment may only be commenced if a competent authority of a contracting party country has approved the package design.

Categories of packages

23. Packages and overpacks must be assigned to either category I-WHITE, II-YELLOW or III-YELLOW in accordance with the conditions set out in Schedule 11.

PART IV

GENERAL PROVISIONS RELATING TO RADIATION PROTECTION, SAFETY PROGRAMMES AND INFORMATION TO THE PUBLIC

Radiation protection programme

24.—(1) This regulation applies to every carrier, consignor and consignee involved in the transport of a consignment and in this regulation an “employee” of a carrier, consignor or consignee includes any person who is an agent and any other person of whose services that carrier, consignor or consignee makes use in the transport of a consignment.

(2) Every carrier, consignor and consignee must, as respect his employees, establish a radiation protection programme which—

- (a) takes into account the nature and extent of the measures to be taken in respect of the magnitude and likelihood of radiation exposure, and
- (b) adopts a structured and systematic approach (including consideration of the interfaces between road transport and other activities).

(3) A carrier, consignor and consignee will be regarded as meeting his obligations under paragraph (2)(a) if he carries out and adheres to the relevant provisions of Part II (general principles and procedures) of the Ionising Radiations Regulations (1999)(14).

(4) Every carrier, consignor and consignee must—

- (a) at suitable intervals (not exceeding 3 years) review and, where necessary, revise the radiation protection programme as respects his employees, such review taking into account any changes that have occurred in the transport of radioactive material to which the programme relates as well as any advances in technical knowledge and any material change to the assessment on which the programme was based;
- (b) upon a written request made to him by the secretary of state, make his radiation protection programme, or any revision of it, available to the Secretary of State.

Segregation of radioactive material

25.—(1) The obligations upon a carrier, a consignor and a consignee (as the case may be) during the transport of a consignment as regards the segregation of radioactive material are that packages, overpacks, containers and tanks must be segregated from—

- (a) areas where persons (other than those referred to in sub-paragraph (c)) have regular access—
 - (i) in accordance with Table XII of Schedule 1; or
 - (ii) by a distance calculated to ensure members of the critical group in that area receive less than 1mSv per year;
- (b) undeveloped photographic film and mailbags, in accordance with Table XIII of Schedule 1;
- (c) workers in regularly occupied working areas, either—
 - (i) in accordance with Table XII of Schedule 1; or
 - (ii) by a distance calculated to ensure that workers in that area receive less than 5 mSv per year; and

(14) S.I. 1999/3232.

- (d) other dangerous goods in accordance with regulation 36 (segregation of consignments from other dangerous goods).
- (2) In paragraph (1)—
- “critical group” means a group of members of the public which is reasonably homogeneous with respect to its exposure to a given radiation source and given exposure pathway and is typical of an individual receiving the highest effective dose by a given exposure pathway from the given source; and
- “workers” means any persons who work (whether full time, part-time or temporarily) for an employer and who have recognised rights and duties in relation to occupational radiation protection pursuant to the Ionising Radiations Regulations 1999.

Information to the public about health protection measures

- 26.**—(1) Every carrier, consignor and consignee carrying out the transport of a consignment must—
- (a) ensure that any members of the public who are in an area in which, in the opinion of the Secretary of State, they are likely to be affected by a radiological emergency arising from the undertaking of that carrier, consignor or consignee (as the case may be) are supplied, in the appropriate manner approved by the Secretary of State and without their having to request it, with at least the information set out in paragraph (2); and
- (b) make that information publicly available, which includes endeavouring to enter into an agreement or arrangement with the local authority in the area referred to in sub-paragraph (a) for the dissemination by that authority of the information required to be supplied to members of the public in accordance with that sub-paragraph.
- (2) The following is the information that is to be supplied and made available under this regulation—
- (a) the basic facts about the radioactivity and its effects on persons and on the environment;
- (b) the various types of radiological emergency possible and their consequences for the general public and the environment;
- (c) the emergency measures envisaged to alert, protect and assist the general public in the event of the occurrence of a radiological emergency;
- (d) appropriate information on action to be taken by the general public in the event of the occurrence of a radiological emergency; and
- (e) the appropriate local authority responsible for implementing the emergency measures and action referred to in (c) and (d) above.
- (3) In preparing the information to be supplied and made available under this regulation, the carrier, consignor or consignee shall—
- (a) consult the Secretary of State, but shall remain responsible for the accuracy, completeness and form of the information supplied; and
- (b) endeavour to enter into an agreement or arrangement with the local authority where his undertaking is situated with respect to the dissemination by that authority of the information to members of the public.
- (4) The information supplied and made available under this regulation must be updated at regular intervals but, in any case, at least every 3 years and whenever significant changes to any of the matters mentioned in paragraph (2) take place; and when information is updated it must be supplied again in accordance with paragraph (2) and made publicly available.
- (5) In this regulation—

“radiological emergency” has the same meaning as in regulation 66 (interpretation);
“undertaking” includes a business and also any activity carried on by a body of persons (whether corporate or incorporate).

Emergency response

27. In the event of an accident or incident occurring during the transport of a consignment, the provisions of Part XII (radiological emergencies and intervention arrangements) shall have effect.

PART V

ACTIVITY LIMITS AND MATERIAL RESTRICTIONS

Basic radionuclide values

28. The individual radionuclides set out in column 1 of Table 1 in Schedule 1 are given the basic values specified respectively in columns (2) to (5) of that Table for—

- (a) A_1 in TBq;
- (b) A_2 in TBq;
- (c) activity concentration for exempt material in Bq/g; and
- (d) activity limits for exempt consignments in Bq.

Calculation of basic radionuclide values

29.—(1) If a consignment containing individual radionuclides that are not listed in Table 1 in Schedule 1 is—

- (a) to be involved in a Great Britain journey, the calculation of its basic radionuclide values specified in regulation 28 (basic radionuclide values) must have the approval of the Secretary of State, but his approval will not be required if the radionuclide values listed in Table 2 in Schedule 1 are used;
- (b) to be involved in an ADR journey or in a non-ADR journey, the calculation of its radionuclide values must have multilateral approval.

(2) Where the chemical form of each radionuclide is known the A_2 value related to its solubility class as recommended by the International Commission on Radiological Protection may be used if the chemical forms under normal and accident conditions of transport are taken into consideration.

(3) The calculation of A_1 and A_2 for a radionuclide that is not listed in Table I of Schedule 1 is to be made in accordance with Schedule 2.

(4) For mixtures of radionuclides, the calculation of the basic radionuclide values referred to in regulation 28 (basic radionuclide values) may be determined in accordance with Schedule 3.

(5) For individual radionuclides (or for mixture of radionuclides) for which relevant data are not available, or for unknown radionuclides, the values shown in Table II in Schedule 1 must be used.

Content limits for packages

30.—(1) The quantity of radioactive material in a package must not exceed the relevant limits that are specified in paragraph (2).

(2) Every type of package or material set out below must comply with the contents limits that are applicable to it by virtue of the paragraph in Schedule 4 indicated.

Excepted packages	paragraphs 1 and 2
Industrial packages	paragraph 3
Type A packages	paragraph 4
Type B(U) package	paragraph 5
Type B(M) package	paragraph 5
Type C packages	paragraph 5
Packages containing fissile material	paragraph 6
Packages containing uranium hexafluoride	paragraph 7
Special arrangement transport operation	paragraph 8

PART VI

REQUIREMENTS AND CONTROLS FOR TRANSPORT

Requirements to be fulfilled by the consignor before the first shipment

31.—(1) This regulation has effect for the purpose of imposing requirements that a consignor (being the first consignor, who makes the first use of a package for the purpose of undertaking a shipment) must fulfil, or ensure are fulfilled, before making that shipment.

(2) The requirements are—

- (a) if the design pressure of the containment system exceeds 35 kPa (gauge), that the containment system of each package conforms to the approved design requirements relating to the capability of that system to maintain its integrity under that pressure;
- (b) the effectiveness of the shielding and containment and (where necessary) the heat transfer characteristics and the effectiveness of the confinement system of each package of Type B(U), Type B(M) and Type C and also each package containing fissile material are within the limits applicable to or specified for the approved design; and
- (c) where, in order to comply with Part XIV of Schedule 8 (which sets out requirements for packages containing fissile material), neutron poisons are specifically included as components of the package, that checks are carried out to confirm the presence and distribution of those neutron poisons.

Requirements to be fulfilled by consignor before each shipment

32.—(1) This regulation imposes, in relation to various types of packages containing various kinds of material, the requirements that each consignor must fulfil to use a package for the purpose of undertaking both—

- (a) the first shipment of that package pursuant to regulation 31 (requirements to be fulfilled by the consignor before first shipment); and
 - (b) every shipment of that package thereafter.
- (2) The requirements are—
- (a) that—
 - (i) for any package, all the requirements specified in the relevant provisions of these Regulations have been satisfied;

- (ii) each Type B(U), Type B(M) and Type C package must be held until equilibrium conditions have been approached closely enough to demonstrate compliance with the requirements for temperature and pressure unless an exemption from these requirements has received unilateral approval; and
 - (iii) for packages containing fissile material, the measurement specified in paragraph 9 of Part XIV of Schedule 8 (which sets out an estimate of the neutron multiplication for the package assessment) and the tests to demonstrate closure of each package as specified in paragraph 6 of Part XIV of Schedule 8 (which sets out the assessment for an individual package in isolation) must be performed where applicable; and
- (b) that it is ensured—
- (i) that the lifting attachments not meeting the requirements specified in paragraph 2 of Part IV of Schedule 8 have been removed or otherwise rendered incapable of being used for lifting the package in accordance with paragraph 3 of Part IV of Schedule 8;
 - (ii) that all the requirements specified in the approval certificates for each Type B(U), Type B(M) and Type C package and for each package containing fissile material have been satisfied;
 - (iii) whether by inspection or by appropriate tests (or both), that all closures, valves and other openings of the containment system through which the radioactive contents might escape are properly closed and (where appropriate) sealed in a manner for which the demonstrations of compliance with the requirements specified in paragraph 7 of Part XI, paragraph 1 of Part XII and paragraph 3 of Part XIII of Schedule 8 were made;
 - (iv) for each special form radioactive material, that all the requirements specified in the special form approval certificate and the relevant provisions of these Regulations have been satisfied; and
 - (v) for each low dispersible radioactive material, that all the requirements specified in the approval certificate and the relevant provisions of these Regulations have been satisfied.

Transport of other goods in packages

33.—(1) The consignor must ensure that a package does not contain any other items except such articles and documents as are necessary for the use of the radioactive material in the package.

(2) But—

- (a) low specific activity material or
- (b) surface contaminated objects

may be transported with other items.

(3) The transport of—

- (a) such articles and documents as are necessary for the use of the radioactive material in the package or
- (b) low specific activity material with other items, or
- (c) surface contaminated objects with other items,

is allowed if there is no interaction between these items and the packaging or its radioactive contents that would reduce the safety of the package.

Restrictions on the use of tanks etc

34. A tank or an intermediate bulk carrier that has been used for the transport of radioactive material must not be used for the storage or for the transport of other goods unless the tank or container has been decontaminated—

- (a) below the level of 0.4 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, and
- (b) below the level of 0.04 Bq/cm^2 for all other alpha emitters.

Transport of other goods with consignments transported under exclusive use

35. The transport of other goods with consignments being transported under exclusive use in accordance with regulation 20 (transport of consignments under exclusive use) is allowed if—

- (a) the arrangements for the transport are controlled solely by the consignor and
- (b) such transport is not prohibited by or under any statute.

Other dangerous properties of contents and the segregation of consignments from other dangerous goods

36.—(2) The carrier must—

- (a) ensure that during transport every consignment is segregated from any other dangerous goods, and
- (b) in the packing, labelling, marking, placarding, storage and transport of a package, take into account, not only radioactive and fissile properties of the contents, but also any other dangerous properties (including explosiveness, flammability, pyrophoricity, chemical toxicity and corrosiveness),

in order to be in compliance with the provisions mentioned in paragraph (2)

(2) Those provisions are—

- (a) these Regulations;
- (b) the relevant regulations for dangerous goods of each of the countries through or into which the consignment will be transported;
- (c) where applicable, the regulations of the cognisant transport organisation; and
- (d) as respects paragraph (1)(a), ADR 7.5.2 (mixed loading prohibition).

Requirements and controls for contamination and for leaking packages

37.—(1) This regulation and (where appropriate) Part XII (radiological emergencies and intervention arrangements) apply for the purpose of imposing requirements and controls relating to contamination and leaking packages and the measures to be taken in the event of damage or leakage occurring.

(2) The consignor must ensure that the levels of non-fixed contamination—

- (a) on the external surfaces of any package, are kept as low as practicable and (under routine conditions of transport) do not exceed—
 - (i) 4 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, and
 - (ii) 0.4 Bq/cm^2 for all other alpha emitters.

these limits being applicable when averaged over any area of 300 cm^2 of any part of the surface;

- (b) on the external and internal surfaces of any overpack, freight container, tank or intermediate bulk container, do not (subject to regulation 40 (exception in cases of certain overpacks, freight containers etc)) exceed the limits specified in sub-paragraph (a) above.
- (3) Whenever it is—
 - (a) evident to the consignor or the carrier that a package is damaged or is leaking, or
 - (b) suspected by the consignor or the carrier that a package may have been damaged or may have leaked,

he must restrict access to that package and must arrange for a qualified person to make an assessment of the extent of the contamination and of the resultant radiation level of the package as soon as possible.

- (4) The scope of the assessment required under paragraph (3) must include—
 - (a) the package;
 - (b) the conveyance;
 - (c) the adjacent loading and unloading areas; and
 - (d) if necessary, all other material which has been carried in or on the conveyance.

(5) When required by the Secretary of State, additional steps approved for the protection of persons, property and the environment must, be taken to overcome and minimise the consequences of any leakage or damage that has arisen.

(6) Any package that has become damaged, or from which any radioactive contents in excess of allowable limits for normal conditions of transport is leaking, may, under the direction of a suitably qualified specialist in radiation protection, be removed to an acceptable interim location under supervision; but any such package must not be forwarded until it has been repaired or reconditioned and it has been decontaminated.

Checks to be made on conveyances and equipment

38. A conveyance and equipment used routinely for the transport of radioactive material must be periodically checked by the consignor or his agent to determine the level of contamination, the frequency of such checks being related to the likelihood of contamination and the extent to which radioactive material is transported.

Decontamination

39. Except as provided in regulation 40 (exception in cases of certain overpacks, freight containers etc), the carrier must ensure that any conveyance or equipment (or part thereof)—

- (a) that in the course of the transport of radioactive material has become contaminated above the limits specified in paragraph (2)(a) of regulation 37 (requirements and controls for contamination etc), or
- (b) that shows a radiation level in excess of 5 $\mu\text{Sv/h}$ at the surface,

is decontaminated as soon as possible by a suitably qualified person and is not re-used unless and until—

- (i) the non-fixed contamination does not exceed the limits specified in paragraph (2)
 - (a) of regulation 37 (requirements and controls for contamination etc), and
- (ii) the radiation level resulting from the fixed contamination of the surfaces after decontamination is less than 5 $\mu\text{Sv/h}$ at the surface.

Exception in cases of certain overpacks, freight containers etc

40. An overpack, freight container, tank, intermediate bulk container or conveyance that is dedicated to the transport of radioactive material under exclusive use is excepted from the requirements of paragraph (2)(b) of regulation 37 (requirements and controls for contamination etc) and regulation 39 (decontamination)—

- (a) with regard to (but only with regard to) its internal surfaces and
- (b) only for so long as it remains under that specific exclusive use.

Particular requirements and controls applicable in the case of the transport of excepted packages

41.—(1) This regulation has effect for the purpose of applying certain provisions and requirements of this Part and of Part VIII (requirements for radioactive material and for packagings and packages) to excepted packages.

(2) Only the following provisions apply to excepted packages

- (a) the requirements specified in paragraphs (3) to (6);
- (b) the requirements specified in regulation 36 (other dangerous properties of contents and the segregation of consignments from other dangerous goods), paragraphs (2)(a) and (5) of regulation 37 (requirements and controls for contamination and for leaking packages), and regulation 42 (transport of empty packagings);
- (c) the requirements specified in paragraphs 1 to 3, 17(a), (b), (c), (d) and (f), and 18 to 22 of Schedule 6;
- (d) the requirements for excepted packages specified in Part V of Schedule 8; and
- (e) if the excepted package contains fissile material, one of the exceptions provided for in paragraph 3 of Part XIV of Schedule 8.

(3) The radiation level at any point on the external surface of an excepted package must not exceed 5 $\mu\text{Sv/h}$.

(4) Radioactive material that is enclosed in, or is included as a component part of, an instrument or other manufactured article having activity not exceeding the item and package limits specified in columns 2 and 3 of Table III in Schedule 1, may be transported in an excepted package if (but only if)—

- (a) the radiation level at 10 cm from any point on the external surface of any unpackaged instrument or article does not exceed 0.1 mSv/h;
- (b) each instrument or article (except radioluminescent time-pieces or devices) bears the marking “RADIOACTIVE”; and
- (c) the radioactive material is completely enclosed by non-active components,

and for the purposes of this paragraph, a device that performs the sole function of containing radioactive material is not an instrument or manufactured article.

(5) Radioactive material in form other than as specified in paragraph (4) having activity not exceeding the limit specified in Table III in Schedule 1 (basic radionuclide values), may be transported if (but only if)—

- (a) the package retains its radioactive contents under routine conditions of transport;
- (b) the package bears the marking “RADIOACTIVE” on an internal surface in such manner that a warning of the presence of radioactive material is visible on opening the package.

(6) A manufactured article in which the sole radioactive material is unirradiated—

- (a) natural uranium,

- (b) depleted uranium, or
- (c) natural thorium,

may be transported as an excepted package if (but only if) the outer surface of the uranium or thorium is enclosed in an inactive sheath made of metal or some other substantial material.

Transport of empty packagings

42. An empty packaging that has previously contained radioactive material may be transported as an excepted package if (but only if)—

- (a) it is in a well maintained condition and is securely closed;
- (b) the outer surface of any uranium or thorium in its structure is covered with an inactive sheath made of metal or of some other substantial material;
- (c) the level of internal non-fixed contamination does not exceed 100 times the levels that are specified in paragraph (2)(a) of regulation 37 (requirements and controls for contamination and for leaking packages); and
- (d) any labels that may have been displayed on it in conformity with the labelling requirements of regulation 48 (responsibilities of consignors) are no longer visible.

Requirements and controls for the transport of LSA material and SCO in industrial packages or unpackaged

43.—(1) This regulation has effect for the purpose of imposing the requirements for, and the controls with respect to, the transport of LSA material or SCO in a single—

- (a) industrial package Type 1;
- (b) industrial package Type 2; or
- (c) industrial package Type 3.

(2) The quantity of the material described in paragraph (1), or (as the case may be) of an object or collection of objects, must be so restricted that the external radiation level at 3 m from the unshielded material or object or collection of objects does not exceed 10 mSv/h.

(3) LSA material and SCO in groups LSA-I and SCO-I may be transported unpackaged under the following conditions—

- (a) all unpackaged material (other than ores containing only naturally occurring radionuclides) must be transported in such manner that under routine conditions of transport there will—
 - (i) be no escape of the radioactive contents from the conveyance, nor
 - (ii) any loss of shielding;
- (b) each conveyance must be under exclusive use (except if it is transporting only SCO-I on which the contamination on the accessible and inaccessible surfaces does not exceed 10 times the applicable level specified in the definition of “contamination” in regulation 2(2)); and
- (c) in the case of SCO-I, where it is suspected that non-fixed contamination exists on inaccessible surfaces that exceeds the values specified in (a)(i) of the definition of “SCO” in regulation 2(2), measures must be taken so as to ensure that the radioactive material is not released into the conveyance.

(4) Except as provided in paragraph (3), LSA material and SCO must be packaged in accordance with Table IV in Schedule 1.

(5) The total activity in a conveyance for the carriage of LSA material or SCO in Type IP-1, Type IP-2, Type IP-3 or unpackaged must not exceed the limits specified in Table V of Schedule 1.

Determination of transport index (TI)

44. The transport index for—
- (a) a package,
 - (b) an overpack,
 - (c) a freight container, or
 - (d) unpackaged LSA-I or SCO-I,

shall be the number derived in accordance with the procedure set out in paragraphs 1 and 2 of Schedule 5.

Determination of criticality safety index (CSI)

45. The criticality safety index for packages containing fissile material shall be determined in accordance with paragraphs 3 and 4 of Schedule 5.

Limits on TI, CSI and radiation levels for packages and overpacks

- 46.—(1) Except for consignments under exclusive use—
- (a) the TI of any package or overpack must not exceed 10, and
 - (b) the CSI of any package or overpack must not exceed 50.

(2) Except for packages or overpacks transported under exclusive use by road under the conditions specified in regulation 20 (transport of consignments under exclusive use), the maximum radiation level at any point on any external surface of a package or overpack must not exceed 2 mSv/h.

(3) The maximum radiation level at any point on the external surface of a package under exclusive use must not exceed 10 mSv/h.

PART VII

FURTHER RESPONSIBILITIES OF CONSIGNORS AND CARRIERS

Persons for whom consignors and carriers are responsible

47. For the purposes of these Regulations, a consignor or a carrier is responsible for the acts and omissions of—

- (a) his employees, and
- (b) any agents or other persons of whose services he makes use for the performance of the transport of radioactive material,

when such employees, agents or other persons are acting within the scope of their employment then such acts or omissions are considered to be those of the consignor or carrier.

Responsibilities of consignors

48. The responsibilities set out below are further responsibilities upon the consignor and are more fully described in the paragraph in Schedule 6 indicated—

Marking	paragraphs 1 to 7
Labelling	paragraphs 8 and 9
Labelling for radioactive contents	paragraph 10
Labelling for criticality safety	paragraphs 11 and 12
Placarding	paragraphs 13 to 16 and 30
Particulars of consignment	paragraph 17
Declaration	paragraphs 18 to 21
Removal or covering of labels	paragraph 22
Information for carriers	paragraphs 23 and 24
Notification of competent authorities	paragraphs 25 to 28
Possession of certificates and instructions	paragraph 29

Responsibilities of carriers

49.—(1) The responsibilities set out below are further responsibilities upon the carrier and are more fully described in the paragraph in Schedule 7 indicated—

Segregation of packages etc during transport and storage in transit	paragraphs 1 to 3
Stowage during transport and storage in transit	paragraphs 4 to 8
Segregation of packages containing fissile material during transport and storage in transit	paragraphs 9 and 10
Undeliverable consignments	paragraph 11
Fire fighting equipment	paragraph 12

(2) Where these Regulations are not applicable in relation to the transport of a consignment because the total activity or the activity concentration of the radioactive material in the consignment is less than the respective values specified in paragraph (1)(f) of regulation 5 (non-application of regulations), the carrier must nevertheless always ensure that the total activity in the conveyance never exceeds the value specified in paragraph (d) of regulation 28 (basic radionuclide values).

PART VIII

REQUIREMENTS FOR RADIOACTIVE MATERIALS AND FOR PACKAGINGS AND PACKAGES

Requirements for radioactive materials etc

50. The Table below shall have effect for the purpose of specifying in relation to the types of radioactive material and the packagings and packages described in column (1) the requirements that are applicable to that material or package or packaging in accordance with the Part of Schedule 8 indicated in column (2).

Status: This is the original version (as it was originally made).

<i>(1)</i> <i>Material, packaging or package</i>	<i>(2)</i> <i>Part</i>
LSA-III material	I
Special form radioactive material	II
Low dispersible radioactive material	III
General requirements for packages and packagings	IV
Excepted packages	V
Industrial packages Type 1 (Type IP-1)	VI
Industrial packages Type 2 (Type IP-2)	VII
Industrial packages Type 3 (Type IP-3)	VIII
Packages containing uranium hexafluoride	IX
Type A packages	X
Type B(U) packages	XI
Type B(M) packages	XII
Type C packages	XIII
Packages containing fissile material	XIV

PART IX TEST PROCEDURES

Test procedures

51.—(1) The Table below shall have effect for the purpose of specifying in relation to the materials and matters described in column (1) the tests that are required to be carried out in accordance with the requirements of the Part of Schedule 9 indicated in column (2).

<i>(1)</i> <i>Subject matter of test</i>	<i>(2)</i> <i>part</i>
Leaching test for LSA-III material and low dispersible radioactive material	I
Special form radioactive material	II
Low dispersible radioactive material	III
Packages	IV

(2) Demonstration of compliance with the performance standards required in any Part referred to in the Table above must be in accordance with any of the methods listed in Part V of Schedule 9.

(3) The Secretary of State may require such additional tests as he considers necessary to be made in relation to any of the materials and matters referred to in paragraph (1).

PART X

APPROVAL REQUIREMENTS FOR DESIGNS AND SHIPMENTS

General

52. In any case where there is no requirement under the following provisions of this Part that the competent authority must issue an approval certificate in respect of a design, the consignor must, upon the request of the Secretary of State, make available to him such documentary evidence as he requires to satisfy him that the package design does comply with the requirements in Part VIII (requirements for radioactive materials and for packagings and packages) and Part IX (test procedures).

Competent authority approval

53. The Table below shall have effect for the purpose of specifying in column (2) the type of approval that is required for designs for the items mentioned in column (1), for which approval is more fully described in the following regulations in this Part.

<i>(1)</i> <i>Item</i>	<i>(2)</i> <i>Type of approval</i>
Special form radioactive material	Unilateral
Low dispersible radioactive material	Multilateral
Packages containing 0.1 kg (or more) of uranium hexafluoride complying with regulation 55(1)(a)	Multilateral
Packages containing 0.1 kg (or more) of uranium hexafluoride complying with regulation 55(1)(b)	Unilateral after 31 December 2003
All packages containing fissile material (unless excepted under paragraph 3 of Part XIV of Schedule 8)	Multilateral
Type B(U) packages	Unilateral
Type B(M) packages	Multilateral
Type C packages	Unilateral
Special arrangements	Multilateral
Certain shipments	Multilateral
Type B(U) packages for low dispersible radioactive material	Multilateral

Approval of special form and low dispersible radioactive material

54.—(1) The design—

- (a) for any special form radioactive material, must have unilateral approval; and
- (b) for any low dispersible radioactive material, must have multilateral approval.

(2) Where the design for special form radioactive material or for low dispersible radioactive material originates in Great Britain, the application for the approval of the design must include the matters set out in Part I of Schedule 10.

(3) An approval certificate that a material meets the requirements for special form or low dispersible radioactive material shall be in the form issued by the Secretary of State certifying that the design meets the requirements of IAEA 1996.

(4) This regulation is subject to the applicable savings and transitional provisions in Part II (savings etc).

Approval of packages designed to contain uranium hexafluoride

55.—(1) The following requirements apply in respect of the approval of package designs to contain 0.1 kg or more of uranium hexafluoride—

- (a) each design that meets the requirements of paragraph 4 of Part IX of Schedule 8, must have multilateral approval;
- (b) after 31 December 2003, each design that meets the requirements of paragraphs 1 to 3 of Part IX of Schedule 8, must have unilateral approval; and
- (c) the application for approval must include all information necessary to satisfy the Secretary of State that the design meets the appropriate requirements and a specification of the applicable quality assurance programme as required by regulation 18 (quality and compliance assurance programmes; prohibitions etc).

(2) An approval certificate that the design meets the requirements for a package containing uranium hexafluoride shall be in the form issued by the Secretary of State certifying that the design meets the requirements of IAEA 1996.

Approval of Type B(U) and Type C package designs

56.—(1) Each Type B(U) and Type C package design must have unilateral approval.

(2) But a Type B(U) package design for low dispersible radioactive material, and a package design for fissile material (to which regulation 58 (approval of package designs to contain fissile material) applies) must each have multilateral approval.

(3) An application for the approval of the Secretary of State must include the matters listed in Part II of Schedule 10.

(4) An approval certificate that a package design meets the requirements for a Type B(U) or a Type C package shall be in the form issued by the Secretary of State Certifying that the design meets the requirements of IAEA 1996.

(5) This regulation is subject to the applicable savings and transitional provisions in Part II (savings etc).

Approval of Type B(M) package designs

57.—(1) Each Type B(M) package design (including those for fissile material to which regulation 58 (approval of package designs to contain fissile material) applies and for low dispersible radioactive material) must have multilateral approval.

(2) An application for multilateral approval of a Type B(M) package must include—

- (a) the matters required to be listed under paragraph 3 of regulation 56 (approval of Type B(U) and Type C package designs) in respect of Type B(U) packages, and
- (b) the matters listed in Part III of Schedule 10.

(3) An approval certificate that a design meets the requirements for a Type B(M) package shall be in the form issued by the Secretary of State certifying that the design meets the requirements of IAEA 1996.

(4) This regulation is subject to the applicable savings and transitional provisions in Part II (savings etc).

Approval of packages designed to contain fissile material

58.—(1) Each package designed to contain fissile material must (unless excepted in accordance with paragraph 3 of Part XIV of Schedule 8 from the requirements that apply specifically to packages containing fissile material) have multilateral approval.

(2) An application for approval under paragraph (1) must include the matters listed in Part IV of Schedule 10.

(3) An approval certificate that a design meets the requirements for a package designed to contain fissile material shall be in the form issued by the Secretary of State certifying that the design meets the requirements of IAEA 1996.

(4) This regulation is subject to the applicable savings and transitional provisions in Part II (savings etc).

Notification and registration of serial numbers

59.—(1) The manufacturer of any packaging manufactured after the date of the coming into force of these Regulations to a design approved by the Secretary of State under regulation 12 (package approval under IAEA 1985), regulation 56 (approval of Type B(U) and Type C package designs), regulation 57 (approval of Type B(M) package designs) and regulation 58 (approval of package designs to contain fissile material) must promptly notify the Secretary of State in writing of the serial number assigned to that packaging.

(2) The owner of any other packaging manufactured to a design approved by the Secretary of State under these Regulations must promptly notify the Secretary of State in writing of the serial number assigned to that packaging.

Approval of shipments

60.—(1) Multilateral approval is required for the following—

- (a) the shipment of Type B(M) packages which—
 - (i) do not conform with the requirements set out in paragraph 5 of Part X of Schedule 8, or
 - (ii) are designed to allow controlled intermittent venting;
- (b) the shipment of Type B(M) packages that contain radioactive material with an activity greater than whichever is the lower of either $3000A_1$ or $3000A_2$ (as appropriate) or $1000TBq$; and
- (c) the shipment of packages that contain fissile material if the sum of the criticality safety indexes of the packages exceeds 50.

(2) An application to the Secretary of State for shipment approval must include the matters listed in Part V of Schedule 10 and, upon approval of the shipment, the Secretary of State will issue an approval certificate.

Approval of shipments under special arrangement

61.—(1) Each consignment that is transported under special arrangement must have multilateral approval.

(2) An application to the Secretary of State for approval of shipments under special arrangement must include the matters listed in Part VI of Schedule 10.

(3) Where the secretary of State is satisfied as to the approval of a shipment under special arrangement, he shall issue an approval certificate.

(4) The approval of the competent authority of another state shall be evidenced by a certificate issued by that competent authority.

PART XI

APPROVAL CERTIFICATES

Types of approval certificates

62.—(1) The Secretary of State may issue the following type of certificate under these Regulations—

- (a) a special form radioactive material approval certificate;
- (b) a low dispersible radioactive material approval certificate;
- (c) a special arrangement approval certificate;
- (d) a shipment approval certificate;
- (e) a package design approval certificate; and
- (f) a basic radionuclide values certificate.

(2) The certificates mentioned in (d) and (e) above may be combined into a single certificate.

Identification marks

63. Each of the certificates mentioned in regulation 62 (types of approval certificates) shall have an identification mark which shall be assigned by the Secretary of State

Content of approval certificates

64. The information to be contained in each approval certificate issued by the Secretary of State must include—

- (a) for special form radioactive material, that set out in Part I of Schedule 12;
- (b) for low dispersible radioactive material, that set out in Part I of Schedule 12;
- (c) for a special arrangement, that set out in Part II of Schedule 12;
- (d) for a shipment, that set out in Part III of Schedule 12;
- (e) for the design of a package, that set out in Part IV of Schedule 12; and
- (f) for a combined package design and a shipment, that set out in Part V of Schedule 12.

Validation of approval certificates

65.—(1) Where shipment is to be made through or into Great Britain, multilateral approval may be demonstrated by means of the validation by the Secretary of State of the original certificate (being one or other of the types of certificate mentioned in regulation 64 (content of approval certificates)).

(2) Validation may be by means of an endorsement on the original certificate or the issue of a new endorsement, annex or supplement.

PART XII

RADIOLOGICAL EMERGENCIES AND INTERVENTION ARRANGEMENTS

Interpretation of expressions used in this Part

66. In this Part—

“assist in the intervention” means the taking of such steps, as it is reasonable and practicable in the prevailing circumstances to take, in order to prevent or decrease exposure; the circumstances include, in particular—

- (a) the weather conditions;
- (b) the time of the occurrence of the emergency;
- (c) the distribution of the local population;
- (d) the nature and content of the package involved;
- (e) the stability of the radioactive material involved;
- (f) the nature of the local geography and ecology;
- (g) any other prevailing hazards; and
- (h) the relative importance of the emergency in relation to other calls that are being made upon the emergency services;

“emergency arrangements” means the documented plan drawn up by the consignor pursuant to regulation 68 (duties of consignor and carrier with regard to the preparation of emergency arrangements) for the purpose of providing for intervention in cases where a radiological emergency occurs during the course of transport of a consignment and which sets out the steps to be taken by those concerned with that transport to make an immediate provisional assessment of the circumstances and consequences of the emergency and to assist with intervention; and which contains provision, where the situation so requires, for intervention relating to—

- (a) the source (so as to reduce or stop the direct radiation and emission of radionuclides);
- (b) the environment (so as to reduce the transfer of radioactive material to individuals); and
- (c) individuals (so as to reduce their exposure or to organise the treatment of victims);

“exposure” means the process of being exposed to ionising radiation;

“initiate the emergency arrangements” means the taking of such steps, as it is reasonable and practicable to take, in order to put into effect the actions that have been planned for in the emergency arrangements;

“intervention” means any human activity taken to prevent or decrease the exposure of individuals to ionising radiation from a consignment involved in a radiological emergency by acting either upon that consignment or upon the transmission pathway giving rise to that exposure or upon the individuals so exposed;

“notifiable event” means any event where—

- (a) radioactive material is lost, escapes or is unlawfully removed from the vehicle carrying the material;
- (b) any package carried in or on a vehicle is opened or otherwise damaged (whether or not the package is still in or on the vehicle);

(c) the vehicle carrying the radioactive material overturns (including being turned on its side) or suffers serious damage or is involved in a fire; or

(d) a radiological emergency occurs; and

“radiological emergency” means a situation arising during the course of the transport of a consignment that requires urgent action in order to protect workers, members of the public or the population (either partially or as a whole) from exposure.

Duties with respect to the monitoring of particular persons

67.—(1) For the purposes of this regulation, the provisions of Part V of the Ionising Radiations Regulations 1999(15) (“the 1999 Regulations”) shall be applicable so that any person (including an employee of a carrier, consignor or consignee) who assists in an intervention and is liable to be subjected to emergency exposure shall be treated as being a person classified pursuant to regulation 20 of the 1999 Regulations and, accordingly, the carrier, consignor or consignee shall have the same duties with regard to the monitoring of such person as are imposed upon an “employer” in regulations 21 to 26 of the 1999 Regulations.

(2) In the exceptional circumstances of saving human lives, there may be an emergency exposure whereby the dose limit specified in paragraph 1, 2, 6, 7 and 8 (Workers over 18 and other persons) of Schedule 4 (dose limits) of the 1999 Regulations could be exceeded to such persons, but only where those persons are volunteers and have been informed of the risks involved in their intervention.

(3) “Employee” has the same meaning as in paragraph (1) of regulation 24 (radiation protection programme).

(4) “Emergency exposure” means an exposure of persons implementing the necessary rapid action to bring help to endangered persons or to prevent a large number of persons from being exposed to ionising radiation or to save valuable goods or a valuable installation, whereby the dose limit specified in paragraphs 1 and 2 of Schedule 4 (dose limits) of the 1999 Regulations could be exceeded.

Duties of consignor and carrier with regard to the preparation of emergency arrangements

68.—(1) Before the transport of a package begins, the consignor thereof must have drawn up a documented plan with regard to emergency arrangements for that package.

(2) The emergency arrangements made pursuant to paragraph (1) shall be prepared having regard to the following principles

(a) intervention is to be undertaken only if the damage due to the radiation resulting from the radiation emergency is sufficient to justify the potential harm and the potential cost (including the social cost) of that intervention;

(b) the form, scale and duration of the intervention is to be optimised so that the benefit to health will be greater than any harm that might be associated with the intervention itself;

(c) the dose limits provided for in Schedule 4 of the Ionising Radiations Regulations 1999 and

(d) the Emergency Reference Levels specified by the National Radiological Protection Board (NRPB) pursuant to a direction under section 1(7) of the Radiological Protection Act 1970(16).

(3) In preparing the emergency arrangements under paragraph (1), the consignor may use or employ the services of any person (including a person who is a carrier) who has expertise in matters relating to the transport of radioactive material or of contamination.

(15) S.I. 1999/3232.

(16) 1970 c. 46.

(4) The consignor must review and, whenever necessary, revise his emergency arrangements and shall ensure that at suitable intervals they are tested.

(5) A carrier must not undertake the transport of, or cause the transport to be made of, any consignment unless he has in his possession a copy of the statement required to be given by the consignor pursuant to paragraph 23(c) of Schedule 6 of these Regulations (emergency arrangements appropriate to the consignment).

Duties of drivers, carriers and consignors in the event of the occurrence of a radiological emergency

69.—(1) This regulation sets out the duties respectively of the driver, the carrier and the consignor in the event of the occurrence of a radiological emergency.

(2) The driver of the vehicle transporting radioactive material who discovers or has reason to believe that a notifiable event has occurred in relation to the vehicle he is driving must—

- (a) immediately notify the police and (where appropriate) the fire brigade and the consignor of that event;
- (b) initiate the emergency arrangements in respect of any radiological emergency and
- (c) assist in the intervention that is made in connection with that radiological emergency.

(3) A carrier of radioactive material who becomes aware of the occurrence of a notifiable event in relation to the material he is carrying must—

- (a) immediately notify the police (unless the driver of the vehicle has already done so) and the Secretary of State of that event;
- (b) assist in the intervention that is made in connection with any radiological emergency; and
- (c) as soon as is reasonable practicable, arrange for the examination of the load that is carried in or on the vehicle so as to determine whether contamination has arisen and, if it has, to arrange for the safe disposal of any part of the load that has been contaminated and for the decontamination of the vehicle.

(4) A consignor of radioactive material who becomes aware of the occurrence of a notifiable event in relation to his consignment must—

- (a) immediately notify the police and the Secretary of State of that event (unless either the driver or the carrier has already done so);
- (b) assist in the intervention that is made in connection with any radiological emergency; and
- (c) provide the Secretary of State with details of the incident that gave rise to that emergency.

(5) Whenever a consignor becomes aware that emergency arrangements have been initiated in relation to his consignment he must notify the Secretary of State of the initiation of those arrangements even if, in the event, no intervention was made pursuant to those arrangements.

Packages involved in a radiological emergency

70. A package that has been involved in a radiological emergency shall not be transported or caused to be transported unless the consignor or his agent has examined it and the consignor is satisfied that it complies with the requirements of these Regulations and he issues a certificate to that effect.

Powers of inspectors and the Secretary of State in relation to emergency arrangements

71.—(1) When requested by an inspector, the carrier and the consignor must provide that inspector, within such reasonable time as the inspector may specify, with a copy of such documents relating to the emergency arrangements as may have been requested.

(2) The Secretary of State may review the emergency arrangements and may at any time by notice in writing to a carrier or consignee require—

- (a) that those arrangements be tested and, if thought appropriate by the Secretary of State, that a rehearsal be carried out of them; and
- (b) that a general or specific revision or improvement be made of those arrangements.

(3) A carrier or consignor upon whom a request is made under paragraph (1) or upon whom notice is served under paragraph (2) must comply with that request or with the requirements of that notice.

PART XIII

MISCELLANEOUS

Retention and production of information

72.—(1) The consignor of any consignment must retain for 2 years from the date on which the transport of that consignment begins any information in his possession derived from measurements of contamination of that consignment.

(2) The user of any package, packaging or special form radioactive material or low dispersible radioactive material shall retain any information in his possession relating to the design, manufacture, testing, use and maintenance of that package, packaging or material, including (without prejudice to the generality of the foregoing) specifications, calculations, test results, quality assurance programmes and manufacturing records, for so long as the package, packaging or material is in use for the transport of radioactive material and for a period of at least two years after the final use of the package, packaging or material.

(3) An inspector may require the user of any package, packaging or special form radioactive material or low dispersible radioactive material to produce such information in his possession relating to that package, packaging or material as the inspector may specify.

(4) In paragraphs (2) and (3) “user” has the same meaning as in paragraph (5) of regulation 18 (quality and compliance assurance programmes, prohibitions etc.)

Production of documents

73. An examiner, an inspector or a constable in uniform may require the carrier of any radioactive material or the driver of any vehicle transporting radioactive material to produce for inspection such documents relating to that material and required by these Regulations as the examiner, inspector or constable may specify

Evaluation of radiation emissions

74. For the purpose of ensuring that the transport of radioactive material does not cause any injury to health, or any damage to property or to the environment, the Secretary of State shall arrange for periodic assessments to be carried out to evaluate the radiation emissions arising from such transport.

Transport documents for regular consignments

75.—(1) Where the same packaging with the same radioactive contents is consigned as a package on a regular basis by the same consignor, who is also the carrier of that package, the consignor may issue a regular consignment certificate for that package in accordance with the provisions of Schedule 13.

(2) The consignor of any package in respect of which he holds a current regular consignment certificate issued under paragraph (1) must carry in the vehicle in which the consignment is transported a document containing a statement that the consignment is covered by a regular consignment certificate issued under this regulation, the date and contents of that certificate, a record (including destinations and dates) of all consignments made under that certificate, and an expiry date for the document not later than three months after the date of the declaration contained in that certificate.

(3) The consignor of any package falling within paragraph (2) must retain a copy of the document described in paragraph (2), or a complete record of the contents of that document, for two years from the date on which the transport of that package begins.

Signed by the authority of the Secretary of State

Parliamentary Under Secretary of State
Department for Transport, Local Government
and the Regions

April 2002