
STATUTORY RULES OF NORTHERN IRELAND

1998 No. 132

**Packaging, Labelling and Carriage of Radioactive
Material by Rail Regulations (Northern Ireland) 1998**

Part V

General Carriage and Operating Requirements

General prohibitions

17.—(1) A person shall not cause or permit to be carried in a passenger train any category I-WHITE package, other than an excepted package, any category II-yellow or any category III-yellow package unless the package is carried in a coach or a compartment thereof from which all passengers, other than those authorised to accompany the package, are excluded.

(2) A person shall not cause or permit to be carried any package if he knows or has reason to believe that the package has or may have been damaged unless—

- (a) following the incident which resulted or may have resulted in such damage, the consignor of the package—
 - (i) has examined it,
 - (ii) is satisfied that it still complies with the relevant requirements of these Regulations, and
 - (iii) issues a certificate to that effect; and
- (b) that certificate is carried with the package.

(3) A person shall not cause or permit to be carried any radioactive material in packaging which displays a danger sign which does not correspond to the material therein.

(4) A person shall not cause or permit to be carried any radioactive material unless he holds the Carriage Information for that material.

(5) Subject to regulation 10, a person shall not cause or permit to be carried any radioactive material except where such material—

- (a) forms the contents of a package which is either—
 - (i) an excepted package,
 - (ii) an industrial package,
 - (iii) a Type A package,
 - (iv) a Type B package, or
 - (v) a fissile package which meets the requirements of paragraph 6 of the Approved Document; or
- (b) is unpackaged LSA-I or SCO-I which is to be carried in accordance with the conditions prescribed in paragraph 9 of the Approved Document.

(6) A person shall not cause or permit to be carried in any tank which has been used for the carriage of radioactive material any goods other than radioactive material.

Suitability of freight containers, tank containers, tank wagons and wagons

18.—(1) A person shall not cause or permit to be carried any radioactive material in a freight container, tank container, tank wagon or wagon unless the freight container, tank container, tank wagon or wagon concerned—

- (a) is suitable for the purpose, having regard to—
 - (i) the nature and circumstances of the journey to be undertaken, and
 - (ii) the hazardous properties and quantity of the radioactive material and any other goods to be carried with it; and
- (b) has been adequately maintained.

(2) A train operator shall not cause or permit to be carried any radioactive material in a freight container, tank container, tank wagon or wagon unless he has taken all reasonable steps to ensure that paragraph (1) has been complied with.

Contents limits

19. Subject to regulation 10, a person shall not cause or permit to be carried any package, the radioactive contents of which exceed the limits specified in paragraph 16 of the Approved Document for that type of package.

Transport Index limits

20.—(1) A person shall not consign for carriage—

- (a) unpackaged LSA-I or SCO-I; or
- (b) other radioactive material in a package, overpack, freight container, tank container, tank wagon or wagon,

unless the Transport Index for that item and for the whole consignment has been determined in accordance with paragraph 17 of the Approved Document.

(2) Subject to regulation 10, a person shall not cause or permit to be carried any package or overpack where the Transport Index for that item is greater than 10, except where that item is being carried under exclusive use.

(3) A person shall not cause or permit to be carried any radioactive material, other than a consignment consisting entirely of LSA-I, in a freight container, tank container, tank wagon or wagon where the sum of the Transport Indexes in the freight container, tank container, tank wagon or wagon concerned is greater than 50, except where that freight container, tank container, tank wagon or wagon is under exclusive use.

(4) A person shall not cause or permit to be carried in any freight container, tank container, tank wagon or wagon under exclusive use any packages or overpacks of fissile material where the sum of the Transport Indexes in the freight container, tank container, tank wagon or wagon concerned is greater than 100.

(5) A person shall not cause or permit to be carried in an overpack any package of fissile material for which the Transport Index for nuclear criticality control exceeds 0.

Activity limits

21. A person shall not cause or permit to be carried in any freight container or wagon—

- (a) LSA-II or LSA-III in the form of combustible solids, liquids or gases; or
- (b) SCO,

where the total activity in the freight container or wagon concerned exceeds $100 \times A_2$.

Radiation level limits

22.—(1) Subject to paragraph (2), a person shall not cause or permit to be carried in any freight container, tank container, tank wagon or wagon any radioactive material where the radiation level, under conditions likely to be encountered in routine carriage, would exceed 2 mSv/h at any point on, and 0.1 mSv/h at 2 m from, the external surfaces of the freight container, tank container, tank wagon or wagon concerned.

(2) A person shall not cause or permit to be carried in any freight container, tank container, tank wagon or wagon a consignment under exclusive use where the radiation level exceeds the limits specified in Schedule 11.

Contamination level limits

23.—(1) Subject to paragraph (6), a person shall not consign any package or overpack where the level of non-fixed contamination on the external surfaces thereof (in the case of overpacks the external and the internal surfaces thereof) exceeds the limits specified in Table III of paragraph 19 of the Approved Document.

(2) The operator of any freight container, tank container, tank wagon or wagon which is being used for the carriage of any package shall ensure that the level of non-fixed contamination on the external surfaces of that package is kept as low as practicable and, under routine carriage conditions, does not exceed the limits specified in the Table III of paragraph 19 of the Approved Document.

(3) Subject to paragraph (6), the operator of any freight container, tank container, tank wagon or wagon which is being used for the carriage of radioactive material shall ensure that the level of non-fixed contamination on the external and internal surfaces of the freight container, tank container, tank wagon or wagon concerned does not exceed the levels specified in Table III of paragraph 19 of the Approved Document.

(4) The operator of any freight container, tank container, tank wagon or wagon which is used routinely for the carriage of radioactive material shall ensure that the external and internal surfaces of the freight container, tank container, tank wagon or wagon concerned are periodically checked to determine the level of contamination.

(5) The frequency of the periodic checking referred to in paragraph (4) shall be related to the likelihood of contamination and the extent to which radioactive material is carried.

(6) Subject to paragraph (7), the operator of any freight container, tank container, tank wagon or wagon, the surfaces of which have become contaminated above the limits specified in Table III of paragraph 19 of the Approved Document or which show a level in excess of 5μ Sv/h, during carriage shall ensure that the freight container, tank container, tank wagon or wagon concerned—

- (a) is decontaminated as soon as possible by a qualified person; and
- (b) is not re-used unless
 - (i) the level of non-fixed contamination does not exceed the limits specified in Table III of paragraph 19 of the Approved Document, and
 - (ii) the level of fixed contamination on surfaces after decontamination is less than 5μ Sv/h.

(7) Paragraphs (1), (3) and (6) shall not apply in relation to the internal surfaces of any overpack, freight container, tank container, tank wagon or wagon dedicated to the carriage of LSA material or

SCO under exclusive use for so long as the overpack, freight container, tank container, tank wagon or wagon concerned remains under that specific exclusive use.

Carriage in tanks

24. A person shall not cause or permit to be carried any radioactive material in a tank, except where—

- (a) the radioactive material is LSA-I or LSA-II; or
- (b) the tank conforms to the packaging requirements of a Type A package, a Type B(U) package or a Type B(M) package.

Prohibition on over-filling tank containers and tank wagons

25. A person shall not cause or permit any tank container or tank wagon, or any compartment thereof, to be filled beyond 93% of its capacity with any radioactive material at the reference temperature of 15°C.

Openings, valves and caps of tank containers and tank wagons to be securely closed

26.—(1) Subject to paragraph (3), the operator of any tank container or tank wagon which is being used for the carriage of radioactive material shall ensure that—

- (a) all openings in the tank container or tank wagon concerned; and
- (b) in the case where any discharge or filling opening in the tank container or tank wagon concerned is fitted with more than one valve or is fitted with a cap, all such valves and that cap,

are securely closed prior to carriage.

(2) Subject to paragraph (3), the operator of any train which is being used for the carriage of any tank container or tank wagon containing radioactive material shall take all reasonable steps to ensure that—

- (a) all openings in the tank container or tank wagon concerned; and
- (b) in the case where any discharge or filling opening in the tank container or tank wagon concerned is fitted with more than one valve or is fitted with a cap, all such valves and that cap,

remain securely closed throughout carriage.

(3) Nothing in paragraphs (1) and (2) shall be taken as permitting the proper functioning of any safety device to be compromised.

Carriage in bulk

27.—(1) Subject to paragraphs (2) and (3), a person shall not cause or permit to be carried any radioactive material in bulk.

(2) LSA-I may be carried in bulk provided—

- (a) in the case of natural ores it is carried under exclusive use; or
- (b) in any other case, it is carried in such a way as to ensure that there can be no escape of contents from the freight container or wagon in which it is being carried and no loss of shielding.

(3) SCO-I may be carried in bulk provided—

- (a) it is carried in a freight container or wagon in such a way as to ensure that there can be no escape of contents and no loss of shielding;
- (b) where the contamination on the accessible and inaccessible surfaces of the radioactive material is greater than 4 Bq/cm² for beta and gamma emitters and low toxicity alpha emitters or 0.4 Bq/cm² for all other alpha emitters, the material is carried under exclusive use; and
- (c) where it is suspected that non-fixed contamination on inaccessible surfaces of the radioactive material is greater than 4 Bq/cm² for beta and gamma emitters and low toxicity alpha emitters or 0.4 Bq/cm² for all other alpha emitters, measures are taken to ensure that the material is not released into the freight container or wagon.