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STATUTORY RULES OF NORTHERN IRELAND

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**2017 No. 229**

**The Ionising Radiations Regulations (Northern Ireland) 2017**

**PART 6**

**ARRANGEMENTS FOR THE CONTROL OF RADIOACTIVE  
SUBSTANCES, ARTICLES AND EQUIPMENT**

**Sealed sources and articles containing or embodying radioactive substances**

**28.**—(1) Where a radioactive substance is used as a source of ionising radiation in work with ionising radiation, the employer shall ensure that, whenever reasonably practicable, the substance is in the form of a sealed source.

(2) The employer shall ensure that the design, construction and maintenance of any article containing or embodying a radioactive substance, including its bonding, immediate container or other mechanical protection, is such as to prevent the leakage of any radioactive substance—

- (a) in the case of a sealed source, so far as is practicable; or
- (b) in the case of any other article, so far as is reasonably practicable.

(3) The employer shall—

- (a) ensure that, where appropriate, suitable tests are carried out at suitable intervals to detect leakage of radioactive substances from any article to which paragraph (2) applies; and
- (b) make a suitable record of each such test and retain that record for at least 2 years after the article is disposed of or until a further record is made following a subsequent test to that article.

**Accounting for radioactive substances**

**29.** Every employer, for the purpose of controlling radioactive substances which are involved in work with ionising radiation undertaken by that employer, shall—

- (a) take such steps as are appropriate to account for and keep records of the quantity and location of those substances; and
- (b) keep those records or a copy of the records for at least 2 years from the date on which they were made and, in addition, for at least 2 years from the date of disposal of that radioactive substance.

**Keeping and moving of radioactive substances**

**30.**—(1) An employer shall ensure, so far as is reasonably practicable, that any radioactive substance under its control which is not for the time being in use or being moved, transported or disposed of—

- (a) is kept in a suitable receptacle; and
- (b) is kept in a suitable store.

(2) An employer who causes or permits a radioactive substance to be moved (otherwise than by transporting it) shall ensure that, so far as is reasonably practicable, the substance is kept in a suitable receptacle, suitably labelled, while it is being moved.

(3) Nothing in paragraphs (1) or (2) applies in relation to a radioactive substance while it is in or on the live body or corpse of a human being.

#### **Notification of certain occurrences**

**31.**—(1) An employer shall immediately notify the Executive in any case where a quantity of a radioactive substance which was under its control and which exceeds the quantity specified for that substance in column 5 of Part I of Schedule 7—

- (a) has been released or is likely to have been released into the atmosphere as a gas, aerosol or dust; or
- (b) has been spilled or otherwise released in such a manner as to give rise to significant contamination.

(2) Paragraph (1) shall not apply where such release—

- (a) was in accordance with a registration under section 10 of the Radioactive Substances Act 1993<sup>(1)</sup> or which was exempt from such registration by virtue of section 11 of that Act; or
- (b) was in a manner specified in an authorisation to dispose of radioactive waste under section 13 of that Act or which was exempt from such authorisation by virtue of section 15 of that Act.

(3) Where an employer has reasonable cause to believe that a quantity of radioactive substance which exceeds the quantity for that substance specified in column 6 of Part I of Schedule 7 and which was under its control is lost or has been stolen, the employer shall immediately notify the Executive of that loss or theft, as the case may be.

(4) Where an employer suspects or has been informed that an occurrence notifiable under this regulation may have occurred, it shall make an immediate investigation and, unless that investigation shows that no such occurrence has occurred, it shall immediately make a notification under the relevant paragraph of this regulation.

(5) An employer who makes any investigation in accordance with paragraph (4) shall make a report of that investigation and shall, unless the investigation showed that no such occurrence occurred, keep that report or a copy of the report for at least 30 years from the date on which it was made or, in any other case, for at least 2 years from the date on which it was made.

#### **Duties of manufacturers etc of articles for use in work with ionising radiation**

**32.**—(1) In the case of articles for use at work, where that work is work with ionising radiation, Article 7(1) of the 1978 Order<sup>(2)</sup> (which imposes general duties on manufacturers etc. as regards articles and substances for use at work) is modified so that any duty imposed on any person by that Article includes a duty to ensure that any such article is so designed and constructed as to restrict so far as is reasonably practicable the extent to which employees and other persons are or are likely to be exposed to ionising radiation.

(2) Where a person erects or installs an article for use at work, being work with ionising radiation, that person shall—

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(1) 1993 c.12; section 10 was amended by paragraphs 200 and 2004 of Schedule 22 to the Environment Act 1995 (c. 25). Relevant amendments were also made by S.I. 2005/2686 and S.S.I. 2011/207

(2) S.I. 1978/1039 (N.I. 9); Article 7 was amended by the Consumer Protection (Northern Ireland) Order 1987 (S.I. 1987/2049 (N.I. 20)), Article 28 and Schedule 2

- (a) undertake a critical examination of the way in which the article was erected or installed for the purpose of ensuring, in particular, that—
  - (i) any safety features and warning devices operate correctly; and
  - (ii) there is sufficient protection for persons from exposure to ionising radiation;
- (b) consult with the radiation protection adviser that they appointed, or that the employer engaged in work with ionising radiation appointed, with regard to the nature and extent of any critical examination and the results of that examination; and
- (c) provide the employer engaged in work with ionising radiation with adequate information about proper use, testing and maintenance of the article.

### **Equipment used for medical exposure**

**33.**—(1) Every employer who has to any extent control of any equipment or apparatus which is used in connection with a medical exposure shall, having regard to the extent of his control over the equipment, ensure that such equipment is of such design or construction and is so installed and maintained as to be capable of restricting so far as is reasonably practicable the exposure to ionising radiation of any person who is undergoing a medical exposure to the extent that this is compatible with the intended clinical purpose or research objective.

(2) An employer who has to any extent control of any radiation equipment which is used for the purpose of diagnosis and which is installed on or after the date of the coming into operation of these Regulations shall, having regard to the extent of the employer's control over the equipment, ensure that such equipment is provided, where practicable, with suitable means for informing the user of that equipment of the quantity of radiation produced by that equipment during a radiological procedure.

(3) Every employer in respect of whom a duty is imposed by paragraph (1) shall, to the extent that it is reasonable for the employer to do so having regard to the extent of the employer's control over the equipment, make arrangements for a suitable quality assurance programme to be provided in respect of the equipment or apparatus for the purpose of ensuring that it remains capable of restricting so far as is reasonably practicable exposure to the extent that this is compatible with the intended clinical purpose or research objective.

(4) Without prejudice to the generality of paragraph (3), the quality assurance programme required by that paragraph shall require the carrying out of—

- (a) in respect of equipment or apparatus first used on or after the date of the coming into operation of this regulation, adequate testing of that equipment or apparatus before it is first used for clinical purposes;
- (b) adequate testing of the performance of the equipment or apparatus at appropriate intervals and after any major maintenance procedure to that equipment or apparatus;
- (c) where appropriate, such measurements at suitable intervals as are necessary to enable the assessment of representative doses from any radiation equipment to persons undergoing medical exposures.

(5) Every employer who has to any extent control of any radiation equipment shall take all such steps as are reasonably practicable to prevent the failure of any such equipment where such failure could result in an exposure to ionising radiation greater than that intended and to limit the consequences of any such failure.

(6) Where an employer suspects or has been informed that an incident may have occurred in which a person while undergoing a medical exposure was, as the result of a malfunction of, or defect in, radiation equipment under the control of that employer, exposed to ionising radiation to an extent much greater than that intended, the employer shall make an immediate investigation of the suspected incident.

(7) Unless the immediate investigation referred to in paragraph (6) shows beyond reasonable doubt that no such incident has occurred, the employer shall immediately notify the Executive of the incident and make or arrange for a detailed investigation of the circumstances of the exposure and an assessment of the dose received.

(8) An employer who makes an investigation in accordance with paragraph (6) or (7) shall make a report of that investigation and shall—

- (a) in relation to an investigation made under paragraph (6), keep the report or a copy of the report for a period of at least 2 years from the date on which it was made; and
- (b) in relation to an investigation made under paragraph (7), keep the report or a copy of the report for a period of at least 30 years from the date on which it was made.

(9) In this regulation—

“radiation equipment” means equipment which delivers ionising radiation to the person undergoing a medical exposure and equipment which directly controls the extent of the exposure.

#### **Misuse of or interference with sources of ionising radiation**

**34.** No person may intentionally or recklessly misuse or without reasonable excuse interfere with any radioactive substance or any electrical equipment in respect of which these Regulations apply.