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STATUTORY INSTRUMENTS

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**2017 No. 1075**

**The Ionising Radiations Regulations 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 must ensure that, whenever reasonably practicable, the substance is in the form of a sealed source.

(2) The employer must 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 must—

- (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, must—

- (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 must 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) must 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 must immediately notify the appropriate authority 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 1 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) does not apply where such release—

- (a) in relation to England and Wales—
  - (i) was in accordance with an environmental permit under the Environmental Permitting (England and Wales) Regulations 2016<sup>(1)</sup> in respect of mobile radioactive apparatus within the meaning of those regulations;
  - (ii) was in a manner specified in such an environmental permit in respect of radioactive waste within the meaning of those regulations; or
  - (iii) did not, under regulation 12 of those regulations, require an environmental permit;
- (b) in relation to Scotland—
  - (i) was in accordance with a registration under section 10 of the Radioactive Substances Act 1993<sup>(2)</sup> or which was exempt from such registration by virtue of section 11 of that Act; or
  - (ii) 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 a radioactive substance which exceeds the quantity for that substance specified in column 6 of Part 1 of Schedule 7 and which was under its control is lost or has been stolen, the employer must immediately notify the appropriate authority 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 must make an immediate investigation and, unless that investigation shows that no such occurrence has occurred, it must immediately make a notification under the relevant paragraph of this regulation.

(5) An employer who makes any investigation in accordance with paragraph (4) must make a report of that investigation and must, 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.

(6) In this regulation “appropriate authority” means—

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<sup>(1)</sup> [S.I. 2016/1154](#).

<sup>(2)</sup> [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](#).

- (a) in relation to an occurrence notifiable under this regulation as a result of work carried out on nuclear premises, the ONR;
- (b) otherwise, the Executive.

### **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, section 6(1) of the 1974 Act (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 subsection 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 must—

- (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 must, having regard to the extent of its 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 force of these Regulations must, 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) must, 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 must require the carrying out of—

- (a) in respect of equipment or apparatus first used on or after the date of the coming into force 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 must 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 must 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 must immediately notify the appropriate authority 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) must make a report of that investigation and must—

- (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—

“appropriate authority” means—

- (a) in connection with the application of this regulation in relation to, or in relation to any activity carried out on, any nuclear premises, the ONR;
- (b) otherwise, the Executive;

“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.