
STATUTORY INSTRUMENTS

1999 No. 3232

The Ionising Radiations Regulations 1999

PART I

INTERPRETATION AND GENERAL

Citation and commencement

1. These Regulations may be cited as the Ionising Radiations Regulations 1999 and shall come into force—

- (a) as respect all regulations except for regulation 5, on 1st January 2000; and
- (b) as respects regulation 5, on the 13th May 2000.

Interpretation

2.—(1) In these Regulations, unless the context otherwise requires—

“accelerator” means an apparatus or installation in which particles are accelerated and which emits ionising radiation with an energy higher than 1MeV;

“appointed doctor” means, subject to regulation 39(5) (which relates to transitional provisions), a registered medical practitioner who is for the time being appointed in writing by the Executive for the purposes of these Regulations;

“approved” means approved for the time being in writing for the purposes of these Regulations by the Health and Safety Commission or the Executive, as the case may be, and published in such form as the Health and Safety Commission or the Executive respectively considers appropriate;

“approved dosimetry service” means, subject to regulation 39(3) (which relates to transitional provisions), a dosimetry service approved in accordance with regulation 35;

“calendar year” means a period of 12 calendar months beginning with the 1st January;

“classified person” means—

- (a) a person designated as such pursuant to regulation 20(1); and
- (b) in the case of an outside worker employed by an undertaking in Northern Ireland or in another member State, a person who has been designated as a Category A exposed worker within the meaning of Article 21 of the Directive;

“comforter and carer” means an individual who (other than as part of his occupation) knowingly and willingly incurs an exposure to ionising radiation resulting from the support and comfort of another person who is undergoing or who has undergone any medical exposure;

“contamination” means the contamination by any radioactive substance of any surface (including any surface of the body or clothing) or any part of absorbent objects or materials or the contamination of liquids or gases by any radioactive substance;

“controlled area” means—

- (a) in the case of an area situated in Great Britain, an area which has been so designated in accordance with regulation 16(1); and
- (b) in the case of an area situated in Northern Ireland or in another member State, an area subject to special rules for the purposes of protection against ionising radiation and to which access is controlled as specified in Article 19 of the Directive;

“the Directive” means Council Directive 96/29/Euratom⁽¹⁾ laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation;

“dose” means, in relation to ionising radiation, any dose quantity or sum of dose quantities mentioned in Schedule 4;

“dose assessment” means the dose assessment made and recorded by an approved dosimetry service in accordance with regulation 21;

“dose constraint” means a restriction on the prospective doses to individuals which may result from a defined source;

“dose limit” means, in relation to persons of a specified class, the limit on effective dose or equivalent dose specified in Schedule 4 in relation to a person of that class;

“dose rate” means, in relation to a place, the rate at which a person or part of a person would receive a dose of ionising radiation from external radiation if he were at that place being a dose rate at that place averaged over one minute;

“dose record” means, in relation to a person, the record of the doses received by that person as a result of his exposure to ionising radiation, being the record made and maintained on behalf of the employer by the approved dosimetry service in accordance with regulation 21;

“employment medical adviser” means an employment medical adviser appointed under section 56 of the Health and Safety at Work etc. Act 1974;

“the Executive” means the Health and Safety Executive;

“external radiation” means, in relation to a person, ionising radiation coming from outside the body of that person;

“health record” means, subject to regulation 39(7) (which relates to transitional provisions), in relation to an employee, the record of medical surveillance of that employee maintained by the employer in accordance with regulation 24(3);

“internal radiation” means, in relation to a person, ionising radiation coming from inside the body of that person;

“ionising radiation” means the transfer of energy in the form of particles or electromagnetic waves of a wavelength of 100 nanometres or less or a frequency of 3×10^{15} hertz or more capable of producing ions directly or indirectly;

“licensee” has the meaning assigned to it by section 26(1) of the Nuclear Installations Act 1965⁽²⁾;

“local rules” means rules made in accordance with regulation 17;

“maintained”, where the reference is to maintaining plant, apparatus, equipment or facilities, means maintained in an efficient state, in efficient working order and good repair;

“medical exposure” means exposure of a person to ionising radiation for the purpose of his medical or dental examination or treatment which is conducted under the direction of a suitably qualified person and includes any such examination for legal purposes and any such examination or treatment conducted for the purposes of research;

(1) OJNo. L159, 29.6.96, p.1.

(2) 1965 c. 57; relevant amending instruments are S.I. 1974/2056 and S.I. 1990/1918.

“member State” means a member State of the Communities;

“outside worker” means a classified person who carries out services in the controlled area of any employer (other than the controlled area of his own employer);

“overexposure” means any exposure of a person to ionising radiation to the extent that the dose received by that person causes a dose limit relevant to that person to be exceeded or, in relation to regulation 26(2), causes a proportion of a dose limit relevant to any employee to be exceeded;

“practice” means work involving—

- (a) the production, processing, handling, use, holding, storage, transport or disposal of radioactive substances; or
- (b) the operation of any electrical equipment emitting ionising radiation and containing components operating at a potential difference of more than 5kV,

which can increase the exposure of individuals to radiation from an artificial source, or from a radioactive substance containing naturally occurring radionuclides which are processed for their radioactive, fissile or fertile properties;

“radiation accident” means an accident where immediate action would be required to prevent or reduce the exposure to ionising radiation of employees or any other persons;

“radiation employer” means an employer who in the course of a trade, business or other undertaking carries out work with ionising radiation and, for the purposes of regulations 5, 6 and 7, includes an employer who intends to carry out such work;

“radiation passbook” means—

- (a) in the case of an outside worker employed by an employer in Great Britain—
 - (i) a passbook approved by the Executive for the purpose of these Regulations; or
 - (ii) a passbook to which regulation 39(4) (transitional provisions) applies; and
- (b) in the case of an outside worker employed by an employer in Northern Ireland or in another member State, a passbook authorised by the competent authority for Northern Ireland or that member State, as the case may be;

“radiation protection adviser” means, subject to regulation 39(6) (which relates to transitional provisions), an individual who, or a body which, meets such criteria of competence as may from time to time be specified in writing by the Executive;

“radioactive substance” means any substance which contains one or more radionuclides whose activity cannot be disregarded for the purposes of radiation protection;

“sealed source” means a source containing any radioactive substance whose structure is such as to prevent, under normal conditions of use, any dispersion of radioactive substances into the environment, but it does not include any radioactive substance inside a nuclear reactor or any nuclear fuel element;

“short-lived daughters of radon 222” means polonium 218, lead 214, bismuth 214 and polonium 214;

“supervised area” means an area which has been so designated by the employer in accordance with regulation 16(3);

“trainee” means a person aged 16 years or over (including a student) who is undergoing instruction or training which involves operations which would, in the case of an employee, be work with ionising radiation;

“transport” means, in relation to a radioactive substance, carriage of that substance on a road within the meaning of, in relation to England and Wales, section 192 of the Road Traffic Act

1988(3) and, in relation to Scotland, the Roads (Scotland) Act 1984(4) or through another public place (whether on a conveyance or not), or by rail, inland waterway, sea or air and, in the case of transport on a conveyance, a substance shall be deemed as being transported from the time that it is loaded onto the conveyance for the purpose of transporting it until it is unloaded from that conveyance, but a substance shall not be considered as being transported if—

- (a) it is transported by means of a pipeline or similar means; or
- (b) it forms an integral part of a conveyance and is used in connection with the operation of that conveyance;

“woman of reproductive capacity” means a woman who is made subject to the additional dose limit for a woman of reproductive capacity specified in paragraphs 5 and 11 of Schedule 4 by an entry in her health record made by an appointed doctor or employment medical adviser;

“work with ionising radiation” means work to which these Regulations apply by virtue of regulation 3(1).

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

- (a) an employer includes a reference to a self-employed person and any duty imposed by these Regulations on an employer in respect of his employee shall extend to a self-employed person in respect of himself;
- (b) an employee includes a reference to—
 - (i) a self-employed person, and
 - (ii) a trainee who but for the operation of this sub-paragraph and paragraph (3) would not be classed as an employee;
- (c) exposure to ionising radiation is a reference to exposure to ionising radiation arising from work with ionising radiation;
- (d) a person entering, remaining in or working in a controlled or supervised area includes a reference to any part of a person entering, remaining in or working in any such area.

(3) For the purposes of these Regulations and Part I of the Health and Safety at Work etc. Act 1974—

- (a) the word “work” shall be extended to include any instruction or training which a person undergoes as a trainee and the meaning of “at work” shall be extended accordingly; and
- (b) a trainee shall, while he is undergoing instruction or training in respect of work with ionising radiation, be treated as the employee of the person whose undertaking (whether for profit or not) is providing that instruction or training and that person shall be treated as the employer of that trainee except that the duties to the trainee imposed upon the person providing instruction or training shall only extend to matters under the control of that person.

(4) In these Regulations, where reference is made to a quantity specified in Schedule 8, that quantity shall be treated as being exceeded if—

- (a) where only one radionuclide is involved, the quantity of that radionuclide exceeds the quantity specified in the appropriate entry in Schedule 8; or
- (b) where more than one radionuclide is involved, the quantity ratio calculated in accordance with Part II of Schedule 8 exceeds one.

(5) Nothing in these Regulations shall be construed as preventing a person from entering or remaining in a controlled area or a supervised area where that person enters or remains in any such area—

(3) 1988 c. 52.

(4) 1984 c. 54.

- (a) in the due exercise of a power of entry conferred on him by or under any enactment; or
- (b) for the purpose of undergoing a medical exposure.
- (6) In these Regulations—
 - (a) any reference to an effective dose means the sum of the effective dose to the whole body from external radiation and the committed effective dose from internal radiation; and
 - (b) any reference to equivalent dose to a human tissue or organ includes the committed equivalent dose to that tissue or organ from internal radiation.
- (7) In these Regulations—
 - (a) a numbered Regulation or Schedule is a reference to the Regulation or Schedule in these Regulations so numbered;
 - (b) a numbered paragraph is a reference to the paragraph so numbered in the Regulation or Schedule in which that reference appears.

Application

3.—(1) Subject to the provisions of this regulation and to regulation 6(1), these Regulations shall apply to—

- (a) any practice;
 - (b) any work (other than a practice) carried out in an atmosphere containing radon 222 gas at a concentration in air, averaged over any 24 hour period, exceeding 400 Bq m^{-3} except where the concentration of the short-lived daughters of radon 222 in air averaged over any 8 hour working period does not exceed $6.24 \times 10^{-7} \text{ Jm}^{-3}$ and
 - (c) any work (other than work referred to in sub-paragraphs (a) and (b) above) with any radioactive substance containing naturally occurring radionuclides.
- (2) The following Regulations shall not apply where the only work being undertaken is that referred to in sub-paragraph (b) of paragraph (1), namely regulations 23, 27 to 30, 32 and 33.
- (3) The following regulations shall not apply in relation to persons undergoing medical exposures, namely regulations 7, 8, 11, 16 to 18, 23, 25, 31(1) and 34(1).
- (4) Regulation 11 shall not apply in relation to any comforter and carer.
- (5) In the case of an outside worker (working in a controlled area situated in Great Britain) employed by an employer established in Northern Ireland or in another member State, it shall be sufficient compliance with regulation 21 (dose assessment and recording) and regulation 24 (medical surveillance) if the employer complies with—
- (a) where the employer is established in Northern Ireland, regulations 13 and 16 of the Ionising Radiations Regulations (Northern Ireland) 1985⁽⁵⁾; or
 - (b) where the employer is established in another member State, the legislation in that State implementing Chapters II and III of Title VI of the Directive where such legislation exists.

Duties under the Regulations

4.—(1) Any duty imposed by these Regulations on an employer in respect of the exposure to ionising radiation of persons other than his employees shall be imposed only in so far as the exposure of those persons to ionising radiation arises from work with ionising radiation undertaken by that employer.

- (2) Duties under these Regulations imposed upon the employer shall also be imposed upon—

(5) [S.R. 1985/273](#).

- (a) the manager of a mine (within the meaning of section 180 of the Mines and Quarries Act 1954⁽⁶⁾); and
 - (b) the operator of a quarry (within the meaning of the Quarries Regulations 1999⁽⁷⁾),
- in so far as those duties relate to the mine or part of the mine of which he is the manager or the quarry of which he is the operator and to matters within his control.
- (3) Subject to regulation 6(1)(b), duties under these Regulations imposed upon the employer shall also be imposed on the holder of a nuclear site licence under the Nuclear Installations Act 1965⁽⁸⁾ in so far as those duties relate to the licensed site.

⁽⁶⁾ 1954 c. 70; section 180 was amended by S.I. 1993/1897.

⁽⁷⁾ S.I. 1999/2024.

⁽⁸⁾ 1965 c. 57; relevant amending instruments are S.I. 1974/2056 and S.I. 1990/1918.