

SCHEDULE 8

RADIOACTIVE SUBSTANCES ACTIVITIES

PART 1

Scope and interpretation

Scope

1. Paragraph 2 applies for the interpretation of—
 - (a) this schedule;
 - (b) schedule 9; and
 - (c) the definition of radioactive substances activity.
- 2.—(1) “Radioactive substances activity” does not include—
 - (a) any activity involving radioactive material carried on by a licensee on a nuclear site;
 - (b) the transport of radioactive material or radioactive waste, including its receipt for transport and its storage during transport;
 - (c) the disposal of radioactive waste in the form of human excreta where—
 - (i) the radioactive waste arises as a consequence of the medical administration of radioactive material for the purpose of diagnosis, treatment or trials; and
 - (ii) the disposal occurs at a place other than the place of administration of the radioactive material;
 - (d) the disposal of radioactive waste at a site to which a PPC permit or waste management licence applies where—
 - (i) the radioactive waste may be disposed of in normal refuse in accordance with general binding rules; and
 - (ii) the radioactive waste has not been segregated from non-radioactive waste;
 - (e) the disposal of waste described in paragraph 6(1)(a) or (b) at a site to which a PPC permit or waste management licence applies where the activity of the waste does not exceed 5 becquerels per gram.
- (2) A radioactive substances activity is not being carried on by the owner or occupier of premises where radioactive material is present in or on a vehicle, vessel or aircraft and either—
 - (a) the vehicle, vessel or aircraft is on those premises in the course of a journey;
 - (b) the vehicle, vessel or aircraft is in its operational life; or
 - (c) in the case of a vessel which is on those premises otherwise than in the course of a journey the material is used in propelling the vessel or is kept in or on the vessel for use in propelling it.

Interpretation

- 3.—(1) In this schedule—

“Basic Safety Standards Directive” means Council Directive 2013/59/Euratom laying down basic safety standards for protection against the dangers arising from exposure to ionising

radiation and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom(1);

“IAEA Categories 1 to 4” means categories 1 to 4 as defined by the International Atomic Energy Agency in Categorisation of Radioactive Sources (RS-G-1.9)(2);

“local authority” means a council constituted under section 2 of the Local Government etc. (Scotland) Act 1994(3);

“medical exposure” means exposure incurred by patients or asymptomatic individuals as part of their own medical or dental diagnosis or treatment, and intended to benefit their health, as well as exposure incurred by carers and comforters and by volunteers in medical or biomedical research;

“occupational exposure” means exposure of workers, apprentices and students incurred in the course of their work;

“optimisation” means keeping the magnitude of individual doses, the likelihood of exposure and the number of individuals exposed as low as reasonably achievable taking into account the current state of technical knowledge and economic and social factors and related expressions are to be construed accordingly;

“orphan source” means a source containing radioactive material or radioactive waste which is neither—

- (a) subject to an authorisation; nor
- (b) on a nuclear site;

“PPC permit” means a permit granted under regulation 13 of the Pollution Prevention and Control (Scotland) Regulations 2012(4);

“public exposure” means the exposure of individuals resulting from—

- (a) the disposal of radioactive waste;
- (b) the introduction of radioactive material into organisms or the environment; or
- (c) the contamination of the environment,

but excluding any occupational or medical exposure;

“radiation protection expert” means an individual who has, or group of individuals who have, the knowledge, training and experience needed to give radiation protection advice in order to ensure the effective protection of individuals, and whose competence in that respect is recognised by SEPA;

“radioactive waste disposal notice” has the meaning given in paragraph 36;

“relevant liquid” means a liquid which—

- (a) is non-aqueous; or
- (b) is classified (or would be so classified in the absence of its radioactivity) under Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006(5) as having any of the following hazard classes and hazard categories (as defined in that Regulation)—

(1) OJ L 13, 17.1.2014, p.1.

(2) Categorization of radioactive sources. — Vienna : International Atomic Energy Agency, 2005 (IAEA safety standards series, ISSN 1020-525X ;ISBN 92-0-103905-0).

(3) 1994 c.39. Section 2 was amended by schedule 22, paragraph 232(1), of the Environment Act 1995 (c.25).

(4) S.S.I. 2012/360.

(5) OJ L 353, 31.12.2008, p.1.

- (i) acute toxicity: categories 1, 2 or 3;
- (ii) skin corrosion/irritation: category 1 corrosive, sub-categories: 1A, 1B or 1C; or
- (iii) hazardous to the aquatic environment: acute category 1 or chronic categories 1 or 2;

“relevant water authority” means —

- (c) Scottish Water; or
 - (d) a district salmon fishery board established under section 14 of the Salmon Act 1986(6);
- “Table 1”, “Table 2”, “Table 3”, “Table 4” and “Table 5” mean the tables with those numbers in Part 6;

“unsealed source” means a radioactive source that is not a sealed source;

“waste management licence” means a licence granted under section 35 of the Environmental Protection Act 1990(7).

- (2) Where any radionuclide carries the suffix “+” or “sec” in this schedule—
 - (a) that radionuclide represents the parent radionuclide in secular equilibrium with the corresponding daughter radionuclides which are identified in column 2 of Table 3 adjacent to the description of the parent radionuclide; and
 - (b) a concentration value given in a table in this schedule in relation to a parent radionuclide refers to the value for the parent radionuclide alone, but already takes into account the daughter radionuclides present.

Interpretation: this schedule and schedule 9

- 4.—(1) In this schedule and in schedule 9—

“disposal” includes—

- (a) discharge (whether into the environment or into a sewer or drain);
- (b) abandonment;
- (c) burial;
- (d) deposit;

“nuclear site” means—

- (e) any site in respect of which a nuclear site licence is for the time being in force; or
- (f) any site in respect of which, after the revocation or surrender of a nuclear site licence, the period of responsibility of the licensee has not yet come to an end;

“nuclear site licence”, “licensee” and “period of responsibility” have the meanings given in section 26 of the Nuclear Installations Act 1965(8);

“radioactive substance” means radioactive material or radioactive waste.

- (2) For the purposes of this schedule and schedule 9, any substance or article which is discharged, discarded or otherwise dealt with as if it were waste is presumed to be waste unless the contrary is proved.

(6) 1986 c.62. Section 14 is repealed in relation to specified areas by (1) the Scotland Act 1998 (River Tweed) Order 2006 (S.S.I. 2006/2913) schedule 4(2), paragraph 1 and (2) the Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003 (asp 15) schedule 4 paragraph 1.

(7) 1990 c.43. Section 35 is amended by regulation 2(5) of the Waste (Scotland) Regulations 2011 (S.S.I. 2011/226), by the Environment Act 1995 (c.25) schedule 22 paragraph 66(2), by the Pollution Prevention and Control (Scotland) Regulations 2000 (S.S.I. 2000/323) schedule 10, Part 1, paragraph 3(4), and by the Regulatory Reform (Scotland) Act 2014 (asp 3) schedule 3, Part 1, paragraph 3(2).

(8) 1965 c.57. The Act is relevantly amended by the Energy Act 2013 (c.32) schedule 12, Part II, paragraphs 17 and 20.

(3) Any reference in this schedule, in schedule 5 or in schedule 9, to the contamination of a substance or article is a reference to its becoming radioactive or its possessing increased radioactivity as a result of either or both of—

- (a) the absorption, admixture or adhesion of radioactive material or radioactive waste; and
- (b) the emission of neutrons or ionising radiations.

(4) Where any reference is made to a substance or article possessing a concentration of radioactivity which exceeds the value shown in a particular column of a table in this schedule or in schedule 9, that value is exceeded—

- (a) where only one radionuclide which is included in that table is present in the substance or article, if the concentration of the radionuclide exceeds the concentration specified in the appropriate entry in the appropriate column of that table; or
- (b) where more than one such radionuclide is present, if the sum of the quotient values of all the radionuclides in the substance or article, as determined by the summation rule following that table as it applies to that column, is greater than one.

Interpretation: radioactive material and radioactive waste

5. In these Regulations—

“high-activity sealed source” means a sealed source where the activity of the contained radionuclide is equal to or exceeds the relevant activity value laid down in Table 4;

“radioactive material” means a substance or article which is not waste, and which satisfies the requirements of any of paragraphs 6, 7 or 8 as the paragraph applies to such a substance or article;

“radioactive waste” means a substance or article which is waste, and which satisfies the requirements of any of paragraph 6, 7 or 8; and

“sealed source” means a radioactive source in which the radioactive substance is permanently sealed in a capsule or incorporated in a solid form with the objective of preventing, under normal conditions of use, any dispersion of radioactive substances.

NORM industrial activity

6.—(1) Sub-paragraph (2) applies to a substance or article which—

- (a) arises from or is used in a NORM industrial activity; or
- (b) is contaminated by a substance or article described in head (a), including where such contamination occurs indirectly through another contaminated substance or article.

(2) A substance or article to which this sub-paragraph applies is radioactive material or radioactive waste where it has a concentration of radioactivity which exceeds the following values in Table 1—

- (a) for a solid substance or article or a relevant liquid substance, the value specified in column 2;
- (b) for any other liquid substance, the value specified in column 3; or
- (c) for a gaseous substance, the value specified in column 4.

(3) In this schedule, “NORM industrial activity” means an industrial activity involving radionuclides of natural, terrestrial or cosmic origin and includes the following industrial activities—

- (a) production and use of thorium, or thorium compounds, and the production of products where thorium is deliberately added;

- (b) production and use of uranium, or uranium compounds, and the production of products where uranium is deliberately added;
- (c) extraction, production and use of rare earth elements and rare earth element alloys;
- (d) mining and processing of ores other than uranium ore;
- (e) production of oil and gas;
- (f) removal and management of radioactive scales and precipitates from equipment associated with industrial activities;
- (g) any industrial activity utilising phosphate ore;
- (h) manufacture of titanium dioxide pigments;
- (i) the extraction and refining of zircon and manufacture of zirconium compounds;
- (j) production of tin, copper, aluminium, zinc, lead and iron and steel;
- (k) activities related to coal mine de-watering plants;
- (l) water treatment associated with provision of drinking water;
- (m) the remediation of contamination from NORM industrial activities;
- (n) china clay extraction; and
- (o) geothermal energy production.

(4) But “NORM industrial activity” does not include an activity where radionuclides of natural, terrestrial or cosmic origin are processed for their radioactive fissile or fertile properties.

Processed radionuclides of natural terrestrial or cosmic origin

7. A substance or article is radioactive material or radioactive waste where—
- (a) it contains one or more of the radionuclides of natural terrestrial or cosmic origin which are listed in column 1 of Table 2;
 - (b) the substance or article—
 - (i) is processed or is intended to be processed for the radioactive, fissile or fertile properties of those radionuclides; or
 - (ii) is contaminated by a substance or article to which sub-paragraph (i) applies, including where such contamination occurs indirectly through another contaminated substance or article; and
 - (c) the substance or article is—
 - (i) a solid or a relevant liquid and it has a concentration of radioactivity which exceeds the value specified in column 2 of Table 2; or
 - (ii) any other liquid or a gas.

Radionuclides not of natural terrestrial or cosmic origin

8. A substance or article which contains one or more radionuclides that are not of natural terrestrial or cosmic origin is radioactive material or radioactive waste where—
- (a) it is a solid or a relevant liquid and it has a concentration of radioactivity which exceeds the value specified in column 2 of Table 2; or
 - (b) it is any other liquid or a gas.

Radionuclides with a short half-life

9. A substance or article is not radioactive material or radioactive waste where none of the radionuclides which it contains or which it consists of has a half-life exceeding 100 seconds.

Radionuclides not of natural terrestrial or cosmic origin in background radioactivity

10.—(1) A substance or article is not radioactive material or radioactive waste where—

- (a) it is contaminated as a result of a climatic process, or a combination of such processes, by radionuclides which—
 - (i) are not of natural terrestrial or cosmic origin; and
 - (ii) are not present in the substance or article at a concentration that exceeds that found normally in such a substance or article in the United Kingdom; and
- (b) in the absence of such contamination, the substance or article would not otherwise be radioactive material or radioactive waste.

(2) In this paragraph, a “climatic process” includes wind, precipitation and the general circulation of the atmosphere and oceans.

Substances or articles after disposal

11.—(1) A substance or article is not radioactive material or radioactive waste during the excluded period where—

- (a) the substance or article has been disposed of lawfully, and at the time of the disposal no further act of disposal is intended in respect of it; or
- (b) the substance or article—
 - (i) is contaminated by a substance or article to which head (a) applies, including where such contamination occurs indirectly through another contaminated substance or article;
 - (ii) in the absence of such contamination, would not otherwise be radioactive material or radioactive waste; and
 - (iii) is not contaminated with the intention of using its radioactive, fissile or fertile properties.

(2) In sub-paragraph (1), “the excluded period” means the period—

- (a) beginning at the relevant start time; and
- (b) ending in the circumstances specified in sub-paragraph (4).

(3) The relevant start time—

- (a) where the substance or article has been disposed of and—
 - (i) is solid at the time of the disposal;
 - (ii) is disposed of by abandonment, burial or deposit (whether underground or otherwise) on premises in accordance with an authorisation,

is the time of the revocation or surrender of that authorisation and where any conditions applied to a surrender notice have ceased to apply;
- (b) where the substance or article is contaminated by a substance or article to which head (a) applies, including where such contamination occurs indirectly through another contaminated substance or article, is the time of the revocation of the authorisation referred to in head (a)(ii); or

- (c) in relation to any other substance or article—

- (i) is the time of the disposal; or
- (ii) where the substance or article is one to which sub-paragraph (1)(b) applies, is the time of the disposal of the substance or article that caused it, directly or indirectly, to be contaminated.

(4) Where, after the beginning of the excluded period, the relevant substance or article is subject to a process which leads to an increase in the radiation exposure of the public or any plant or animal, the excluded period ends at the time of that increase.

Historic radium contamination

12. A substance or article is not radioactive material or radioactive waste where the substance or article arises from the remediation of land contaminated by radium and—

- (a) the substance or article contains Ra-226 or its progeny;
- (b) in the absence of Ra-226 or its progeny, the substance or article would not otherwise be radioactive material or radioactive waste;
- (c) the contamination occurred prior to 13th May 2001; and
- (d) the concentration of Ra-226 and any progeny resulting from the decay of Ra-226 does not exceed the following values—
 - (i) for a substance or article which is a solid or a substance which is a relevant liquid, 1 becquerel per gram;
 - (ii) for a substance which is any other liquid, 1 becquerel per litre; or
 - (iii) for a substance which is a gas, 0.01 becquerels per cubic metre.