SCOTTISH STATUTORY INSTRUMENTS

2011 No. 207

ATOMIC ENERGY AND RADIOACTIVE SUBSTANCES

The Radioactive Substances Act 1993 Amendment (Scotland) Regulations 2011

Made - - - -	*16th March 2011*
Coming into force - -	*1st October 2011*

The Scottish Ministers make the following Regulations in exercise of the powers conferred by section 2(2) of the European Communities Act 1972(**1**) and all other powers enabling them to do so.

In accordance with paragraph 2 of Schedule 2 to that Act, a draft of this instrument has been laid before and approved by resolution of the Scottish Parliament.

Citation, commencement and extent

1.—(1) These Regulations may be cited as the Radioactive Substances Act 1993 Amendment (Scotland) Regulations 2011 and come into force on 1st October 2011.

(2) These Regulations extend to Scotland only.

Interpretation

2. In these Regulations, "the Act" means the Radioactive Substances Act 1993(**2**).

Insertion of sections 1A to 1J of the Act

3. For sections 1 and 2 of the Act substitute—

"**Meaning of "radioactive material" and "radioactive waste"**

1A. In this Act, except as provided by sections 1E, 1F, 1G and 1H—

(1) 1972 c.68, as relevantly amended by the Scotland Act 1998 (c.46) Schedule 8 paragraph 15(3); the Legislative and Regulatory Reform Act 2006 (c.51) Part 3 section 27(1)(a) and the European Union Amendment Act 2008 (c.7) Schedule 1 Part 1. The functions of the designated Minister so far as exercisable within devolved competence were transferred to the Scottish Ministers by virtue of section 53 of the Scotland Act.

(2) 1993 c.12, as relevantly amended by the Environment Act 1995 (c.25) Schedule 22 paragraphs 200 and 203 and S.S.I. 2000/100 regulation 2(1).

"radioactive material" means a substance or article which is not waste, and which satisfies the requirements of any of sections 1B, 1C and 1D as they apply to such a substance or article;

"radioactive waste" means a substance or article which is waste, and which satisfies the requirements of any of sections 1B, 1C and 1D; and

"Table 1", "Table 2", "Table 3" and "Table 4" mean the tables with those numbers in Schedule 1A.

1BNORM industrial activities

(1) Subsection (2) applies to a substance or article which—

(a) arises from or is used in a NORM industrial activity listed in Part 1 of Table 1;

(b) is waste which arises from a NORM industrial activity listed in Part 2 of Table 1; or

(c) is contaminated by a substance or article described in paragraph (a) or (b), including where such contamination occurs indirectly through another contaminated substance or article.

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

(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.

Processed radionuclides of natural terrestrial or cosmic origin

1C. 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 3;

(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 3; or

(ii) any other liquid or a gas.

Radionuclides not of natural terrestrial or cosmic origin

1D. 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 3; or

(b) it is any other liquid or a gas.

Radionuclides with a short half-life

1E. 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.

1FRadionuclides not of natural terrestrial or cosmic origin in background radioactivity

(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 under this Act.

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

1GContaminated substances or articles

(1) Subject to subsection (2), a substance or article is not radioactive material where—

(a) it is contaminated, but has not been so contaminated with the intention of utilising its radioactive, fissile or fertile properties; and

(b) in the absence of such contamination, the substance or article would not otherwise be radioactive material under this Act.

(2) Subsection (1) only applies while the substance or article is kept on the premises on which the contamination occurred.

1HSubstances or articles after disposal

(1) Subject to subsections (2) and (3), 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 paragraph (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 under this Act; and

(iii) is not contaminated with the intention of using its radioactive, fissile or fertile properties.

(2) In subsection (1), "the excluded period" means the period—

(a) beginning at the relevant start time; and

(b) ending in the circumstances specified in subsection (4).

(3) The relevant start time is—

(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 burial (whether underground or otherwise) on premises in relation to which an authorisation under section 13 of this Act is held at the time of disposal; and

(iii) is disposed of in accordance with that authorisation,

the time of the revocation of that authorisation;

(b) where the substance or article is contaminated by a substance or article to which paragraph (a) applies, including where such contamination occurs indirectly through another contaminated substance or article, the time of the revocation of the authorisation referred to in paragraph (a)(ii); or

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

(i) the time of the disposal of it; or

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

(4) The excluded period ends where, after the beginning of the excluded period, the 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, at the time of that increase.

Variation of tables in Schedule 1A

1J. The Scottish Ministers may by order vary the provisions of Table 2 and Table 3, either by adding further entries to any column of those tables or by altering or deleting any entry for the time being contained in any column.".

Amendments to section 15 of the Act

4.—(1) Section 15(1) of the Act is repealed.

(2) In section 15(2)—

(a) for "Without prejudice to subsection (1), the" substitute "The";

(b) for "exclude" substitute "exempt"; and

(c) for "exclusion" substitute "exemption".

Amendments to section 47 of the Act

5.—(1) In section 47(1) of the Act insert, at the appropriate place in alphabetical order, the following definitions—

""m", where it appears after a radionuclide, means a radionuclide in a metastable state of radioactive decay in which gamma photons are emitted;";

""NORM industrial activity" means the industrial activities involving radionuclides of natural terrestrial or cosmic origin, which activities are listed in Table 1, but not including any such activity where radionuclides of natural terrestrial or cosmic origin are processed for their radioactive, fissile or fertile properties;";

""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 Council Regulation No. 1272/2008(**3**) as having any of the following hazard classes and hazard categories (as defined in that Regulation)—

(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;".

(2) After section 47(5A) of the Act insert—

"(5B) Where any radionuclide carries the suffix "+" or "sec" in this Act—

(a) that radionuclide represents the parent radionuclide in secular equilibrium with the corresponding daughter radionuclides which are identified in column 2 of Table 4 in Schedule 1A adjacent to the description of that parent radionuclide; and

(b) a concentration value given in a table in Schedule 1A in relation to such a parent radionuclide refers to the value for the parent radionuclide alone, but already takes into account the daughter radionuclides present.

(5C) 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 Schedule 1A, that value is exceeded if—

(a) where only one radionuclide which is included in that table is present in the substance or article, the concentration of that 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, the sum of the quotient values of all such 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.".

Amendments to section 48 of the Act

6. In section 48 of the Act—

(a) after the entry for "local authority" insert—

"secretary of state	section 47(1)";

(b) after the entry for "mobile radioactive apparatus" insert—

"NORM industrial activity	section 47(1)";

(c) for the entries for "radioactive material" and "radioactive waste" substitute—

"radioactive material	section 1A
radioactive waste	section 1A
relevant liquid	section 47(1);";

(d) after the entry for "substance" insert—

"Table 1	section 1A
Table 2	section 1A
Table 3	section 1A
Table 4	section 1A"; and

(e) after the entry for "waste" insert—

"+ or sec	section 47(5B)".

(3) O.J. No. L 353, 31.12.2008, p.1.

Amendments to Schedule 1 to the Act

7. For Schedule 1 to the Act, substitute the contents of the Schedule to these Regulations.

Repeals

8. Section 8(4) and (5) of the Act are repealed.

Transitional provisions

9.—(1) Where a substance or article which immediately before 1st October 2011 was not categorised as radioactive material becomes radioactive material on that date by virtue of these Regulations—

(a) a person carrying on any activity described in section 6 of the Act (prohibition of use of radioactive material without registration) in relation to that substance or article immediately before 1st October 2011 is exempt from the requirement to hold a registration under section 7 of the Act (registration of users of radioactive material) in relation to that activity until—

(i) where a registration under that section is applied for in relation to that activity before 1st April 2012—

(aa) if the application is granted, the date of grant;

(bb) if the application is refused and the applicant appeals against the refusal under section 26 of the Act (registrations, authorisations and notices: appeals from decisions of appropriate agency), the date on which the appeal is determined or withdrawn;

(cc) if the application is refused, and the applicant is entitled to appeal against the refusal in accordance with section 26 of the Act, but does not do so, the date which is the day after the last day on which an appeal could have been brought, determined in accordance with the appeals regulations; or

(dd) if the application is refused, and the applicant is not entitled to appeal against the refusal in accordance with section 26 of the Act, the date on which the application is refused; or

(ii) where no such application is made, the earliest of—

(aa) 1st April 2012;

(bb) where, in relation to the activity in sub-paragraph (a), that person becomes exempted from the duty to hold a registration under an Order made under section 8(6) of the Act which comes into force on or after 1st October 2011, the day after that person first becomes so exempted; or

(cc) the day on which the activity ceases;

(b) a person carrying on any activity to which section 9(1) of the Act (prohibition of use of mobile radioactive apparatus without registration) applies in relation to that substance or article immediately before 1st October 2011 is exempt from the requirement to hold a registration under section 10 of the Act (registration of mobile radioactive apparatus) in relation to that activity until—

(i) where a registration under that section is applied for in relation to that activity before 1st April 2012—

(aa) if the application is granted, the date of grant;

(bb) if the application is refused and the applicant appeals against the refusal under section 26 of the Act, the date on which the appeal is determined or withdrawn;

(cc) if the application is refused, and the applicant is entitled to appeal against the refusal in accordance with section 26 of the Act, but does not do so, the date which is the day after the last day on which an appeal could have been brought, determined in accordance with the appeals regulations; or

(dd) if the application is refused, and the applicant is not entitled to appeal against the refusal in accordance with section 26 of the Act, the date on which the application is refused; or

(ii) where no such application is made, the earliest of—

(aa) 1st April 2012;

(bb) where, in relation to the activity in sub-paragraph (b), that person becomes exempted from the duty to hold a registration under an Order made under section 11(1) of the Act which comes into force on or after 1st October 2011, the day after that person first becomes so exempted; or

(cc) the day on which the activity ceases.

(2) Where a substance or article which immediately before 1st October 2011 was not categorised as radioactive waste becomes radioactive waste on that date by virtue of these Regulations—

(a) a person carrying on any activity described in section 13 of the Act (disposal of radioactive waste) in relation to that substance or article immediately before 1st October 2011 is exempt from the requirement to hold an authorisation under that section in relation to that activity until—

(i) where an authorisation under that section is applied for in relation to that activity before 1st April 2012—

(aa) if the application is granted, the date of grant;

(bb) if the application is refused and the applicant appeals against the refusal under section 26 of the Act, the date on which the appeal is determined or withdrawn;

(cc) if the application is refused, and the applicant is entitled to appeal against the refusal in accordance with section 26 of the Act, but does not do so, the date which is the day after the last day on which an appeal could have been brought, determined in accordance with the appeals regulations; or

(dd) if the application is refused, and the applicant is not entitled to appeal against the refusal in accordance with section 26 of the Act, the date on which the application is refused; or

(ii) where no such application is made, the earlier of—

(aa) 1st April 2012;

(bb) where, in relation to the activity in sub-paragraph (a), that person becomes exempted from the duty to hold an authorisation under an Order made under section 15(2) of the Act which comes into force on or after 1st October 2011, the day after that person first becomes so exempted; or

(cc) the day on which the activity ceases;

(b) a person carrying on any activity described in section 14 of the Act (accumulation of radioactive waste) in relation to that substance or article immediately before 1st October

2011 is exempt from the requirement to hold an authorisation under that section in relation to that activity until—

(i) where an authorisation under that section is applied for in relation to that activity before 1st April 2012—

(aa) if the application is granted, the date of grant;

(bb) if the application is refused and the applicant appeals against the refusal under section 26 of the Act, the date on which the appeal is determined or withdrawn;

(cc) if the application is refused, and the applicant is entitled to appeal against the refusal in accordance with section 26 of the Act, but does not do so, the date which is the day after the last day on which an appeal could have been brought, determined in accordance with the appeals regulations; or

(dd) if the application is refused, and the applicant is not entitled to appeal against the refusal in accordance with section 26 of the Act, the date on which the application is refused; or

(ii) where no such application is made, the earliest of—

(aa) 1st April 2012;

(bb) where, in relation to the activity in sub-paragraph (a), that person becomes exempted from the duty to hold an authorisation under an Order made under section 15(2) of the Act which comes into force on or after 1st October 2011, the day after that person first becomes so exempted; or

(cc) the day on which the activity ceases.

(3) Where a person described in paragraph (1)(a)—

(a) holds a registration under section 7 of the Act (registration of users of radioactive material) covering radioactive material which is not described in paragraph (1); and

(b) in relation to the activity and material described in paragraph (1)(a), applies for a variation of that registration instead of applying for a new registration,

the exemption in paragraph (1)(a) applies to that person but with references in that paragraph to an application being read as references to an application for a variation of a registration under section 12 of the Act (cancellation and variation of registrations).

(4) Where a person described in paragraph (1)(b)—

(a) holds a registration under section 10 of the Act (registration of mobile radioactive apparatus) covering radioactive material which is not described in paragraph (1); and

(b) in relation to the activity and material described in paragraph (1)(b), applies for a variation of that registration instead of applying for a new registration,

the exemption in paragraph (1)(b) applies to that person but with references in that paragraph to an application being read as references to an application for a variation of a registration under section 12 of the Act (cancellation and variation of registrations).

(5) Where a person described in paragraph (2)(a)—

(a) holds an authorisation under section 13 of the Act (disposal of radioactive waste) covering radioactive waste which is not described in paragraph (2); and

(b) in relation to the activity and waste described in paragraph (2)(a), applies for a variation of that authorisation instead of applying for a new authorisation,

the exemption in paragraph (2)(a) applies to that person but with references in that paragraph to an application being read as references to an application for a variation of an authorisation under section 17 of the Act (revocation and variation of authorisations).

(6) Where a person described in paragraph (2)(b)—

(a) holds an authorisation under section 14 of the Act (accumulation of radioactive waste) covering radioactive waste which is not described in paragraph (2); and

(b) in relation to the activity and waste described paragraph (2)(b), applies for a variation of that authorisation instead of applying for a new authorisation,

the exemption in paragraph (2)(b) applies to that person but with references in that paragraph to an application being read as references to an application for a variation of an authorisation under section 17 of the Act (revocation and variation of authorisations).

(7) In this regulation, "the appeals regulations" means the Radioactive Substances (Appeals) Regulations 1990(**4**).

St Andrew's House,Edinburgh
16th March 2011

RICHARD LOCHHEAD
A member of the Scottish Executive

(4) S.I. 1990/2504.

SCHEDULE Regulation 7

New Schedule 1A to the Act

"SCHEDULE 1A Section 1A-D

Tables of NORM industrial activities, radionuclides and summation rules

Table 1

NORM Industrial Activities

Part 1

Production and use of thorium, or thorium compounds, and the production of products where thorium is deliberately added
Production and use of uranium or uranium compounds, and the production of products where uranium is deliberately added

Part 2

Extraction, production and use of rare earth elements and rare earth element alloys
Mining and processing of ores other than uranium ore
Production of oil and gas
Removal and management of radioactive scales and precipitates from equipment associated with industrial activities
Any industrial activity utilising phosphate ore
Manufacture of titanium dioxide pigments
The extraction and refining of zircon and manufacture of zirconium compounds
Production of tin, copper, aluminium, zinc, lead and iron and steel
Activities related to coal mine de-watering plants
Water treatment associated with provision of drinking water and the remediation of contamination from other NORM industrial activities
China clay extraction

Table 2

Concentration of radionuclides: NORM industrial activities

Radionuclide	*Solid or relevant liquid Concentration in becquerels per gram (Bq/g)*	*Any other liquid concentration in becquerels per litre (Bq/l)*	*Gaseous concentration in becquerels per cubic metre (Bq/m3)*
U-238sec	0.5	0.1	0.001
U-238+	5	10	0.01
U-234	5	10	0.01

Th-230	10	10	0.001
Ra-226+	0.5	1	0.01
Pb-210+	5	0.1	0.01
Po-210	5	0.1	0.01
U-235sec	1	0.1	0.0001
U-235+	5	10	0.01
Pa-231	5	1	0.001
Ac-227+	1	0.1	0.001
Th-232sec	0.5	0.1	0.001
Th-232	5	10	0.001
Ra-228+	1	0.1	0.01
Th-228+	0.5	1	0.001

1. "The table 2 summation rule" means the sum of the quotient A/B where—

(a) "A" means the quantity of each radionuclide listed in column 1 of Table 2 that is present in the substance or article; and

(b) "B" means the quantity of that radionuclide specified in (as appropriate)—

(i) column 2 of Table 2 where the substance or article is a solid or a relevant liquid;

(ii) column 3 of Table 2 where the substance or article is any other liquid; or

(iii) column 4 of Table 2 where the substance or article is a gas.

Table 3

Concentration of radionuclides

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
H-3	10^2
Be-7	10
C-14	10
F-18	1
Na-22	0.1
Na-24	0.1
Si-31	10^2
P-32	10^2
P-33	10^2
S-35	10^2
Cl-36	1

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Cl-38	1
K-42	10
K-43	1
Ca-45	10^2
Ca-47	1
Sc-46	0.1
Sc-47	10
Sc-48	0.1
V-48	0.1
Cr-51	10
Mn-51	1
Mn-52	0.1
Mn-52m	1
Mn-53	10^3
Mn-54	0.1
Mn-56	1
Fe-52+	1
Fe-55	10^2
Fe-59	0.1
Co-55	1
Co-56	0.1
Co-57	1
Co-58	0.1
Co-58m	10^2
Co-60	0.1
Co-60m	10^3
Co-61	10^2
Co-62m	1
Ni-59	10^2
Ni-63	10^2
Ni-65	1

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Cu-64	10
Zn-65	1
Zn-69	10^2
Zn-69m+	1
Ga-72	1
Ge-71	10^4
As-73	10^2
As-74	1
As-76	1
As-77	10^2
Se-75	1
Br-82	0.1
Rb-86	10
Sr-85	1
Sr-85m	10
Sr-87m	10
Sr-89	10
Sr-90+	1
Sr-91+	1
Sr-92	1
Y-90	10^2
Y-91	10
Y-91m	1
Y-92	10
Y-93	10
Zr-93	10
Zr-95+	0.1
Zr-97+	1
Nb-93m	10^2
Nb-94	0.1
Nb-95	1

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Nb-97+	1
Nb-98	1
Mo-90	1
Mo-93	10
Mo-99+	1
Mo-101+	1
Tc-96	0.1
Tc-96m	10
Tc-97	10
Tc-97m	10
Tc-99	1
Tc-99m	10^2
Ru-97	1
Ru-103+	1
Ru-105+	1
Ru-106+	1
Rh-103m	10^4
Rh-105	10
Pd-103+	10^3
Pd-109+	10^2
Ag-105	1
Ag-108m+	0.1
Ag-110m+	0.1
Ag-111	10
Cd-109+	10
Cd-115+	1
Cd-115m+	10
In-111	1
In-113m	10
In-114m+	1
In-115m	10
Sn-113+	1

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Sn-125	1
Sb-122	1
Sb-124	0.1
Sb-125+	1
Te-123m	1
Te-125m	10^2
Te-127	10^2
Te-127m+	10
Te-129	10
Te-129m+	10
Te-131	10
Te-131m+	1
Te-132+	0.1
Te-133+	1
Te-133m+	1
Te-134	1
I-123	10
I-125	1
I-126	1
I-129	0.1
I-130	1
I-131+	1
I-132	1
I-133	1
I-134	1
I-135	1
Cs-129	1
Cs-131	10^3
Cs-132	1
Cs-134	0.1
Cs-134m	10^3
Cs-135	10

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Cs-136	0.1
Cs-137+	1
Cs-138	1
Ba-131	1
Ba-140	0.1
La-140	0.1
Ce-139	1
Ce-141	10
Ce-143	1
Ce-144+	10
Pr-142	10
Pr-143	10^2
Nd-147	10
Nd-149	10
Pm-147	10^2
Pm-149	10^2
Sm-151	10^2
Sm-153	10
Eu-152	0.1
Eu-152m	10
Eu-154	0.1
Eu-155	10
Gd-153	10
Gd-159	10
Tb-160	0.1
Dy-165	10^2
Dy-166	10
Ho-166	10
Er-169	10^2
Er-171	10
Tm-170	10

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Tm-171	10^2
Yb-175	10
Lu-177	10
Hf-181	1
Ta-182	0.1
W-181	10
W-185	10^2
W-187	1
Re-186	10^2
Re-188	10
Os-185	1
Os-191	10
Os-191m	10^3
Os-193	10
Ir-190	0.1
Ir-192	0.1
Ir-194	10
Pt-191	1
Pt-193m	10^2
Pt-197	10^2
Pt-197m	10^2
Au-198	1
Au-199	10
Hg-197	10
Hg-197m	10
Hg-203	1
Tl-200	1
Tl-201	10
Tl-202	1
Tl-204	10
Pb-203	1

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Pb-210+	0.01
Pb-212+	1
Bi-206	0.1
Bi-207	0.1
Bi-210	10
Bi-212+	1
Po-203	1
Po-205	1
Po-207	1
Po-210	0.01
At-211	10^2
Ra-223+	1
Ra-224+	1
Ra-225	1
Ra-226+	0.01
Ra-227	10
Ra-228+	0.01
Ac-227+	0.01
Ac-228	1
Th-226+	10^2
Th-227	1
Th-228+	0.1
Th-229+	0.1
Th-230	0.1
Th-231	10^2
Th-232	0.01
Th-232+	0.01
Th-232sec	0.01
Th-234+	10
Pa-230	1
Pa-231	0.01
Pa-233	1

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
U-230+	1
U-231	10
U-232+	0.1
U-233	1
U-234	1
U-235+	1
U-235sec	0.01
U-236	1
U-237	10
U-238+	1
U-238sec	0.01
U-239	10^2
U-240+	10
Np-237+	0.1
Np-239	10
Np-240	1
Pu-234	10^2
Pu-235	10^2
Pu-236	0.1
Pu-237	10
Pu-238	0.1
Pu-239	0.1
Pu-240	0.1
Pu-241	1
Pu-242	0.1
Pu-243	10^2
Pu-244+	0.1
Am-241	0.1
Am-242	10^2
Am-242m+	0.1
Am-243+	0.1

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Cm-242	1
Cm-243	0.1
Cm-244	0.1
Cm-245	0.1
Cm-246	0.1
Cm-247+	0.1
Cm-248	0.1
Bk-249	10
Cf-246	10
Cf-248	1
Cf-249	0.1
Cf-250	0.1
Cf-251	0.1
Cf-252	0.1
Cf-253	1
Cf-253+	1
Cf-254	0.1
Es-253	1
Es-254+	0.1
Es-254m+	1
Fm-254	10^2
Fm-255	10
Any other solid or non-aqueous liquid radionuclide that is not of natural terrestrial or cosmic origin	0.01, unless the concentration which gives rise to the same 10 μSv/year dose criteria as used in column 2 of this table can be calculated using guidance by Euratom in RP 122 part 1(**5**)or any successor Euratom guidance or decision applying to the derivation of the concentrations in this table, in which case that concentration.

2. "The table 3 summation rule" means the sum of the quotient A/B where—

(a) "A" means the concentration of each radionuclide listed in column 1 of Table 3 that is present in the substance or article, and

(b) "B" means the quantity of that radionuclide specified in column 2 of Table 3.

Table 4

Radionuclides in Secular Equilibrium

Parent radionuclide	*Daughter radionuclides*
Ac-227+	Th-227, Fr-223, Ra-223, Rn-219, Po-215, Pb-211, Bi-211, Tl-207, Po-211
Ag-108m+	Ag-108
Ag-110m+	Ag-110
Am-242m+	Np-238
Am-243+	Np-239
Bi-212+	Tl-208
Cd-109+	Ag-109m
Cd-115+	In-115m
Cd-115m+	In-115m
Ce-144+	Pr-144, Pr-144m
Cf-253+	Cm-249
Cm-247+	Pu-243
Cs-137+	Ba-137m
Es-254+	Bk-250
Es-254m+	Fm-254
Fe-52+	Mn-52m
I-131+	Xe-131m
In-114m+	In-114
Mo-99+	Tc-99m
Mo-101+	Tc-101
Nb-97+	Nb-97m
Np-237+	Pa-233
Pb-210+	Bi-210, Po-210
Pb-212+	Bi-212, Tl-208
Pd-103+	Rh-103m

(5) EC 2000. Radiation Protection 122: Practical use of the concepts of clearance and exemption. Report RP122 Luxembourg. European Commission.

Parent radionuclide	*Daughter radionuclides*
Pd-109+	Ag-109m
Pu-244+	U-240, Np-240m, Np-240
Ra-223+	Rn-219, Po-215, Pb-211, Bi-211, Tl-207
Ra-224+	Rn-220, Po-216, Pb-212, Bi-212, Tl-208
Ra-226+	Rn-222, Po-218, Pb-214, Bi-214, Po-214
Ra-228+	Ac-228
Ru-103+	Rh-103m
Ru-105+	Rh-105m
Ru-106+	Rh-106
Sb-125+	Te-125m
Sn-113+	In-113m
Sr-90+	Y-90
Sr-91+	Y-91m
Te-127m+	Te-127
Te-129m+	Te-129
Te-131m+	Te-131
Te-132+	I-132
Te-133+	I-133, Xe-133m, Xe-133
Te-133m+	Te-133, I-133, Xe-133m, Xe-133
Th-226+	Ra-222, Rn-218, Po-214
Th-228+	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208
Th-229+	Ra-225, Ac-225, Fr-221, At-217, Bi-213, Tl-209, Pb-209
Th-232+	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208
Th-232sec	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Po-212, Tl-208
Th-234+	Pa-234m, Pa-234
U-230+	Th-226, Ra-222, Rn-218, Po-214
U-232+	Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208
U-235+	Th-231
U-235sec	Th-231, Pa-231, Ac-227, Th-227, Fr-223, Ra-223, Rn-219, Po-215, Pb-211, Bi-211, Tl-207, Po-211
U-238+	Th-234, Pa-234m, Pa-234
U-238sec	Th-234, Pa-234m, Pa-234, U-234, Th-230, Ra-226, Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210

Parent radionuclide	*Daughter radionuclides*
U-240+	Np-240m, Np-240
Zn-69m+	Zn-69
Zr-95+	Nb-95m
Zr-97+	Nb-97m, Nb-97”

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations amend the Radioactive Substances Act 1993 (“the Act”) in order to align it more closely with the structure and terminology used in the Basic Safety Standards Directive(**6**).

Regulation 3 substitutes new sections 1A to 1J in place of the current sections 1 and 2 of the Act. These new provisions define the substances and articles which are classified as “radioactive material” or “radioactive waste” under the Act, and which are subject to the controls contained in later sections of the Act. Regulation 7 introduces a new Schedule 1A, which is substituted for the current Schedule 1 to the Act and supplements new sections 1A to 1D.

Regulation 4(1) repeals section 15(1) of the Act, which contains an exemption relating to clocks and watches. Other exemptions are contained in exemption orders made under section 15(2), and it is intended that this exemption will be subsumed in an updated exemption order under that subsection. Regulation 4(2)(a) contains an amendment which is consequential on the repeal of section 15(1), while regulation 4(2)(b) and (c) adjust the terminology in section 15(2) to ensure that the Act consistently refers to “exemption” rather than to both “exemption” and “exclusion”. Regulation 5 inserts new interpretive provisions into the Act which relate to terms used in the new provisions inserted by these Regulations, while regulation 6 makes consequential additions to the index of defined expressions in section 48 of the Act.

Regulation 8 repeals section 8(4) and (5) of the Act, which also contain provision relating to the exemption of clocks and watches. Regulation 9 contains transitional provisions.

A Business and Regulatory Impact Assessment has been prepared and placed in the Scottish Parliament Information Centre. Copies can be obtained from Scottish Government Environmental Quality Division, Area 1-H North, Victoria Quay, Edinburgh EH6 6QQ.

(6) Council Directive 96/29/Euratom laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation. O.J. L 159, 29.6.1996, p. 1.