#### SCHEDULE 1

Regulation 2(1)

# DOSES OF IONISING RADIATION WITHIN THE MEANING OF "RADIATION EMERGENCY"

**1.** An effective dose of 5 mSv in the period of one year immediately following the radiation emergency.

#### **Commencement Information**

I1 Sch. 1 para. 1 in force at 20.9.2001, see reg. 1

- 2. Without prejudice to paragraph 1—
  - (a) an equivalent dose for the lens of the eye of 15 mSv in the period of one year immediately following the radiation emergency; and
  - (b) an equivalent dose for the skin of 50 mSv in the period of one year immediately following the radiation emergency over 1 cm<sup>2</sup> area of skin, regardless of the area exposed.

#### **Commencement Information**

I2 Sch. 1 para. 2 in force at 20.9.2001, see reg. 1

- 3. In this Schedule—
  - (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;
  - (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;
  - (c) "external radiation" means, in relation to a person, ionising radiation coming from outside the body of that person; and
  - (d) "internal radiation" means, in relation to a person, ionising radiation coming from inside the body of that person.

#### **Commencement Information**

I3 Sch. 1 para. 3 in force at 20.9.2001, see reg. 1

#### SCHEDULE 2

Regulation 3(1) and (2)

# SPECIFIED QUANTITIES OF RADIONUCLIDES ON PREMISES

# PART I

#### **Commencement Information**

I4 Sch. 2 Pt. I in force at 20.9.2001, see reg. 1

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Actinium		
Ac-224		2 10 <sup>11</sup>
Ac-225		3 10 <sup>9</sup>
Ac-226		$2 \ 10^{10}$
Ac-227		4 10 <sup>7</sup>
Ac-228		5 10 <sup>11</sup>
Aluminium		
Al-26		$7  10^{10}$
Americium		
Am-237		4 10 <sup>12</sup>
Am-238		6 10 <sup>12</sup>
Am-239		$2 \ 10^{12}$
Am-240		4 10 <sup>12</sup>
Am-241		3 10 <sup>8</sup>
Am-242		$1 \ 10^{12}$
Am-242m		3 10 <sup>8</sup>
Am-243		3 10 <sup>8</sup>
Am-244		$2 \ 10^{12}$
Am-244m		$2 \ 10^{14}$
Am-245		2 10 <sup>12</sup>
Am-246		1 10 <sup>12</sup>
Am-246m		2 10 <sup>12</sup>
Antimony		
Sb-115		$2 \ 10^{12}$
Sb-116		2 10 <sup>12</sup>
Sb-116m		2 10 <sup>12</sup>
Sb-117		1 10 <sup>13</sup>
Sb-118m		7 10 <sup>12</sup>

#### Table of radionuclides

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Sb-119		$1 \ 10^{13}$
Sb-120	(long lived isotope)	$3 \ 10^{12}$
Sb-120	(short lived isotope)	$2 \ 10^{12}$
Sb-122		$2 \ 10^{12}$
Sb-124		$4 \ 10^{11}$
Sb-124m		$4 \ 10^{12}$
Sb-125		$4 \ 10^{11}$
Sb-126		$1 \ 10^{12}$
Sb-126m		$2 \ 10^{12}$
Sb-127		$2 \ 10^{12}$
Sb-128	(long lived isotope)	$2 \ 10^{12}$
Sb-128	(short lived isotope)	$1 \ 10^{12}$
Sb-129		$2 \ 10^{12}$
Sb-130		$1 \ 10^{12}$
Sb-131		$2 \ 10^{12}$
Argon		
Ar-37	(gas)	$4 \ 10^{17}$
Ar-39	(gas)	$2 \ 10^{16}$
Ar-41	(gas)	4 10 <sup>13</sup>
Arsenic		
As-69		$7 \ 10^{11}$
As-70		$1 \ 10^{12}$
As-71		$3 \ 10^{12}$
As-72		9 10 <sup>11</sup>
As-73		8 10 <sup>12</sup>
As-74		2 10 <sup>12</sup>
As-76		9 10 <sup>11</sup>
As-77		$2 \ 10^{12}$
As-78		7 10 <sup>11</sup>

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)	
Astatine			
At-207		4 10 <sup>12</sup>	
At-211		2 10 <sup>11</sup>	
Barium			
Ba-126		$2 \ 10^{13}$	
Ba-128		$1 \ 10^{13}$	
Ba-131		6 10 <sup>12</sup>	
Ba-131m		3 10 <sup>12</sup>	
Ba-133		$4 \ 10^{11}$	
Ba-133m		$2 \ 10^{12}$	
Ba-135m		2 10 <sup>12</sup>	
Ba-139		11, <sup>012</sup>	
Ba-140		$2 \ 10^{12}$	
Ba-141		$1 \ 10^{12}$	
Ba-142		$2 \ 10^{12}$	
Berkelium			
Bk-245		3 10 <sup>12</sup>	
Bk-246		6 10 <sup>12</sup>	
Bk-247		3 10 <sup>8</sup>	
Bk-249		$2 \ 10^{11}$	
Bk-250		$2 \ 10^{12}$	
Beryllium			
Be-7		$2 \ 10^{13}$	
Be-10		6 10 <sup>11</sup>	
Bismuth			
Bi-200		$2 \ 10^{12}$	
Bi-201		$2 \ 10^{12}$	
Bi-202		3 10 <sup>12</sup>	
Bi-203		4 10 <sup>12</sup>	

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Bi-205		$2 \ 10^{12}$
Bi-206		$2 \ 10^{12}$
Bi-207		1 10 <sup>11</sup>
Bi-210		$2 \ 10^{11}$
Bi-210m		6 10 <sup>9</sup>
Bi-212		$7 \ 10^{11}$
Bi-213		$7 \ 10^{11}$
Bi-214		$1 \ 10^{12}$
Bromine		
Br-74		8 10 <sup>11</sup>
Br-74m		6 10 <sup>11</sup>
Br-75		2 10 <sup>12</sup>
Br-76		1 10 <sup>12</sup>
Br-77		4 10 <sup>13</sup>
Br-80		1 10 <sup>12</sup>
Br-80m		5 10 <sup>12</sup>
Br-82		3 10 <sup>12</sup>
Br-83		2 10 <sup>12</sup>
Br-84		$7 \ 10^{11}$
Cadmium		
Cd-104		1 10 <sup>13</sup>
Cd-107		4 10 <sup>12</sup>
Cd-109		2 10 <sup>12</sup>
Cd-113		2 10 <sup>11</sup>
Cd-113m		1 10 <sup>11</sup>
Cd-115		$2 \ 10^{12}$
Cd-115m		$2 \ 10^{12}$
Cd-117		$2 \ 10^{12}$
Cd-117m		$2 \ 10^{12}$

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Caesium		
Cs-125		$2 \ 10^{12}$
Cs-127		1 10 <sup>13</sup>
Cs-129		2 10 <sup>13</sup>
Cs-130		$2 \ 10^{12}$
Cs-131		6 10 <sup>13</sup>
Cs-132		9 10 <sup>12</sup>
Cs-134		$7 \ 10^{10}$
Cs-134m		4 10 <sup>12</sup>
Cs-135		9 10 <sup>11</sup>
Cs-135m		8 10 <sup>12</sup>
Cs-136		8 10 <sup>11</sup>
Cs-137		1 10 <sup>11</sup>
Cs-138		8 10 <sup>11</sup>
Calcium		
Ca-41		3 10 <sup>13</sup>
Ca-45		3 10 <sup>12</sup>
Ca-47		2 10 <sup>12</sup>
Californium		
Cf-244		$2 \ 10^{12}$
Cf-246		5 10 <sup>10</sup>
Cf-248		2 10 <sup>9</sup>
Cf-249		3 10 <sup>8</sup>
Cf-250		$7  10^8$
Cf-251		3 10 <sup>8</sup>
Cf-252		1 10 <sup>9</sup>
Cf-253		$2 \ 10^{10}$
Cf-254		$4  10^8$
Carbon		

Carbon

Changes to legislation: There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
C-11		2 10 <sup>12</sup>
C-11	(vapour)	1 10 <sup>14</sup>
C-11	(dioxide gas)	$1 \ 10^{14}$
C-11	(monoxide gas)	$1 \ 10^{14}$
C-14		3 10 <sup>12</sup>
C-14	(vapour)	4 10 <sup>13</sup>
C-14	(dioxide gas)	3 10 <sup>15</sup>
C-14	(monoxide gas)	1 10 <sup>16</sup>
Cerium		
Ce-134		1 10 <sup>13</sup>
Ce-135		2 10 <sup>12</sup>
Ce-137		2 10 <sup>13</sup>
Ce-137m		2 10 <sup>12</sup>
Ce-139		2 10 <sup>12</sup>
Ce-141		2 10 <sup>12</sup>
Ce-143		2 10 <sup>12</sup>
Ce-144		3 10 <sup>11</sup>
Chlorine		
Cl-36		2 10 <sup>12</sup>
Cl-38		6 10 <sup>11</sup>
Cl-39		1 10 <sup>12</sup>
Chromium		
Cr-48		4 10 <sup>13</sup>
Cr-49		2 10 <sup>12</sup>
Cr-51		3 10 <sup>13</sup>
Cobalt		
Co-55		2 10 <sup>12</sup>
Co-56		2 10 <sup>11</sup>
Co-57		1 10 <sup>12</sup>

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Co-58		6 10 <sup>11</sup>
Co-58m		2 10 <sup>13</sup>
Co-60		6 10 <sup>10</sup>
Co-60m		7 10 <sup>12</sup>
Co-61		$2 \ 10^{12}$
Co-62m		9 10 <sup>11</sup>
Copper		
Cu-60		$1 \ 10^{12}$
Cu-61		$2 \ 10^{12}$
Cu-64		4 10 <sup>12</sup>
Cu-67		3 10 <sup>12</sup>
Curium		
Cm-238		5 10 <sup>12</sup>
Cm-240		7 10 <sup>9</sup>
Cm-241		5 10 <sup>11</sup>
Cm-242		4 10 <sup>9</sup>
Cm-243		4 10 <sup>8</sup>
Cm-244		4 10 <sup>8</sup>
Cm-245		2 10 <sup>8</sup>
Cm-246		2 10 <sup>8</sup>
Cm-247		3 10 <sup>8</sup>
Cm-248		7 10 <sup>7</sup>
Cm-249		2 10 <sup>12</sup>
Cm-250		1 10 <sup>7</sup>
Dysprosium		
Dy-155		1 10 <sup>13</sup>
Dy-157		$1 \ 10^{14}$
Dy-159		8 10 <sup>12</sup>
Dy-165		2 10 <sup>12</sup>

Changes to legislation: There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Dy-166		3 10 <sup>12</sup>
Einsteinium		
Es-250		1 10 <sup>13</sup>
Es-251		6 10 <sup>12</sup>
Es-253		8 10 <sup>9</sup>
Es-254		2 10 <sup>9</sup>
Es-254m		5 10 <sup>10</sup>
Erbium		
Er-161		6 10 <sup>12</sup>
Er-165		$2 \ 10^{14}$
Er-169		3 10 <sup>12</sup>
Er-171		2 10 <sup>12</sup>
Er-172		3 10 <sup>12</sup>
Europium		
Eu-145		4 10 <sup>12</sup>
Eu-146		3 10 <sup>12</sup>
Eu-147		4 10 <sup>12</sup>
Eu-148		4 10 <sup>11</sup>
Eu-149		8 10 <sup>12</sup>
Eu-150	(long lived isotope)	1 10 <sup>11</sup>
Eu-150	(short lived isotope)	$2 \ 10^{12}$
Eu-152		$1 \ 10^{11}$
Eu-152m		$2 \ 10^{12}$
Eu-154		$1 \ 10^{11}$
Eu-155		2 10 <sup>12</sup>
Eu-156		2 10 <sup>12</sup>
Eu-157		2 10 <sup>12</sup>
Eu-158		$1 \ 10^{12}$
Fermium		

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Fm-252		$7 \ 10^{10}$
Fm-253		$6 \ 10^{10}$
Fm-254		3 10 <sup>11</sup>
Fm-255		9 10 <sup>10</sup>
Fm-257		3 10 <sup>9</sup>
Fluorine		
F-18		2 10 <sup>12</sup>
Francium		
Fr-222		1 10 <sup>12</sup>
Fr-223		$2 \ 10^{12}$
Gadolinium		
Gd-145		2 10 <sup>12</sup>
Gd-146		2 10 <sup>12</sup>
Gd-147		5 10 <sup>12</sup>
Gd-148		9 10 <sup>8</sup>
Gd-149		6 10 <sup>12</sup>
Gd-151		5 10 <sup>12</sup>
Gd-152		$1 \ 10^9$
Gd-153		2 10 <sup>12</sup>
Gd-159		2 10 <sup>12</sup>
Gallium		
Ga-65		$1 \ 10^{12}$
Ga-66		9 10 <sup>11</sup>
Ga-67		5 10 <sup>12</sup>
Ga-68		2 10 <sup>12</sup>
Ga-70		1 10 <sup>12</sup>
Ga-72		2 10 <sup>12</sup>
Ga-73		2 10 <sup>12</sup>
Germanium		

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Ge-66		3 10 <sup>12</sup>
Ge-67		7 10 <sup>11</sup>
Ge-68		1 10 <sup>12</sup>
Ge-69		$2 \ 10^{12}$
Ge-71		$7 \ 10^{14}$
Ge-75		$2 \ 10^{12}$
Ge-77		$1 \ 10^{12}$
Ge-78		$2 \ 10^{12}$
Gold		
Au-193		7 10 <sup>12</sup>
Au-194		1 10 <sup>13</sup>
Au-195		3 10 <sup>12</sup>
Au-198		$2 \ 10^{12}$
Au-198m		$2 \ 10^{12}$
Au-199		3 10 <sup>12</sup>
Au-200		1 10 <sup>12</sup>
Au-200m		$2 \ 10^{12}$
Au-201		$2 \ 10^{12}$
Hafnium		
Hf-170		4 10 <sup>12</sup>
Hf-172		5 10 <sup>11</sup>
Hf-173		6 10 <sup>12</sup>
Hf-175		2 10 <sup>12</sup>
Hf-177m		$2 \ 10^{12}$
Hf-178m		4 10 <sup>10</sup>
Hf-179m		2 10 <sup>12</sup>
Hf-180m		2 10 <sup>12</sup>
Hf-181		1 10 <sup>12</sup>
Hf-182		$7  10^{10}$

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Hf-182m		2 10 <sup>12</sup>
Hf-183		2 10 <sup>12</sup>
Hf-184		$2 \ 10^{12}$
Holmium		
Но-155		2 10 <sup>12</sup>
Но-157		4 10 <sup>12</sup>
Но-159		6 10 <sup>12</sup>
Ho-161		1 10 <sup>13</sup>
Ho-162		5 10 <sup>12</sup>
Ho-162m		4 10 <sup>12</sup>
Ho-164		2 10 <sup>12</sup>
Ho-164m		4 10 <sup>12</sup>
Но-166		1 10 <sup>12</sup>
Ho-166m		8 10 <sup>10</sup>
Но-167		2 10 <sup>12</sup>
Hydrogen		
H-3	(tritiated water)	7 10 <sup>13</sup>
H-3	(organically bound tritium)	1 10 <sup>14</sup>
Н-3	(tritiated water vapour)	1 10 <sup>15</sup>
Н-3	(gas)	1 10 <sup>18</sup>
Н-3	(tritiated methane gas)	$1  10^{17}$
H-3	(organically bound tritium gas/ vapour)	6 10 <sup>14</sup>
Indium		
In-109		7 10 <sup>12</sup>
In-110	(long lived isotope)	$2 \ 10^{13}$
In-110	(short lived isotope)	1 10 <sup>12</sup>
In-111		9 10 <sup>12</sup>
In-112		2 10 <sup>12</sup>

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
In-113m		5 10 <sup>12</sup>
In-114		$1 \ 10^{12}$
In-114m		9 10 <sup>11</sup>
In-115		6 10 <sup>10</sup>
In-115m		3 10 <sup>12</sup>
In-116m		$2 \ 10^{12}$
In-117		$2 \ 10^{12}$
In-117m		2 10 <sup>12</sup>
In-119m		9 10 <sup>11</sup>
Iodine		
I-120		6 10 <sup>11</sup>
I-120	(elemental vapour)	2 10 <sup>13</sup>
I-120	(methyl iodide vapour)	2 10 <sup>13</sup>
I-120m		7 10 <sup>11</sup>
I-120m	(elemental vapour)	2 10 <sup>13</sup>
I-120m	(methyl iodide vapour)	2 10 <sup>13</sup>
I-121		4 10 <sup>12</sup>
I-121	(elemental vapour)	$1  10^{14}$
I-121	(methyl iodide vapour)	$1  10^{14}$
I-123		9 10 <sup>12</sup>
I-123	(elemental vapour)	5 10 <sup>13</sup>
I-123	(methyl iodide vapour)	6 10 <sup>13</sup>
I-124		$2 \ 10^{12}$
I-124	(elemental vapour)	9 10 <sup>11</sup>
I-124	(methyl iodide vapour)	1 10 <sup>12</sup>
I-125		1 10 <sup>11</sup>
I-125	(elemental vapour)	1 10 <sup>12</sup>
I-125	(methyl iodide vapour)	1 10 <sup>12</sup>
I-126		8 10 <sup>11</sup>

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
I-126	(elemental vapour)	5 10 <sup>11</sup>
I-126	(methyl iodide vapour)	6 10 <sup>11</sup>
I-128		1 10 <sup>12</sup>
I-128	(elemental vapour)	$2 \ 10^{14}$
I-128	(methyl iodide vapour)	5 10 <sup>14</sup>
I-129		$1  10^{10}$
I-129	(elemental vapour)	$2 \ 10^{11}$
I-129	(methyl iodide vapour)	2 10 <sup>11</sup>
I-130		3 10 <sup>12</sup>
I-130	(elemental vapour)	5 10 <sup>12</sup>
I-130	(methyl iodide vapour)	6 10 <sup>12</sup>
I-131		9 10 <sup>10</sup>
I-131	(elemental vapour)	6 10 <sup>11</sup>
I-131	(methyl iodide vapour)	7 10 <sup>11</sup>
I-132		$2 \ 10^{12}$
I-132	(elemental vapour)	2 10 <sup>13</sup>
I-132	(methyl iodide vapour)	3 10 <sup>13</sup>
I-132m		$2 \ 10^{12}$
I-132m	(elemental vapour)	4 10 <sup>13</sup>
I-132m	(methyl iodide vapour)	5 10 <sup>13</sup>
I-133		$2 \ 10^{12}$
I-133	(elemental vapour)	$2 \ 10^{12}$
I-133	(methyl iodide vapour)	3 10 <sup>12</sup>
I-134		2 10 <sup>12</sup>
I-134	(elemental vapour)	3 10 <sup>13</sup>
I-134	(methyl iodide vapour)	4 10 <sup>13</sup>
I-135		$2 \ 10^{12}$
I-135	(elemental vapour)	9 10 <sup>12</sup>
I-135	(methyl iodide vapour)	1 10 <sup>13</sup>

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Iridium		
Ir-182		$1 \ 10^{12}$
Ir-184		$2 \ 10^{12}$
Ir-185		$3 \ 10^{12}$
Ir-186	(long lived isotope)	$3 \ 10^{12}$
Ir-186	(short lived isotope)	$2 \ 10^{12}$
Ir-187		6 10 <sup>12</sup>
Ir-188		5 10 <sup>12</sup>
Ir-189		9 10 <sup>12</sup>
Ir-190		$2 \ 10^{12}$
Ir-190m	(long lived isotope)	$3 \ 10^{12}$
Ir-190m	(short lived isotope)	$1 \ 10^{13}$
Ir-192		6 10 <sup>11</sup>
Ir-192m		4 10 <sup>11</sup>
Ir-193m		$4 \ 10^{12}$
Ir-194		$1 \ 10^{12}$
Ir-194m		$1  10^{11}$
Ir-195		$2 \ 10^{12}$
Ir-195m		$2 \ 10^{12}$
Iron		
Fe-52		$2 \ 10^{12}$
Fe-55		8 10 <sup>12</sup>
Fe-59		8 10 <sup>11</sup>
Fe-60		$4  10^{10}$
Krypton		
Kr-74	(gas)	5 10 <sup>13</sup>
Kr-76	(gas)	$1 \ 10^{14}$
Kr-77	(gas)	6 10 <sup>13</sup>
Kr-79	(gas)	2 10 <sup>14</sup>

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)	
Kr-81	(gas)	$7 \ 10^{15}$	
Kr-81m	(gas)	5 10 <sup>14</sup>	
Kr-83m	(gas	3 10 <sup>16</sup>	
Kr-85	(gas)	$1 \ 10^{16}$	
Kr-85m	(gas)	$4 \ 10^{14}$	
Kr-87	(gas)	7 10 <sup>13</sup>	
Kr-88	(gas)	3 10 <sup>13</sup>	
Lanthanum			
La-131		$2 \ 10^{12}$	
La-132		2 10 <sup>12</sup>	
La-135		$2 \ 10^{14}$	
La-137		2 10 <sup>12</sup>	
La-138		2 10 <sup>11</sup>	
La-140		2 10 <sup>12</sup>	
La-141		1 10 <sup>12</sup>	
La-142		1 10 <sup>12</sup>	
La-143		$7 \ 10^{11}$	
Lead			
Pb-195m		$2 \ 10^{12}$	
Pb-198		4 10 <sup>12</sup>	
Pb-199		6 10 <sup>12</sup>	
Pb-200		3 10 <sup>12</sup>	
Pb-201		8 10 <sup>12</sup>	
Pb-202		6 10 <sup>11</sup>	
Pb-202m		4 10 <sup>12</sup>	
Pb-203		9 10 <sup>12</sup>	
Pb-205		1 10 <sup>13</sup>	
Pb-209		2 10 <sup>12</sup>	
Pb-210		3 10 <sup>9</sup>	

Changes to legislation: There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Pb-211		2 10 <sup>12</sup>
Pb-212		$1 \ 10^{11}$
Pb-214		1 10 <sup>12</sup>
Lutetium		
Lu-169		6 10 <sup>12</sup>
Lu-170		3 10 <sup>12</sup>
Lu-171		4 10 <sup>12</sup>
Lu-172		3 10 <sup>12</sup>
Lu-173		2 10 <sup>12</sup>
Lu-174		1 10 <sup>12</sup>
Lu-174m		3 10 <sup>12</sup>
Lu-176		3 10 <sup>11</sup>
Lu-176m		$2 \ 10^{12}$
Lu-177		3 10 <sup>12</sup>
Lu-177m		3 10 <sup>11</sup>
Lu-178		1 10 <sup>12</sup>
Lu-178m		1 10 <sup>12</sup>
Lu-179		2 10 <sup>12</sup>
Magnesium		
Mg-28		5 10 <sup>12</sup>
Manganese		
Mn-51		$1 \ 10^{12}$
Mn-52		2 10 <sup>12</sup>
Mn-52m		8 10 <sup>11</sup>
Mn-53		$1 \ 10^{14}$
Mn-54		3 10 <sup>11</sup>
Mn-56		1 10 <sup>12</sup>
Mendelevium		
Md-257		9 10 <sup>11</sup>

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Md-258		4 10 <sup>9</sup>
Mercury		
Hg-193	(organic)	3 10 <sup>12</sup>
Hg-193	(inorganic)	$3 \ 10^{12}$
Hg-193	(vapour)	2 10 <sup>13</sup>
Hg-193m	(organic)	$2 \ 10^{12}$
Hg-193m	(inorganic)	2 10 <sup>12</sup>
Hg-193m	(vapour)	6 10 <sup>12</sup>
Hg-194	(organic)	3 10 <sup>11</sup>
Hg-194	(inorganic)	$1 \ 10^{12}$
Hg-194	(vapour)	6 10 <sup>11</sup>
Hg-195	(organic)	5 10 <sup>12</sup>
Hg-195	(inorganic)	5 10 <sup>12</sup>
Hg-195	(vapour)	1 10 <sup>13</sup>
Hg-195m	(organic)	3 10 <sup>12</sup>
Hg-195m	(inorganic)	3 10 <sup>12</sup>
Hg-195m	(vapour)	3 10 <sup>12</sup>
Hg-197	(organic)	7 10 <sup>12</sup>
Hg-197	(inorganic)	7 10 <sup>12</sup>
Hg-197	(vapour)	5 10 <sup>12</sup>
Hg-197m	(organic)	$2 \ 10^{12}$
Hg-197m	(inorganic)	$2 \ 10^{12}$
Hg-197m	(vapour)	4 10 <sup>12</sup>
Hg-199m	(organic)	$2 \ 10^{12}$
Hg-199m	(inorganic)	$2 \ 10^{12}$
Hg-199m	(vapour)	$1 \ 10^{14}$
Hg-203	(organic)	$3 \ 10^{12}$
Hg-203	(inorganic)	3 10 <sup>12</sup>
Hg-203	(vapour)	3 10 <sup>12</sup>

Changes to legislation: There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Molybdenum		
Mo-90		2 10 <sup>12</sup>
Mo-93		$2 \ 10^{12}$
Mo-93m		4 10 <sup>12</sup>
Mo-99		$2 \ 10^{12}$
Mo-101		2 10 <sup>12</sup>
Neodymium		
Nd-136		4 10 <sup>12</sup>
Nd-138		5 10 <sup>13</sup>
Nd-139		2 10 <sup>12</sup>
Nd-139m		3 10 <sup>12</sup>
Nd-141		2 10 <sup>13</sup>
Nd-147		2 10 <sup>12</sup>
Nd-149		2 10 <sup>12</sup>
Nd-151		1 10 <sup>12</sup>
Neon		
Ne-19	(gas)	6 10 <sup>13</sup>
Neptunium		
Np-232		3 10 <sup>12</sup>
Np-233		$2 \ 10^{14}$
Np-234		5 10 <sup>12</sup>
Np-235		2 10 <sup>13</sup>
Np-236	(long lived isotope)	3 10 <sup>9</sup>
Np-236	(short lived isotope)	3 10 <sup>12</sup>
Np-237		5 10 <sup>8</sup>
Np-238		2 10 <sup>12</sup>
Np-239		1 10 <sup>12</sup>
Np-240		7 10 <sup>11</sup>
Nickel		

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Ni-56		4 10 <sup>12</sup>
Ni-56	(carbonyl vapour)	$1 \ 10^{13}$
Ni-57		$2 \ 10^{12}$
Ni-57	(carbonyl vapour)	$2 \ 10^{13}$
Ni-59		$4  10^{13}$
Ni-59	(carbonyl vapour)	$2 \ 10^{13}$
Ni-63		$1 \ 10^{13}$
Ni-63	(carbonyl vapour)	$1 \ 10^{13}$
Ni-65		$1 \ 10^{12}$
Ni-65	(carbonyl vapour)	$4 \ 10^{13}$
Ni-66		5 10 <sup>12</sup>
Ni-66	(carbonyl vapour)	$1 \ 10^{13}$
Niobium		
Nb-88		$7 \ 10^{11}$
Nb-89	(long lived isotope)	$1 \ 10^{12}$
Nb-89	(short lived isotope)	8 10 <sup>11</sup>
Nb-90		$2 \ 10^{12}$
Nb-93m		$1 \ 10^{13}$
Nb-94		$1 \ 10^{11}$
Nb-95		$2 \ 10^{12}$
Nb-95m		$2 \ 10^{12}$
Nb-96		$2 \ 10^{12}$
Nb-97		$2 \ 10^{12}$
Nb-98		$1 \ 10^{12}$
Nitrogen		
N-13	(gas)	6 10 <sup>13</sup>
Osmium		
Os-180		$1 \ 10^{13}$

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Os-181		3 10 <sup>12</sup>
Os-182		6 10 <sup>12</sup>
Os-185		$7 \ 10^{11}$
Os-189m		1 10 <sup>13</sup>
Os-191		4 10 <sup>12</sup>
Os-191m		7 10 <sup>12</sup>
Os-193		2 10 <sup>12</sup>
Os-194		2 10 <sup>11</sup>
Palladium		
Pd-100		7 10 <sup>12</sup>
Pd-101		8 10 <sup>12</sup>
Pd-103		4 10 <sup>13</sup>
Pd-107		3 10 <sup>13</sup>
Pd-109		2 10 <sup>12</sup>
Phosphorus		
P-32		$1 \ 10^{11}$
P-33		3 10 <sup>12</sup>
Platinum		
Pt-186		9 10 <sup>13</sup>
Pt-188		6 10 <sup>12</sup>
Pt-189		6 10 <sup>12</sup>
Pt-191		7 10 <sup>12</sup>
Pt-193		$1 \ 10^{14}$
Pt-193m		3 10 <sup>12</sup>
Pt-195m		3 10 <sup>12</sup>
Pt-197		2 10 <sup>12</sup>
Pt-197m		2 10 <sup>12</sup>
Pt-199		2 10 <sup>12</sup>
Pt-200		2 10 <sup>12</sup>

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Plutonium		
Pu-234		$1 \ 10^{12}$
Pu-235		2 10 <sup>13</sup>
Pu-236		6 10 <sup>8</sup>
Pu-237		1 10 <sup>13</sup>
Pu-238		$2  10^8$
Pu-239		$2  10^8$
Pu-240		$2 \ 10^8$
Pu-241		$1  10^{10}$
Pu-242		2 10 <sup>8</sup>
Pu-243		2 10 <sup>12</sup>
Pu-244		$2 \ 10^8$
Pu-245		2 10 <sup>12</sup>
Pu-246		2 10 <sup>12</sup>
Polonium		
Po-203		3 10 <sup>12</sup>
Po-205		7 10 <sup>12</sup>
Po-206		$1 \ 10^{11}$
Po-207		8 10 <sup>12</sup>
Po-208		2 10 <sup>9</sup>
Po-209		2 10 <sup>9</sup>
Po-210		4 10 <sup>9</sup>
Potassium		
K-40		$2 \ 10^{12}$
K-42		$7 \ 10^{11}$
K-43		2 10 <sup>12</sup>
K-44		6 10 <sup>11</sup>
K-45		9 10 <sup>11</sup>
Praseodymium		

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Pr-136		1 10 <sup>12</sup>
Pr-137		$2 \ 10^{12}$
Pr-138m		$2 \ 10^{12}$
Pr-139		7 10 <sup>12</sup>
Pr-142		1 10 <sup>12</sup>
Pr-142m		2 10 <sup>15</sup>
Pr-143		2 10 <sup>12</sup>
Pr-144		2 10 <sup>12</sup>
Pr-145		1 10 <sup>12</sup>
Pr-147		$1 \ 10^{12}$
Promethium		
Pm-141		$1 \ 10^{12}$
Pm-143		9 10 <sup>11</sup>
Pm-144		2 10 <sup>11</sup>
Pm-145		3 10 <sup>12</sup>
Pm-146		2 10 <sup>11</sup>
Pm-147		4 10 <sup>12</sup>
Pm-148		1 10 <sup>12</sup>
Pm-148m		5 10 <sup>11</sup>
Pm-149		2 10 <sup>12</sup>
Pm-150		1 10 <sup>12</sup>
Pm-151		2 10 <sup>12</sup>
Protactinium		
Pa-227		3 10 <sup>11</sup>
Pa-228		3 10 <sup>11</sup>
Pa-230		3 10 <sup>10</sup>
Pa-231		$2 \ 10^8$
Pa-232		2 10 <sup>12</sup>
Pa-233		2 10 <sup>12</sup>

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Pa-234		5 10 <sup>11</sup>
Radium		
Ra-223		3 10 <sup>9</sup>
Ra-224		7 10 <sup>9</sup>
Ra-225		3 10 <sup>9</sup>
Ra-226		2 10 <sup>9</sup>
Ra-227		$2 \ 10^{12}$
Ra-228		1 10 <sup>9</sup>
Rhenium		
Re-177		$2 \ 10^{12}$
Re-178		$2 \ 10^{12}$
Re-181		3 10 <sup>12</sup>
Re-182	(long lived isotope)	$2 \ 10^{12}$
Re-182	(short lived isotope)	4 10 <sup>12</sup>
Re-184		$1 \ 10^{12}$
Re-184m		7 10 <sup>11</sup>
Re-186		$2 \ 10^{12}$
Re-186m		$1 \ 10^{12}$
Re-187		5 10 <sup>14</sup>
Re-188		$1 \ 10^{12}$
Re-188m		3 10 <sup>12</sup>
Re-189		2 10 <sup>12</sup>
Rhodium		
Rh-99		4 10 <sup>12</sup>
Rh-99m		9 10 <sup>12</sup>
Rh-100		4 10 <sup>12</sup>
Rh-101		7 10 <sup>11</sup>
Rh-101m		2 10 <sup>13</sup>
Rh-102		1 10 <sup>11</sup>

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Rh-102m		6 10 <sup>11</sup>
Rh-103m		3 10 <sup>15</sup>
Rh-105		$2 \ 10^{12}$
Rh-106m		2 10 <sup>12</sup>
Rh-107		2 10 <sup>12</sup>
Rubidium		
Rb-79		1 10 <sup>12</sup>
Rb-81		2 10 <sup>12</sup>
Rb-81m		4 10 <sup>12</sup>
Rb-82m		3 10 <sup>12</sup>
Rb-83		1 10 <sup>12</sup>
Rb-84		1 10 <sup>12</sup>
Rb-86		2 10 <sup>11</sup>
Rb-87		4 10 <sup>12</sup>
Rb-88		5 10 <sup>11</sup>
Rb-89		9 10 <sup>11</sup>
Ruthenium		
Ru-94		1 10 <sup>14</sup>
Ru-94	(tetroxide vapour)	1 10 <sup>14</sup>
Ru-97		3 10 <sup>13</sup>
Ru-97	(tetroxide vapour)	1 10 <sup>14</sup>
Ru-103		2 10 <sup>12</sup>
Ru-103	(tetroxide vapour)	1 10 <sup>13</sup>
Ru-105		2 10 <sup>12</sup>
Ru-105	(tetroxide vapour)	6 10 <sup>13</sup>
Ru-106		3 10 <sup>11</sup>
Ru-106	(tetroxide vapour)	8 10 <sup>11</sup>
Samarium		
Sm-141		1 10 <sup>12</sup>

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Sm-141m		$2 \ 10^{12}$
Sm-142		9 10 <sup>12</sup>
Sm-145		$3 \ 10^{12}$
Sm-146		2 10 <sup>9</sup>
Sm-147		3 10 <sup>9</sup>
Sm-151		6 10 <sup>12</sup>
Sm-153		$2 \ 10^{12}$
Sm-155		$2 \ 10^{12}$
Sm-156		$2 \ 10^{12}$
Scandium		
Sc-43		$2 \ 10^{12}$
Sc-44		$2 \ 10^{12}$
Sc-44m		9 10 <sup>12</sup>
Sc-46		3 10 <sup>11</sup>
Sc-47		$3 \ 10^{12}$
Sc-48		$2 \ 10^{12}$
Sc-49		$1 \ 10^{12}$
Selenium		
Se-70		$2 \ 10^{12}$
Se-73		$2 \ 10^{12}$
Se-73m		$2 \ 10^{12}$
Se-75		$2  10^{11}$
Se-79		$5  10^{10}$
Se-81		2 10 <sup>12</sup>
Se-81m		4 10 <sup>12</sup>
Se-83		2 10 <sup>12</sup>
Silicon		
Si-31		$2 \ 10^{12}$
Si-32		$2  10^{11}$

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Silver		
Ag-102		$1 \ 10^{12}$
Ag-103		2 10 <sup>12</sup>
Ag-104		3 10 <sup>12</sup>
Ag-104m		2 10 <sup>12</sup>
Ag-105		2 10 <sup>12</sup>
Ag-106		2 10 <sup>12</sup>
Ag-106m		2 10 <sup>12</sup>
Ag-108m		1 10 <sup>11</sup>
Ag-110m		3 10 <sup>10</sup>
Ag-111		2 10 <sup>12</sup>
Ag-112		$7 \ 10^{11}$
Ag-115		9 10 <sup>11</sup>
Sodium		
Na-22		$1 \ 10^{11}$
Na-24		2 10 <sup>12</sup>
Strontium		
Sr-80		$1 \ 10^{14}$
Sr-81		9 10 <sup>11</sup>
Sr-82		2 10 <sup>12</sup>
Sr-83		3 10 <sup>12</sup>
Sr-85		$1 \ 10^{12}$
Sr-85m		3 10 <sup>13</sup>
Sr-87m		7 10 <sup>12</sup>
Sr-89		$1 \ 10^{12}$
Sr-90		8 10 <sup>10</sup>
Sr-91		$2 \ 10^{12}$
Sr-92		2 10 <sup>12</sup>
Sulphur		

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
S-35	(inorganic)	1 10 <sup>12</sup>
S-35	(organic)	$2 \ 10^{11}$
8-35	(carbon disulphide vapour)	$2 \ 10^{13}$
S-35	(vapour)	$2 \ 10^{14}$
S-35	(dioxide gas)	$1  10^{14}$
Tantalum		
Ta-172		$2 \ 10^{12}$
Ta-173		$2 \ 10^{12}$
Ta-174		$2 \ 10^{12}$
Ta-175		$2 \ 10^{12}$
Ta-176		3 10 <sup>12</sup>
Ta-177		1 10 <sup>13</sup>
Ta-178	(long lived isotope)	3 10 <sup>12</sup>
Ta-179		6 10 <sup>12</sup>
Ta-180		9 10 <sup>11</sup>
Ta-180m		6 10 <sup>12</sup>
Ta-182		3 10 <sup>11</sup>
Ta-182m		$2 \ 10^{12}$
Ta-183		$2 \ 10^{12}$
Ta-184		$2 \ 10^{12}$
Ta-185		1 10 <sup>12</sup>
Ta-186		9 10 <sup>11</sup>
Technetium		
Tc-93		5 10 <sup>13</sup>
Tc-93m		4 10 <sup>12</sup>
Tc-94		6 10 <sup>12</sup>
Tc-94m		$1 \ 10^{12}$
Tc-95		4 10 <sup>13</sup>
Tc-95m		1 10 <sup>12</sup>

Changes to legislation: There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)	
Tc-96		4 10 <sup>12</sup>	
Tc-96m		2 10 <sup>13</sup>	
Tc-97		9 10 <sup>12</sup>	
Tc-97m		5 10 <sup>12</sup>	
Tc-98		1 10 <sup>11</sup>	
Tc-99		5 10 <sup>10</sup>	
Tc-99m		1 10 <sup>13</sup>	
Tc-101		2 10 <sup>12</sup>	
Tc-104		6 10 <sup>11</sup>	
Tellurium			
Te-116		6 10 <sup>12</sup>	
Te-116	(vapour)	$2 \ 10^{14}$	
Te-121		4 10 <sup>12</sup>	
Te-121	(vapour)	3 10 <sup>13</sup>	
Te-121m		1 10 <sup>12</sup>	
Te-121m	(vapour)	3 10 <sup>12</sup>	
Te-123		6 10 <sup>12</sup>	
Te-123	(vapour)	2 10 <sup>12</sup>	
Te-123m		2 10 <sup>12</sup>	
Te-123m	(vapour)	5 10 <sup>12</sup>	
Te-125m		2 10 <sup>12</sup>	
Te-125m	(vapour)	8 10 <sup>12</sup>	
Te-127		2 10 <sup>12</sup>	
Te-127	(vapour)	2 10 <sup>14</sup>	
Te-127m		1 10 <sup>12</sup>	
Te-127m	(vapour)	$2 \ 10^{12}$	
Te-129		$2 \ 10^{12}$	
Te-129	(vapour)	4 10 <sup>14</sup>	
Te-129m		$1 \ 10^{12}$	

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Te-129m	(vapour)	3 10 <sup>12</sup>
Te-131		1 10 <sup>12</sup>
Te-131	(vapour)	$1  10^{14}$
Te-131m		2 10 <sup>12</sup>
Te-131m	(vapour)	5 10 <sup>12</sup>
Te-132		3 10 <sup>12</sup>
Te-132	(vapour)	2 10 <sup>12</sup>
Te-133		1 10 <sup>12</sup>
Te-133	(vapour)	7 10 <sup>13</sup>
Te-133m		1 10 <sup>12</sup>
Te-133m	(vapour)	2 10 <sup>13</sup>
Te-134		3 10 <sup>12</sup>
Te-134	(vapour)	7 10 <sup>13</sup>
Terbium		
Tb-147		$2 \ 10^{12}$
Tb-149		$2 \ 10^{12}$
Tb-150		$2 \ 10^{12}$
Tb-151		4 10 <sup>12</sup>
Tb-153		7 10 <sup>1</sup> 2;
Tb-154		4 10 <sup>12</sup>
Tb-155		1 10 <sup>13</sup>
Tb-156		3 10 <sup>12</sup>
Tb-156m	(long lived isotope)	1 10 <sup>13</sup>
Tb-156m	(short lived isotope)	4 10 <sup>12</sup>
Tb-157		1 10 <sup>13</sup>
Tb-158		$2 \ 10^{11}$
Tb-160		5 10 <sup>11</sup>
Tb-161		$2 \ 10^{12}$
Thallium		

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Tl-194		1 10 <sup>13</sup>
Tl-194m		2 10 <sup>12</sup>
Tl-195		4 10 <sup>12</sup>
Tl-197		5 10 <sup>12</sup>
Tl-198		7 10 <sup>12</sup>
Tl-198m		2 10 <sup>12</sup>
Tl-199		6 10 <sup>12</sup>
T1-200		1 10 <sup>13</sup>
T1-201		7 10 <sup>12</sup>
T1-202		7 10 <sup>12</sup>
T1-204		2 10 <sup>12</sup>
Thorium		
Th-226		4 10 <sup>11</sup>
Th-227		2 10 <sup>9</sup>
Th-228		6 10 <sup>8</sup>
Th-229		$1 \ 10^8$
Th-230		2 10 <sup>8</sup>
Th-231		2 10 <sup>12</sup>
Th-232		2 10 <sup>8</sup>
Th-234		3 10 <sup>12</sup>
Thulium		
Tm-162		$2 \ 10^{12}$
Tm-166		3 10 <sup>12</sup>
Tm-167		4 10 <sup>12</sup>
Tm-170		2 10 <sup>12</sup>
Tm-171		1 10 <sup>13</sup>
Tm-172		2 10 <sup>12</sup>
Tm-173		2 10 <sup>12</sup>
Tm-175		2 10 <sup>12</sup>

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Tin		
Sn-110		6 10 <sup>13</sup>
Sn-111		$2 \ 10^{12}$
Sn-113		5 10 <sup>12</sup>
Sn-117m		3 10 <sup>12</sup>
Sn-119m		5 10 <sup>12</sup>
Sn-121		3 10 <sup>12</sup>
Sn-121m		4 10 <sup>12</sup>
Sn-123		$2 \ 10^{12}$
Sn-123m		$2 \ 10^{12}$
Sn-125		$1 \ 10^{12}$
Sn-126		5 10 <sup>11</sup>
Sn-127		$2 \ 10^{12}$
Sn-128		2 10 <sup>12</sup>
Titanium		
Ti-44		2 10 <sup>11</sup>
Ti-45		$2 \ 10^{12}$
Tungsten		
W-176		5 10 <sup>12</sup>
W-177		3 10 <sup>12</sup>
W-178		6 10 <sup>13</sup>
W-179		1 10 <sup>13</sup>
W-181		1 10 <sup>13</sup>
W-185		4 10 <sup>12</sup>
W-187		$2 \ 10^{12}$
W-188		$3 \ 10^{12}$
Uranium		
U-230		2 10 <sup>9</sup>
U-231		7 10 <sup>12</sup>

Changes to legislation: There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
U-232		6 108
U-233		3 10 <sup>9</sup>
U-234		3 10 <sup>9</sup>
U-235		3 10 <sup>9</sup>
U-236		3 10 <sup>9</sup>
U-237		$2 \ 10^{12}$
U-238		3 10 <sup>9</sup>
U-239		$2 \ 10^{12}$
U-240		$2 \ 10^{12}$
Vanadium		
V-47		$1 \ 10^{12}$
V-48		$1 \ 10^{12}$
V-49		$2 \ 10^{14}$
Xenon		
Xe-120	(gas)	$1  10^{14}$
Xe-121	(gas)	$3 \ 10^{13}$
Xe-122	(gas)	$1 \ 10^{15}$
Xe-123	(gas)	9 10 <sup>13</sup>
Xe-125	(gas)	$2 \ 10^{14}$
Xe-127	(gas)	$2 \ 10^{14}$
Xe-129m	(gas)	$2 \ 10^{15}$
Xe-131m	(gas)	4 10 <sup>15</sup>
Xe-133	(gas)	1 10 <sup>15</sup>
Xe-133m	(gas)	$2 \ 10^{15}$
Xe-135	(gas)	$2 \ 10^{14}$
Xe-135m	(gas)	$1  10^{14}$
Xe-138	(gas)	5 10 <sup>13</sup>
Ytterbium		
Yb-162		$1 \ 10^{13}$

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Yb-166		8 10 <sup>12</sup>
Yb-167		4 10 <sup>12</sup>
Yb-169		3 10 <sup>12</sup>
Yb-175		4 10 <sup>12</sup>
Yb-177		$2 \ 10^{12}$
Yb-178		$2 \ 10^{12}$
Yttrium		
Y-86		2 10 <sup>12</sup>
Y-86m		1 10 <sup>13</sup>
Y-87		2 10 <sup>13</sup>
Y-88		2 10 <sup>11</sup>
Y-90		$2 \ 10^{12}$
Y-90m		$7 \ 10^{12}$
Y-91		$2 \ 10^{12}$
Y-91m		2 10 <sup>13</sup>
Y-92		6 10 <sup>11</sup>
Y-93		8 10 <sup>11</sup>
Y-94		6 10 <sup>11</sup>
Y-95		6 10 <sup>11</sup>
Zinc		
Zn-62		1 10 <sup>13</sup>
Zn-63		$1 \ 10^{12}$
Zn-65		5 10 <sup>10</sup>
Zn-69		$2 \ 10^{12}$
Zn-69m		2 10 <sup>13</sup>
Zn-71m		$2 \ 10^{12}$
Zn-72		3 10 <sup>12</sup>
Zirconium		
Zr-86		2 10 <sup>13</sup>

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)	
Zr-88		$1 \ 10^{12}$	
Zr-89		4 10 <sup>12</sup>	
Zr-93		8 10 <sup>11</sup>	
Zr-95		8 10 <sup>11</sup>	
Zr-97		$2 \ 10^{12}$	
Other radionuclides not listed above (see note)		4 10 <sup>7</sup>	

Note: In the case of radionuclides not specified elsewhere in this Part, the quantity specified in this entry is to be used unless the Executive has approved some other quantity for that radionuclide.

# PART II

# Quantity ratios for more than one radionuclide

1. For the purpose of regulation 3(2), the quantity ratio for more than one radionuclide is the sum of the quotients of the quantity of a radionuclide present Qp divided by the quantity of that radionuclide specified in the appropriate column of Part I of this Schedule Qlim, namely-

 $\sum \frac{Q_p}{O_{\text{lim}}}$ 

#### **Commencement Information**

15 Sch. 2 Pt. II para. 1 in force at 20.9.2001, see reg. 1

2. In any case where the isotopic composition of a radioactive substance is not known or is only partially known, the quantity ratio for that substance shall be calculated by using the values specified in the appropriate column in Part 1 for `other radionuclides not listed above' for any radionuclide that has not been identified or where the quantity of a radionuclide is uncertain, unless the employer can show that the use of some other value is appropriate in the circumstances of a particular case, when he may use that value.

#### **Commencement Information I6**

Sch. 2 Pt. II para. 2 in force at 20.9.2001, see reg. 1

#### SCHEDULE 3

Regulation 3(1)

# MASSES OF FISSILE MATERIAL

#### **Commencement Information**

Sch. 3 in force at 20.9.2001, see reg. 1 I7

For the purpose of regulation 3(1), the specified mass of a fissile material shall be—

(a)	plutonium as Pu 239 or Pu 241 or as a mixture of plutonium isotopes containing Pu 239 or Pu 241—	150 grams;
(b)	uranium as U233—	150 grams;
(c)	uranium enriched in U 235 to more than 1% but not more than 5%—	500 grams;(r)
(d)	uranium enriched in U 235 to more than 5%—	250 grams.

#### SCHEDULE 4

Regulation 3(1) and (3)

# SPECIFIED QUANTITIES FOR THE TRANSPORT OF RADIONUCLIDES

# PART I

#### **Commencement Information**

**I8** Sch. 4 Pt. I in force at 20.9.2001, see reg. 1

#### Table of radionuclides

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)	
Actinium			
Ac-225	(see note 1)	6 10 <sup>9</sup>	
Ac-227	(see note 1)	9 10 <sup>7</sup>	
Ac-228		5 10 <sup>11</sup>	
Aluminium			
Al-26		1 10 <sup>11</sup>	

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of  $O_3$ ,  $UF_4$ ,  $UCl_4$  and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Americium		
Am-241		1 10 <sup>9</sup>
Am-242m	(see note 1)	1 10 <sup>9</sup>
Am-243	(see note 1)	1 10 <sup>9</sup>
Antimony		
Sb-122		4 10 <sup>11</sup>
Sb-124		6 10 <sup>11</sup>
Sb-125		1 10 <sup>12</sup>
Sb-126		4 10 <sup>11</sup>
Argon		
Ar-37		4 10 <sup>13</sup>
Ar-39		2 10 <sup>13</sup>
Ar-41		3 10 <sup>11</sup>
Arsenic		
As-72		3 10 <sup>11</sup>
As-73		4 10 <sup>13</sup>
As-74		9 10 <sup>11</sup>
As-76		3 10 <sup>11</sup>
As-77		7 10 <sup>11</sup>
Astatine		
At-211	(see note 1)	5 10 <sup>11</sup>
Barium		
Ba-131	(see note 1)	$2 \ 10^{12}$
Ba-133		3 10 <sup>12</sup>
Ba-133m		6 10 <sup>11</sup>

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)	
Ba-140	(see note 1)	3 10 <sup>11</sup>	
Berkelium			
Bk-247		8 10 <sup>8</sup>	
Bk-249	(see note 1)	3 10 <sup>11</sup>	
Beryllium			
Be-7		$2 \ 10^{13}$	
Be-10		6 10 <sup>11</sup>	
Bismuth			
Bi-205		7 10 <sup>11</sup>	
Bi-206		3 10 <sup>11</sup>	
Bi-207		7 10 <sup>11</sup>	
Bi-210		6 10 <sup>11</sup>	
Bi-210m	(see note 1)	2 10 <sup>10</sup>	
Bi-212	(see note 1)	6 10 <sup>11</sup>	
Bromine			
Br-76		$4 \ 10^{11}$	
Br-77		3 10 <sup>12</sup>	
Br-82		$4  10^{11}$	
Cadmium			
Cd-109		2 10 <sup>12</sup>	
Cd-113m		5 10 <sup>11</sup>	
Cd-115	(see note 1)	4 10 <sup>11</sup>	
Cd-115m		5 10 <sup>11</sup>	
Caesium			
Cs-129		4 10 <sup>12</sup>	

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Cs-131		$3 \ 10^{13}$
Cs-132		1 10 <sup>12</sup>
Cs-134		7 10 <sup>11</sup>
Cs-134m		6 10 <sup>11</sup>
Cs-135		1 10 <sup>12</sup>
Cs-136		5 10 <sup>11</sup>
Cs-137	(see note 1)	6 10 <sup>11</sup>
Calcium		
Ca-41		unlimited
Ca-45		1 10 <sup>12</sup>
Ca-47	(see note 1)	3 10 <sup>11</sup>
Californium		
Cf-248		6 10 <sup>9</sup>
Cf-249		8 10 <sup>8</sup>
Cf-250		2 10 <sup>9</sup>
Cf-251		7 10 <sup>8</sup>
Cf-252		3 10 <sup>9</sup>
Cf-253	(see note 1)	4 10 <sup>10</sup>
Cf-254		1 10 <sup>9</sup>
Carbon		
C-11		6 10 <sup>11</sup>
C-14		3 10 <sup>12</sup>
Cerium		
Ce-139		2 10 <sup>12</sup>
Ce-141		6 10 <sup>11</sup>

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Ce-143		6 10 <sup>11</sup>
Ce-144	(see note 1)	2 10 <sup>11</sup>
Chlorine		
Cl-36		6 10 <sup>11</sup>
C1-38		2 10 <sup>11</sup>
Chromium		
Cr-51		3 10 <sup>13</sup>
Cobalt		
Co-55		5 10 <sup>11</sup>
Co-56		3 10 <sup>11</sup>
Co-57		1 10 <sup>13</sup>
Co-58		1 10 <sup>12</sup>
Co-58m		4 10 <sup>13</sup>
Co-60		4 10 <sup>11</sup>
Copper		
Cu-64		1 10 <sup>12</sup>
Cu-67		7 10 <sup>11</sup>
Curium		
Cm-240		$2 \ 10^{10}$
Cm-241		1 10 <sup>12</sup>
Cm-242		$1  10^{10}$
Cm-243		1 10 <sup>9</sup>
Cm-244		2 10 <sup>9</sup>
Cm-245		9 10 <sup>8</sup>
Cm-246		9 10 <sup>8</sup>

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)	_
Cm-247	(see note 1)	1 10 <sup>9</sup>	
Cm-248		3 10 <sup>8</sup>	
Dysprosium			
Dy-159		2 10 <sup>13</sup>	
Dy-165		6 10 <sup>11</sup>	
Dy-166	(see note 1)	3 10 <sup>11</sup>	
Erbium			
Er-169		1 10 <sup>12</sup>	
Er-171		5 10 <sup>11</sup>	
Europium			
Eu-147		$2 \ 10^{12}$	
Eu-148		5 10 <sup>11</sup>	
Eu-149		2 10 <sup>13</sup>	
Eu-150	(long lived isotope)	$7  10^{11}$	
Eu-150	(short lived isotope)	7 10 <sup>11</sup>	
Eu-152		1 10 <sup>12</sup>	
Eu-152m		8 10 <sup>11</sup>	
Eu-154		6 10 <sup>11</sup>	
Eu-155		3 10 <sup>12</sup>	
Eu-156		$7 \ 10^{11}$	
Fluorine			
F-18		6 10 <sup>11</sup>	
Gadolinium			
Gd-146	(see note 1)	5 10 <sup>11</sup>	
Gd-148		2 10 <sup>9</sup>	

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Gd-153		9 10 <sup>12</sup>
Gd-159		6 10 <sup>11</sup>
Gallium		
Ga-67		3 10 <sup>12</sup>
Ga-68		5 10 <sup>11</sup>
Ga-72		4 10 <sup>11</sup>
Germanium		
Ge-68	(see note 1)	5 10 <sup>11</sup>
Ge-71		4 10 <sup>13</sup>
Ge-77		3 10 <sup>11</sup>
Gold		
Au-193		2 10 <sup>12</sup>
Au-194		1 10 <sup>12</sup>
Au-195		6 10 <sup>12</sup>
Au-198		6 10 <sup>11</sup>
Au-199		6 10 <sup>11</sup>
Hafnium		
Hf-172	(see note 1)	6 10 <sup>11</sup>
Hf-175		3 10 <sup>12</sup>
Hf-181		5 10 <sup>11</sup>
Hf-182		unlimited
Holmium		
Но-166		4 10 <sup>11</sup>
Ho-166m		5 10 <sup>11</sup>
Hydrogen		

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of  $O_3$ , UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
H-3		4 10 <sup>13</sup>
Indium		
In-111		3 10 <sup>12</sup>
In-113m		$2 \ 10^{12}$
In-114m	(see note 1)	5 10 <sup>11</sup>
In-115m		$1 \ 10^{12}$
Iodine		
I-123		$3 \ 10^{12}$
I-124		$1 \ 10^{12}$
I-125		$3 \ 10^{12}$
I-126		$1 \ 10^{12}$
I-129		unlimited
I-131		$7 \ 10^{11}$
I-132		$4 \ 10^{11}$
I-133		6 10 <sup>11</sup>
I-134		3 10 <sup>11</sup>
I-135	(see note 1)	6 10 <sup>11</sup>
Iridium		
Ir-189	(see note 1)	$1 \ 10^{13}$
Ir-190		$7 \ 10^{11}$
Ir-192		6 10 <sup>11</sup>
Ir-194		3 10 <sup>11</sup>
Iron		
Fe-52	(see note 1)	3 10 <sup>11</sup>
Fe-55		4 10 <sup>13</sup>

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Fe-59		9 10 <sup>11</sup>
Fe-60	(see note 1)	2 10 <sup>11</sup>
Krypton		
Kr-81		$4 \ 10^{13}$
Kr-85		$1 \ 10^{13}$
Kr-85m		$3 \ 10^{12}$
Kr-87		$2 \ 10^{11}$
Lanthanum		
La-137		6 10 <sup>12</sup>
La-140		$4 \ 10^{11}$
Lead		
Pb-201		$1 \ 10^{12}$
Pb-202		$2 \ 10^{13}$
Pb-203		$3 \ 10^{12}$
Pb-205		unlimited
Pb-210	(see note 1)	$5 \ 10^{10}$
Pb-212	(see note 1)	$2 \ 10^{11}$
Lutetium		
Lu-172		6 10 <sup>11</sup>
Lu-173		8 10 <sup>12</sup>
Lu-174		9 10 <sup>12</sup>
Lu-174m		$1 \ 10^{13}$
Lu-177		7 10 <sup>11</sup>
Magnesium		
Mg-28	(see note 1)	3 10 <sup>11</sup>

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

Changes to legislation: There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Manganese		
Mn-52		3 10 <sup>11</sup>
Mn-53		unlimited
Mn-54		$1 \ 10^{12}$
Mn-56		3 10 <sup>11</sup>
Mercury		
Hg-194	(see note 1)	$1 \ 10^{12}$
Hg-195m	(see note 1)	$7 \ 10^{11}$
Hg-197		1 10 <sup>13</sup>
Hg-197m		4 10 <sup>11</sup>
Hg-203		1 10 <sup>12</sup>
Molybdenum		
Mo-93		2 10 <sup>13</sup>
Mo-99	(see note 1)	6 10 <sup>11</sup>
Neodymium		
Nd-147		6 10 <sup>11</sup>
Nd-149		5 10 <sup>11</sup>
Neptunium		
Np-235		4 10 <sup>13</sup>
Np-236	(long lived isotope)	$2 \ 10^{10}$
Np-236	(short lived isotope)	2 10 <sup>12</sup>
Np-237		2 10 <sup>9</sup>
Np-239		4 10 <sup>11</sup>
Nickel		
Ni-59		unlimited

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Ni-63		3 10 <sup>13</sup>
Ni-65		4 10 <sup>11</sup>
Niobium		
Nb-93m		3 10 <sup>13</sup>
Nb-94		$7 \ 10^{11}$
Nb-95		$1 \ 10^{12}$
Nb-97		6 10 <sup>11</sup>
Nitrogen		
N-13		6 10 <sup>11</sup>
Osmium		
Os-185		$1 \ 10^{12}$
Os-191		$2 \ 10^{12}$
Os-191m		3 10 <sup>13</sup>
Os-193		6 10 <sup>11</sup>
Os-194	(see note 1)	3 10 <sup>11</sup>
Palladium		
Pd-103	(see note 1)	4 10 <sup>13</sup>
Pd-107		unlimited
Pd-109		5 10 <sup>11</sup>
Phosphorus		
P-32		5 10 <sup>11</sup>
P-33		$1 \ 10^{12}$
Platinum		
Pt-188	(see note 1)	8 10 <sup>11</sup>
Pt-191		3 10 <sup>12</sup>

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of  $O_3$ , UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

Changes to legislation: There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)	
Pt-193		4 10 <sup>13</sup>	
Pt-193m		5 10 <sup>11</sup>	
Pt-195m		5 10 <sup>11</sup>	
Pt-197		6 10 <sup>11</sup>	
Pt-197m		6 10 <sup>11</sup>	
Plutonium			
Pu-236		3 10 <sup>9</sup>	
Pu-237		2 10 <sup>13</sup>	
Pu-238		1 10 <sup>9</sup>	
Pu-239		1 10 <sup>9</sup>	
Pu-240		1 10 <sup>9</sup>	
Pu-241	(see note 1)	$6 \ 10^{10}$	
Pu-242		1 10 <sup>9</sup>	
Pu-244	(see note 1)	1 10 <sup>9</sup>	
Polonium			
Po-210		$2 \ 10^{10}$	
Potassium			
K-40		9 10 <sup>11</sup>	
K-42		2 10 <sup>11</sup>	
K-43		6 10 <sup>11</sup>	
Praseodymium			
Pr-142		4 10 <sup>11</sup>	
Pr-143		6 10 <sup>11</sup>	
Promethium			
Pm-143		3 10 <sup>12</sup>	

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Pm-144		$7  10^{11}$
Pm-145		$1 \ 10^{13}$
Pm-147		$2 \ 10^{12}$
Pm-148m	(see note 1)	7 10 <sup>11</sup>
Pm-149		6 10 <sup>11</sup>
Pm-151		6 10 <sup>11</sup>
Protactinium		
Pa-230	(see note 1)	$7  10^{10}$
Pa-231		$4  10^8$
Pa-233		$7 \ 10^{11}$
Radium		
Ra-223	(see note 1)	7 10 <sup>9</sup>
Ra-224	(see note 1)	$2  10^{10}$
Ra-225	(see note 1)	4 10 <sup>9</sup>
Ra-226	(see note 1)	3 10 <sup>9</sup>
Ra-228	(see note 1)	$2  10^{10}$
Radon		
Rn-222	(see note 1)	4 10 <sup>9</sup>
Rhenium		
Re-184		$1 \ 10^{12}$
Re-184m		$1 \ 10^{12}$
Re-186		6 10 <sup>11</sup>
Re-187		unlimited
Re-188		4 10 <sup>11</sup>
Re-189	(see note 1)	6 10 <sup>11</sup>

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Re-natural		unlimited
Rhodium		
Rh-99		$2 \ 10^{12}$
Rh-101		3 10 <sup>12</sup>
Rh-102		5 10 <sup>11</sup>
Rh-102m		$2 \ 10^{12}$
Rh-103m		$4  10^{13}$
Rh-105		8 10 <sup>11</sup>
Rubidium		
Rb-81		8 10 <sup>11</sup>
Rb-83	(see note 1)	$2 \ 10^{12}$
Rb-84		$1 \ 10^{12}$
Rb-86		5 10 <sup>11</sup>
Rb-87		unlimited
Rb-natural		unlimited
Ruthenium		
Ru-97		5 10 <sup>12</sup>
Ru-103	(see note 1)	$2 \ 10^{12}$
Ru-105		6 10 <sup>11</sup>
Ru-106	(see note 1)	$2 \ 10^{11}$
Samarium		
Sm-145		1 10 <sup>13</sup>
Sm-147		unlimited
Sm-151		$1  10^{13}$
Sm-153		6 10 <sup>11</sup>

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Scandium		
Sc-44		5 10 <sup>11</sup>
Sc-46		5 10 <sup>11</sup>
Sc-47		7 10 <sup>11</sup>
Sc-48		3 10 <sup>11</sup>
Selenium		
Se-75		3 10 <sup>12</sup>
Se-79		2 10 <sup>12</sup>
Silicon		
Si-31		6 10 <sup>11</sup>
Si-32		5 10 <sup>11</sup>
Silver		
Ag-105		$2 \ 10^{12}$
Ag-108m	(see note 1)	7 10 <sup>11</sup>
Ag-110m	(see note 1)	4 10 <sup>11</sup>
Ag-111		6 10 <sup>11</sup>
Sodium		
Na-22		5 10 <sup>11</sup>
Na-24		$2 \ 10^{11}$
Strontium		
Sr-82	(see note 1)	$2 \ 10^{11}$
Sr-85		$2 \ 10^{12}$
Sr-85m		5 10 <sup>12</sup>
Sr-87m		3 10 <sup>12</sup>
Sr-89		6 10 <sup>11</sup>

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Sr-90	(see note 1)	3 10 <sup>11</sup>
Sr-91	(see note 1)	3 10 <sup>11</sup>
Sr-92	(see note 1)	3 10 <sup>11</sup>
Sulphur		
S-35		3 10 <sup>12</sup>
Tantalum		
Ta-178	(long lived isotope)	8 10 <sup>11</sup>
Ta-179		3 10 <sup>13</sup>
Ta-182		5 10 <sup>11</sup>
Technetium		
Tc-95m	(see note 1)	$2 \ 10^{12}$
Tc-96		4 10 <sup>11</sup>
Tc-96m	(see note 1)	4 10 <sup>11</sup>
Tc-97		unlimited
Tc-97m		1 10 <sup>12</sup>
Tc-98		$7 \ 10^{11}$
Tc-99		9 10 <sup>11</sup>
Tc-99m		4 10 <sup>12</sup>
Tellurium		
Te-121		$2 \ 10^{12}$
Te-121m		3 10 <sup>12</sup>
Te-123m		1 10 <sup>12</sup>
Te-125m		9 10 <sup>11</sup>
Te-127		7 10 <sup>11</sup>
Te-127m	(see note 1)	5 10 <sup>11</sup>

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Te-129		6 10 <sup>11</sup>
Te-129m	(see note 1)	$4 \ 10^{11}$
Te-131m	(see note 1)	5 10 <sup>11</sup>
Te-132	(see note 1)	4 10 <sup>11</sup>
Terbium		
Tb-157		4 10 <sup>13</sup>
Tb-158		$1 \ 10^{12}$
Tb-160		6 10 <sup>11</sup>
Thallium		
T1-200		9 10 <sup>11</sup>
Tl-201		4 10 <sup>12</sup>
Tl-202		$2 \ 10^{12}$
Tl-204		7 10 <sup>11</sup>
Thorium		
Th-227		5 109
Th-228	(see note 1)	$1 \ 10^9$
Th-229		5 10 <sup>8</sup>
Th-230		1 10 <sup>9</sup>
Th-231		$2 \ 10^{10}$
Th-232		unlimited
Th-234	(see note 1)	3 10 <sup>11</sup>
Th-natural		unlimited
Thulium		
Tm-167		8 10 <sup>11</sup>
Tm-170		6 10 <sup>11</sup>

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of  $O_3$ , UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Tm-171		4 10 <sup>13</sup>
Tin		
Sn-113	(see note 1)	2 10 <sup>12</sup>
Sn-117m		4 10 <sup>11</sup>
Sn-119m		3 10 <sup>13</sup>
Sn-121m	(see note 1)	9 10 <sup>11</sup>
Sn-123		6 10 <sup>11</sup>
Sn-125		4 10 <sup>11</sup>
Sn-126	(see note 1)	4 10 <sup>11</sup>
Titanium		
Ti-44	(see note 1)	4 10 <sup>11</sup>
Tungsten		
W-178	(see note 1)	5 10 <sup>12</sup>
W-181		3 10 <sup>13</sup>
W-185		8 10 <sup>11</sup>
W-187		6 10 <sup>11</sup>
W-188	(see note 1)	3 10 <sup>11</sup>
Uranium		
U-230	(fast lung absorption, see notes 1 and 2)	1 10 <sup>11</sup>
U-230	(medium lung absorption see notes 1 and 3)	4 10 <sup>9</sup>
U-230	(slow lung absorption, see notes 1 and 4)	3 10 <sup>9</sup>
U-232	(fast lung absorption, see note 2)	$1  10^{10}$

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
U-232	(medium lung absorption, see note 3)	7 10 <sup>9</sup>
U-232	(slow lung absorption, see note 4)	1 10 <sup>9</sup>
U-233	(fast lung absorption, see note 2)	9 10 <sup>10</sup>
U-233	(medium lung absorption, see note 3)	2 10 <sup>10</sup>
U-233	(slow lung aborption, see note 4)	6 10 <sup>9</sup>
U-234	(fast lung absorption, see note 2)	9 10 <sup>10</sup>
U-234		$2 \ 10^{10}$
U-234	(medium lung absorption, see note 3)	6 10 <sup>9</sup>
U-235	(slow lung absorption, see note 4)	unlimited
U-236	(all lung absorption types, see notes 1, 2, 3 and 4)	unlimited
U-236	(fast lung absorption, see note 2)	2 10 <sup>10</sup>
U-236	(medium lung absorption, see note 3)	6 10 <sup>9</sup>
U-238	(slow lung absorption, see note 4)	unlimited
U-natural	(all lung absorption types, see notes 2, 3 and 4)	unlimited
U (enriched to 20% or less)		unlimited
U-depleted	(see note 5)	unlimited
Vanadium		

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
V-48		4 10 <sup>11</sup>
V-49		4 10 <sup>13</sup>
Xenon		
Xe-122	(see note 1)	4 10 <sup>11</sup>
Xe-123		7 10 <sup>11</sup>
Xe-127		$2 \ 10^{12}$
Xe-131m		4 10 <sup>13</sup>
Xe-133		1 10 <sup>13</sup>
Xe-135		2 10 <sup>12</sup>
Ytterbium		
Yb-169		$1 \ 10^{12}$
Yb-175		<b>9</b> 10 <sup>11</sup>
Yttrium		
Y-87	(see note 1)	1 10 <sup>12</sup>
Y-88		4 10 <sup>11</sup>
Y-90		3 10 <sup>11</sup>
Y-91		6 10 <sup>11</sup>
Y-91m		$2 \ 10^{12}$
Y-92		2 10 <sup>11</sup>
Y-93		3 10 <sup>11</sup>
Zinc		
Zn-65		2 10 <sup>12</sup>
Zn-69		6 10 <sup>11</sup>
Zn-69m	(see note 1)	6 10 <sup>11</sup>
Zirconium		

Zirconium

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of  $O_3$ , UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

Radionuclide name, symbol	Radionuclide form	Quantity (Bq)
Zr-88		3 10 <sup>12</sup>
Zr-93		unlimited
Zr-95	(see note 1)	8 10 <sup>11</sup>
Zr-97	(see note 1)	$4  10^{11}$
Other radionuclides not listed above where only beta or gamma emitting nuclides are known to be present	(see note 6)	2 10 <sup>10</sup>
Other radionuclides not listed above where alpha emitting nuclides are known to be present or no relevant data are available	(see note 6)	9 10 <sup>7</sup>

Note 1: Values include contributions from daughter nuclides with half-lives less than 10 days.

Note 2: These values apply only to compounds of uranium that take the chemical form of  $UF_6$ ,  $UO_2F_2$  and  $UO_2(NO_3)_2$  in both normal and accident conditions of transport.

Note 3: These values apply only to compounds of uranium that take the chemical form of O<sub>3</sub>, UF<sub>4</sub>, UCl<sub>4</sub> and hexavalent compounds other than those specified in Note 2 above in both normal and accident conditions of transport.

Note 4: These values apply to all compounds of uranium other than those specified in Notes 2 and 3 above.

Note 5: These values apply to unirradiated uranium only.

Note 6: In the case of radionuclides not specified elsewhere in this Part, the quantity specified in this entry is to be used unless the Executive has approved some other quantity for that radionuclide.

# PART II

## Quantity ratios for more than one radionuclide

1. For the purpose of regulation 3(3), the quantity ratio for more than one radionuclide is the sum of the quotients of the quantity of a radionuclide present  $Q_p$  divided by the quantity of that radionuclide specified in the appropriate column of Part I of this Schedule  $Q_{lim}$ , namely—



## **Commencement Information**

**I9** Sch. 4 Pt. II para. 1 in force at 20.9.2001, see reg. 1

2. In any case where the isotopic composition of a radioactive substance is not known or is only partially known, the quantity ratio for that substance shall be calculated by using the values specified in the appropriate column in Part I for "other radionuclides not listed above" for any radionuclide that has not been identified or where the quantity of a radionuclide is uncertain, unless the employer can show that the use of some other value is appropriate in the circumstances of a particular case, when he may use that value.

Commencement Information I10 Sch. 4 Pt. II para. 2 in force at 20.9.2001, see reg. 1

## SCHEDULE 5

Regulation 6(4)

## PARTICULARS TO BE INCLUDED IN AN ASSESSMENT REPORT

## **Commencement Information**

II1 Sch. 5 in force at 20.9.2001, see reg. 1

The following particulars are required to be included in an assessment report under regulation 6(4)-

- (a) the name and address of the operator or carrier;
- (b) the postal address of the premises where the radioactive substance will be processed, manufactured, used or stored, or where the facilities for processing, manufacture, use or storage exist or, in the case of transport, the postal address of the transport undertaking;
- (c) the date on which it is anticipated that the work with ionising radiation will commence or, if it has already commenced, a statement to that effect;
- (d) a general description of the premises or place including the geographical location, meteorological, geological, hydrographic conditions and, where material, the history of the premises, except that in the case of transport a general description shall be given of either—

(i) the starting and end points of the journey and transhipment points, or

- (ii) the criteria to be used for route selection;
- (e) in the case of an assessment by an operator, a description of any radioactive substance on the premises which is likely to exceed any quantity or mass specified in Schedule 2 or Schedule 3, as the case may be, which description shall where practicable include details of the radionuclides present and their likely maximum quantities;
- (f) in the case of an assessment by a carrier, a description of any radioactive substance which is likely to exceed any quantity or mass specified in Schedule 4 or Schedule 3, as the case may be, which description shall where practicable include details of the radionuclides present and their likely maximum quantities;
- (g) except in the case of an assessment relating to transport, a plan of the premises in question and a map of the environs to a scale large enough to enable the premises and any features which could affect the general risk in an emergency to be identified;
- (h) a diagram and description of any single plant or enclosed system containing more than the quantity or mass of any radioactive substance specified in Schedule 2 or Schedule 3, as the case may be, or, in the case of the transport of more than the quantity or mass of any radioactive substance specified in Schedule 4 or Schedule 3, as the case may be, the nature of the containment for the radioactive substance, the type of vehicle and the means of securing the load within or on the vehicle;
- (i) those factors which could precipitate a major release of any radioactive substance and the measures to be taken to prevent or control such release and information showing the maximum quantity of radioactive substance which, in the event of a major failure of containment, would be released to the atmosphere including, in respect of premises,

the identification of plant and other activities anywhere on the premises which could precipitate such release;

- (j) those factors which could precipitate a smaller but continuing release of any radioactive substance and the measures to be taken to prevent or control such releases to atmosphere;
- (k) those factors which could give rise to an incident involving the initiation of an unintended self-sustaining nuclear chain reaction or the loss of control of an intended self-sustaining nuclear chain reaction and, in either case, the measures to be taken to prevent or control any such incident;
- (1) information concerning the management systems and staffing arrangements by which the radioactive substance is controlled and by which the procedures are controlled;
- (m) except in the case of an assessment relating to transport, information about the size and distribution of the population in the vicinity of premises to which the report relates;
- (n) an assessment of the area which is likely to be affected by the dispersal of any radioactive substance as a result of any radiation emergency and the period of time over which such dispersal is likely to take place;
- (o) an assessment of the likely exposures to ionising radiation of any person or class of persons as a result of any radiation emergency; and
- (p) an assessment of the necessity for an emergency plan to be prepared by the operator or carrier.

## SCHEDULE 6

Regulation 6(5)

## FURTHER PARTICULARS THAT THE EXECUTIVE MAY REQUIRE

#### **Commencement Information**

I12 Sch. 6 in force at 20.9.2001, see reg. 1

A further assessment and report may be required under regulation 6(5) in respect of the following matters—

- (a) the analysis carried out to establish the likely consequences of any hazard, including the likely doses of ionising radiation to which members of the public might be exposed, and the probability of the occurrence of such hazard;
- (b) the number of persons whose health or safety might be affected by the hazard;
- (c) the management systems and staffing arrangements by which any hazard is to be or is controlled;
- (d) the safety systems, procedures and monitoring systems by which any hazard is to be or is controlled;
- (e) the qualifications, experience and training of staff concerned;
- (f) the design, construction, operation or maintenance of any equipment (including the incorporation of adequate safety or reliability features of such equipment) which is used for the purposes of intervention or which is used to control any hazard;
- (g) the design and operating documentation;
- (h) the design and operation of containment and pressure systems;
- (i) the protection of persons from the effects of loss of containment; and

(j) the procedures for the reporting of and learning from radiation emergencies.

## SCHEDULE 7

Regulations 7(2), 8(2) and 9(2)

## INFORMATION TO BE INCLUDED IN EMERGENCY PLANS

# PART I

## Information to be included in an operator's emergency plan

## **Commencement Information**

I13 Sch. 7 Pt. I in force at 20.9.2001, see reg. 1

The information referred to in regulation 7(2) is as follows—

- (a) the names or positions of persons authorised to set emergency procedures in motion and the person in charge of and co-ordinating the on-site mitigatory action;
- (b) the name or position of the person with responsibility for liaison with the local authority responsible for preparing the off-site emergency plan;
- (c) for reasonably foreseeable conditions or events which could be significant in bringing about a radiation emergency, a description of the action which should be taken to control the conditions or events and to limit their consequences, including a description of the safety equipment and the resources available;
- (d) the arrangements for limiting the risks to persons on the premises including how warnings are to be given and the actions persons are expected to take on receipt of a warning;
- (e) the arrangements for providing early warning of the incident to the local authority responsible for setting the off-site emergency plan in motion, the type of information which should be contained in an initial warning and the arrangements for the provision of more detailed information as it becomes available;
- (f) the arrangements for providing assistance with off-site mitigatory action; and
- (g) the arrangements for emergency exposures including the dose levels which have been determined as appropriate for the purposes of putting into effect the emergency plan.

# PART II

## Information to be included in a carrier's emergency plan

#### **Commencement Information**

II4 Sch. 7 Pt. II in force at 20.9.2001, see reg. 1

The information referred to in regulation 8(2) is as follows—

(a) the names or positions of persons authorised to set emergency procedures in motion and the person in charge of and co-ordinating the mitigatory action;

- (b) for reasonably foreseeable conditions or events which could be significant in bringing about a radiation emergency, a description of the action which should be taken to control the conditions or events and to limit their consequences, including a description of the safety equipment and the resources available;
- (c) the arrangements for providing early warning of the incident, the type of information which should be contained in an initial warning and the arrangements for the provision of more detailed information as it becomes available; and
- (d) the arrangements for emergency exposures including the dose levels which have been determined as appropriate for the purposes of putting into effect the emergency plan.

# PART III

## Information to be included in an off-site emergency plan

## **Commencement Information**

I15 Sch. 7 Pt. III in force at 20.9.2001, see reg. 1

The information referred to in regulation 9(2) is as follows-

- (a) the names or positions of persons authorised to set emergency procedures in motion and of persons authorised to take charge of and co-ordinate the off-site mitigatory action;
- (b) the arrangements for receiving early warning of incidents, and alert and call-out procedures;
- (c) the arrangements for co-ordinating resources necessary to implement the off-site emergency plan;
- (d) the arrangements for providing assistance with on-site mitigatory action;
- (e) the arrangements for off-site mitigatory action;
- (f) the arrangements for providing the public with specific information relating to the emergency and the behaviour which it should adopt; and
- (g) the arrangements for emergency exposures including the dose levels which have been determined as appropriate for the purposes of putting into effect the emergency plan.

SCHEDULE 8

Regulations 7(4) and (5), 8(5) and (6) and 9(10) and (11)

## PRINCIPLES AND PURPOSES OF INTERVENTION

# PART I

## Principles to which emergency plans shall have regard

Commencement Information I16 Sch. 8 Pt. I in force at 20.9.2001, see reg. 1

An emergency plan drawn up pursuant to regulation 7, 8 or 9 respectively shall, in so far as it applies to any radiation emergency, be drawn up having regard to the following principles—

- (a) the intervention shall be undertaken only if the reduction in the detriment due to the radiation resulting from the radiation emergency is sufficient to justify the harm and costs, including the social costs, of the intervention; and
- (b) the form, scale and duration of the intervention shall be carried out in such a way as to ensure that exposures to radiation are kept as low as is reasonably practicable so that the benefit of the reduction in health detriment less the detriment associated with the intervention will be maximised.

# **PART II**

## **Purposes of intervention**

Comm	nencement Information
I17	Sch. 8 Pt. II in force at 20.9.2001, see reg. 1

The purposes of intervention referred to in regulations 7(5), 8(6) and regulation 9(11) are—

- (a) reducing or stopping at source direct radiation and the emission of radionuclides;
- (b) reducing the transfer of radioactive substances to individuals from the environment; and
- (c) reducing the exposure and organising the treatment of persons who have been subject to exposure to radiation.

## SCHEDULE 9

Regulation 16(1)

## PRIOR INFORMATION TO BE SUPPLIED AND MADE PUBLICLY AVAILABLE

1. Basic facts about radioactivity and its effects on persons and on the environment.

## **Commencement Information**

I18 Sch. 9 para. 1 in force at 20.9.2001, see reg. 1

**2.** The various types of radiation emergency covered and their consequences for the general public and the environment.

## **Commencement Information**

**I19** Sch. 9 para. 2 in force at 20.9.2001, see reg. 1

**3.** Emergency measures envisaged to alert, protect and assist the general public in the event of a radiation emergency.

## **Commencement Information**

I20 Sch. 9 para. 3 in force at 20.9.2001, see reg. 1

**4.** Appropriate information on action to be taken by the general public in the event of a radiation emergency.

## **Commencement Information**

I21 Sch. 9 para. 4 in force at 20.9.2001, see reg. 1

5. The authority or authorities responsible for implementing the emergency measures and action referred to in paragraphs 3 and 4 above.

## **Commencement Information**

I22 Sch. 9 para. 5 in force at 20.9.2001, see reg. 1

## SCHEDULE 10

Regulation 17(4)

## INFORMATION TO BE SUPPLIED IN THE EVENT OF A RADIATION EMERGENCY

**1.** Information on the type of emergency which has occurred, and, where possible, its characteristics, for example, its origin, extent and probable development.

#### **Commencement Information**

I23 Sch. 10 para. 1 in force at 20.9.2001, see reg. 1

**2.** Advice on health protection measures, which, depending on the type of emergency, might include—

- (a) any restrictions on the consumption of certain foodstuffs and water supply likely to be contaminated;
- (b) any basic rules on hygiene and decontamination;
- (c) any recommendation to stay indoors;
- (d) the distribution and use of protective substances;
- (e) any evacuation arrangements;
- (f) special warnings for certain population groups.

#### **Commencement Information**

I24 Sch. 10 para. 2 in force at 20.9.2001, see reg. 1

**3.** Any announcements recommending co-operation with instructions or requests by the competent authorities.

## **Commencement Information**

I25 Sch. 10 para. 3 in force at 20.9.2001, see reg. 1

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

**4.** Where an occurrence which is likely to give rise to a release of radioactivity or ionising radiation has happened but no release has yet taken place, the information and advice should include the following—

- (a) an invitation to tune in to radio or television;
- (b) preparatory advice to establishments with particular collective responsibilities; and
- (c) recommendations to occupational groups particularly affected.

Commencement Information 126 Sch. 10 para. 4 in force at 20.9.2001, see reg. 1

5. If time permits, information setting out the basic facts about radioactivity and its effects on persons and on the environment.

Commencement InformationI27Sch. 10 para. 5 in force at 20.9.2001, see reg. 1

## SCHEDULE 11

Regulation 21

## AMENDMENT OF REGULATIONS

The Fire Certificates (Special Premises) Regulations 1976

**1.** Paragraph 14 of Schedule 1 to the Fire Certificates (Special Premises) Regulations 1976(1) shall be deleted and the following substituted—

"**14.** Premises to which the Radiation (Emergency Preparedness and Public Information) Regulations 2001 apply by virtue of regulation 3 of those Regulations."

## **Commencement Information**

I28 Sch. 11 para. 1 in force at 20.9.2001, see reg. 1

## The Ionising Radiations Regulations 1999

2. The 1999 Regulations shall be amended in accordance with paragraphs 3 to 9.

## **Commencement Information**

I29 Sch. 11 para. 2 in force at 20.9.2001, see reg. 1

**3.** In regulation 21(3)(i), the word "to" shall be inserted before "maintain".

<sup>(</sup>**1**) S.I.1995/3163.

#### **Commencement Information**

I30 Sch. 11 para. 3 in force at 20.9.2001, see reg. 1

**4.** In regulation 35(1), after the words "these Regulations" there shall be inserted the words "or of the Radiation (Emergency Preparedness and Public Information) Regulations 2001.".

#### **Commencement Information**

I31 Sch. 11 para. 4 in force at 20.9.2001, see reg. 1

5. After regulation 35, there shall be inserted the following regulation—

## "Enforcement

**35A.** Insofar as any provision of regulation 21 is made under section 2(2) of the European Communities Act 1972, sections—

- (a) 16 to 21 (approval of codes of practice and enforcement);
- (b) 23 (provisions supplementary to sections 21 and 22) and 24 (appeal against improvement or prohibition notice), so far as they relate to an improvement notice;
- (c) 26 (power to indemnify inspectors); and
- (d) 33 to 42 (provisions as to offences),

of the Health and Safety at Work etc. Act 1974 shall apply to that provision as if that provision had been made under section 15 of that Act."

#### **Commencement Information**

I32 Sch. 11 para. 5 in force at 20.9.2001, see reg. 1

6. Paragraph (7) of regulation 36 shall be deleted and the following substituted—

"(7) Where a contravention of these Regulations by any person is due to the act or default of some other person, that other person shall be guilty of the offence which would, but for any defence under this regulation available to the first-mentioned person, be constituted by the act or default."

#### **Commencement Information**

**I33** Sch. 11 para. 6 in force at 20.9.2001, see reg. 1

7. In paragraph 6 of Schedule 4, after "trainee" there shall be inserted the words "referred to in paragraphs 1 or 3".

#### Commencement Information

I34 Sch. 11 para. 7 in force at 20.9.2001, see reg. 1

**8.** In paragraph 19 of Schedule 4, in place of "pursuant to regulation 11(2)" there shall be substituted "in accordance with regulation 11(1)".

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

## **Commencement Information**

I35 Sch. 11 para. 8 in force at 20.9.2001, see reg. 1

**9.** In column 1 of Schedule 8, under the entry for Ruthenium, in place of "Ru-160+", there shall be substituted "Ru-106+".

## **Commencement Information**

I36 Sch. 11 para. 9 in force at 20.9.2001, see reg. 1

## The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995

**10.** In Schedule 7 of the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995(2)—

- (a) "The Ionising Radiations Regulations 1985" shall be deleted and "The Ionising Radiations Regulations 1999" substituted; and
- (b) after the final entry there shall be added: "The Radiation (Emergency Preparedness and Public Information) Regulations 2001.".

## **Commencement Information**

I37 Sch. 11 para. 10 in force at 20.9.2001, see reg. 1

<sup>(2)</sup> S.I.1985/1333, revoked (subject to a saving) by regulation 41 of the Ionising Radiations Regulations 1999.

## **Changes to legislation:**

There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Any changes that have already been made by the team appear in the content and are referenced with annotations.

View outstanding changes

## Changes and effects yet to be applied to :

- Sch. 2 Pt. 1 column 3 word substituted by S.I. 2002/2099 Sch. 4 para. 8
- Sch. 2 Pt. 2 para. 2 words substituted by S.I. 2002/2099 Sch. 4 para. 9
- Sch. 4 Pt. 1 Note 3 word substituted by S.I. 2002/2099 Sch. 4 para. 10
- Sch. 5 para. (h) words omitted by S.I. 2007/1573 Sch. 8
- Sch. 11 para. 2-9 omitted by S.I. 2017/1075 Sch. 9 para. 5(6)
- Sch. 11 para. 10 revoked by S.I. 2013/1471 reg. 18(1)Sch. 4 Table 1
- Regulations revoked by S.I. 2019/703 reg. 27
- defn(s) appl by S.I. 2005/2042 reg 12(e)
- reg. 2(1) words inserted by S.I. 2002/2099 Sch. 4 para. 3(b)
  - reg. 2(1) words omitted by S.I. 2002/2099 Sch. 4 para. 3(a)
- reg. 2(1) words omitted by S.I. 2007/1573 Sch. 8
- reg. 2(1) words substituted by S.I. 2002/2469 Sch. 1 para. 95
- reg. 2(1) words substituted by S.I. 2004/568 Sch. 13 para. 11(2)
- reg. 2(1) words substituted by S.I. 2013/235 Sch. 2 para. 47(2)
- reg. 2(1) words substituted by S.I. 2017/1075 Sch. 9 para. 5(2)(a)
- reg. 2(1) words substituted by S.I. 2017/1075 Sch. 9 para. 5(2)(b)
- reg. 2(1) words substituted by S.I. 2017/1075 Sch. 9 para. 5(2)(c)
- reg. 2(1) words substituted by S.I. 2017/1075 Sch. 9 para. 5(2)(d)
- reg. 2(1) words substituted by S.I. 2017/1075 Sch. 9 para. 5(2)(e)
- reg. 2(1) words substituted by S.I. 2017/1075 Sch. 9 para. 5(2)(f)
- reg. 2(1) words substituted by S.I. 2018/269 Sch. para. 6(2)
- reg. 2(2)(a) and word omitted by S.I. 2007/1573 Sch. 8
- reg. 3(1) words substituted by S.I. 2002/2099 Sch. 4 para. 4(a)
- reg. 3(1)(b) omitted by S.I. 2007/1573 Sch. 8
- reg. 3(1)(c) words substituted by S.I. 2007/1573 Sch. 8
- reg. 3(3) words substituted by S.I. 2007/1573 Sch. 8
- reg. 3(4) words substituted by S.I. 2002/2099 Sch. 4 para. 4(b)
- reg. 3(4)(c) substituted by S.I. 2004/568 Sch. 13 para. 11(3)(a)
- reg. 3(4)(c) substituted by S.I. 2007/1573 Sch. 8
- reg. 3(4)(d) substituted by S.I. 2002/2099 Sch. 4 para. 4(c)
- reg. 3(4)(d) substituted by S.I. 2004/568 Sch. 13 para. 11(3)(b)
- reg. 3(4)(d) substituted by S.I. 2007/1573 Sch. 8
- reg. 3(4)(e) substituted by S.I. 2004/568 Sch. 13 para. 11(3)(c)
- reg. 3(4)(e) substituted by S.I. 2007/1573 Sch. 8
- reg. 3(4)(f) substituted by S.I. 2004/568 Sch. 13 para. 11(3)(d)
- reg. 3(4)(f) substituted by S.I. 2007/1573 Sch. 8
- reg. 4(3) words substituted by S.I. 2017/1075 Sch. 9 para. 5(3)
- reg. 7(7)(b) words substituted by S.I. 2017/1075 Sch. 9 para. 5(4)
- reg. 8(4) omitted by S.I. 2007/1573 Sch. 8
- reg. 8(7)(a) words omitted by S.I. 2007/1573 Sch. 8
- reg. 8(8)(b) words substituted by S.I. 2017/1075 Sch. 9 para. 5(4)
- reg. 13(3)(a)(i) words inserted by S.I. 2013/235 Sch. 2 para. 47(6)(a)
- reg. 13(3)(a)(i)(ii) words inserted by S.I. 2018/378 Sch. para. 20(d)
- reg. 13(3)(a)(ii) words omitted by S.I. 2007/1573 Sch. 8
- reg. 13(3)(a)(ii) words substituted by S.I. 2013/235 Sch. 2 para. 47(6)(b)
- reg. 15 words substituted by S.I. 2017/1075 Sch. 9 para. 5(5)
- reg. 18(3) words substituted by S.I. 2002/2099 Sch. 4 para. 5
- reg. 19 words substituted by S.I. 2002/2099 Sch. 4 para. 6

reg. 22 revoked by S.I. 2002/2099 Sch. 4 para. 7

# Changes and effects yet to be applied to the whole Instrument associated Parts and Chapters:

Whole provisions yet to be inserted into this Instrument (including any effects on those provisions):

- reg. 2(9A) added by S.I. 2005/2560 reg. 2(3)
- reg. 3(6) added by S.I. 2004/568 Sch. 13 para. 11(3)(e)
- reg. 3(6) substituted by S.I. 2007/1573 Sch. 8
- reg. 7(6)(aa)(ab) substituted for word by S.I. 2013/235 Sch. 2 para. 47(3)
- reg. 7(6)(ab) words inserted by S.I. 2018/378 Sch. para. 20(d)
- reg. 8(7)(aa) substituted for word by S.I. 2013/235 Sch. 2 para. 47(4)
- reg. 8(7)(aa) words inserted by S.I. 2018/378 Sch. para. 20(d)
- reg. 9(12)(aa)(ab) substituted for word by S.I. 2013/235 Sch. 2 para. 47(5)
- reg. 9(12)(ab) words inserted by S.I. 2018/378 Sch. para. 20(d)
- reg. 18A inserted by S.I. 2006/557 Sch. para. 10
- reg. 18A heading words substituted by S.I. 2015/1682 Sch. para. 10(f)
- reg. 18A words substituted by S.I. 2015/1682 Sch. para. 10(f)(i)
- reg. 18A(2)(aa) inserted by S.I. 2014/469 Sch. 3 para. 105(2)
- reg. 18B inserted by S.I. 2014/469 Sch. 3 para. 105(3)
- reg. 18B(2)(b) words substituted by S.I. 2015/1682 Sch. para. 10(f)(ii)