STATUTORY RULES OF NORTHERN IRELAND

2018 No. 116

RADIOACTIVE SUBSTANCES

ENVIRONMENTAL PROTECTION

The Radioactive Substances (Modification of Enactments) Regulations (Northern Ireland) 2018

Made - - - -	*10th May 2018*
Coming into operation -	*1st June 2018*

The Department of Agriculture, Environment and Rural Affairs(**a**) has been designated(**b**) for the purposes of section 2(2) of the European Communities Act 1972(**c**) in relation to the safety measures in regard to radioactive substances and the emission of ionising radiation, and measures relating to basic safety standards for health protection of the general public and workers against the dangers of ionising radiation.

The Department of Agriculture, Environment and Rural Affairs in exercise of powers conferred on it by that section and by sections 8(6), 8(7), 8(8), 15(2), 15(3), 45(1) and 45(2) of the Radioactive Substances Act 1993(**d**), which are now vested in it, hereby makes the following Regulations.

Citation and commencement

1.—(1) These Regulations may be cited as the Radioactive Substances (Modification of Enactments) Regulations (Northern Ireland) 2018 and shall come into operation on 1st June 2018.

(2) The Interpretation Act (Northern Ireland) 1954(**e**) shall apply to these Regulations as it applies to an Act of the Assembly.

PART 1

Radioactive Substances Activities

Amendment of the Radioactive Substances Act 1993

2.—(1) The Radioactive Substances Act 1993 is amended in accordance with paragraphs (2) to (8).

(**a**) The Department of the Environment was dissolved by section 1(9) of the Departments Act (Northern Ireland) 2016 and, by virtue of Article 8(1)(c) of the Departments (Transfer of Functions) Order (Northern Ireland) 2016, its functions for the purpose of these Regulations were transferred to the Department of Agriculture, Environment and Rural Affairs
(**b**) S.I. 1977 No. 1718 and S.I. 1991 No. 2289
(**c**) 1972 c.68
(**d**) 1993 c.12 as relevantly amended by S.R. 2003 No. 208, S.I. 2005 No. 2686 and S.R. 2011 No. 289
(**e**) 1954 c.33 (N.I.)

(2) In the Section headed Preliminary in so far as it extends to Northern Ireland—

(a) in section 1A (meaning of radioactive material) in the first line after "sections 1E, 1F,1G" insert ", 1GA";

(b) after section 1D (radionuclides not of natural terrestrial or cosmic origin) insert—

"**Dilution to reduce concentration of radioactivity: Northern Ireland**

1DA. For the purposes of section 1B, 1C and 1D, a substance or article is to be treated as having a concentration of radioactivity which exceeds the value referred to in section 1B(2), 1C(c)(i) or 1D(a), if a person has deliberately diluted the substance or article with the intention of ensuring that its concentration of radioactivity does not exceed that value."; and

(c) after section 1G (contaminated substances or articles) insert—

"**Historic radium contamination: Northern Ireland**

1GA. A substance or article is not radioactive material or radioactive waste where the substance or article arises from the remediation of land contaminated by radium and—

(a) the substance or article contains Ra-226 or its progeny;

(b) in the absence of Ra-226 or its progeny, the substance or article would not otherwise be radioactive material or radioactive waste under this section;

(c) the contamination occurred prior to 13 May 2000; and

(d) the concentration of Ra-226 and any progeny resulting from the decay of Ra-226 does not exceed the following values—

(i) for a substance or article which is a solid or a substance which is relevant a liquid, 1Bq/g;

(ii) for a substance which is any other liquid, 1Bq/l; or

(iii) for a substance which is a gas, 0.01 Bq/m^3.".

(3) After section 14 (accumulation of radioactive waste) insert—

"Radioactive waste: requirements to be imposed on persons authorised to dispose of and accumulate radioactive waste: Northern Ireland

14A.—(1) The chief inspector shall require a person who holds an authorisation to carry on the radioactive substances activity described in section 13(3) (disposal of radioactive waste) or section 14(2) (accumulation of radioactive waste) to—

(a) achieve and maintain an optimal level of protection of members of the public;

(b) accept into service adequate equipment and procedures for measuring and assessing exposure of members of the public and radioactive contamination of the environment;

(c) check the effectiveness and maintenance of equipment as referred to in paragraph (b) and ensure the regular calibration of measuring instruments; and

(d) seek advice from a radioactive waste adviser in the performance of the tasks referred to in paragraphs (a), (b) and (c).

(2) In this section "radioactive waste adviser" means a person with the knowledge, training and experience needed to give radioactive waste management and environmental radiation protection advice in relation to radioactive waste in order to ensure the effective protection of members of the public, and whose competence in that respect is recognised by the chief inspector.".

(4) In section 16 (grant of authorisations) in so far as it extends to Northern Ireland after subsection (8) insert—

"(8A) In exercising the functions under this Act in relation to radioactive material and radioactive waste, the chief inspector shall observe the requirements of Article 30(4) of the Basic Safety Standards Directive(**a**).

(8B) This subsection applies where the chief inspector is exercising functions under this Act in relation to radioactive substances activity where there are no radioactive discharges specified in conditions in the authorisation—

(a) the chief inspector shall impose appropriate conditions in the authorisation concerning—

(i) the monitoring, or the evaluation, of radioactive airborne or aqueous discharges into the environment; and

(ii) the reporting to the chief inspector of the results of such monitoring or evaluation;

(b) for the purposes of this subsection, where the chief inspector is exercising functions under this Act in relation to a nuclear power station or nuclear reprocessing plant, the conditions imposed in the authorisation shall require the monitoring of radioactive discharges and reporting to the chief inspector of such information on radioactive discharges as the appropriate Minister directs; and

(c) notification and recording of significant events to ensure compliance with Article 96 of the Basic Safety Standards Directive.".

(5) In section 17A (review of authorisations) in so far as it extends to Northern Ireland—

(a) in the title, after "authorisations", insert "and inspection of premises authorised in this Act";

(b) at the end of subsection 1(a) omit "and";

(c) at the end of subsection 1(b) omit "." and insert ";";

(d) following subsection 1(b) insert—

"(c) shall make appropriate periodic inspections of premises for which an authorisation was granted in accordance with section 13 or 14 of this Act; and

(d) when establishing an inspection programme for the purposes of subparagraph (1)(c) in relation to radioactive substances activities, shall take into account the potential magnitude and nature of the hazard associated with such activities, a general assessment of radiation protection issues in the activities, and the state of compliance with the requirements of this Act.".

(e) after subsection (1), insert—

"(1A) Where the chief inspector makes an inspection of an undertaking that is a radioactive substances activity, the chief inspector shall—

(a) record the findings of that inspection; and

(b) communicate those findings to the operator of the authorised premises.".

(6) In section 30A (recovery and disposal of orphan sources) in so far as it extends to Northern Ireland in subsection (1) after ", to" insert "control and".

(7) In section 47 (general interpretation provisions) in so far as it relates to Northern Ireland—

(a) in subsection (1)—

(i) at the appropriate alphabetical place insert—

""the Basic Safety Standards Directive" means Council Directive 2013/59/EURATOM laying down basic safety standards for protection against the dangers arising from the exposure to ionising radiation and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom;";

(**a**) O.J. L 13, 17.01.2014, p.1.

(ii) for the definition of "the appropriate Minister" substitute—

""the appropriate Minister" means, in relation to Northern Ireland, the Department of Agriculture, Environment and Rural Affairs;";

(iii) omit the definition for "the HASS Directive";

(iv) omit the definition of "high-activity source";

(v) after the definition of "the appropriate Minister" insert—

""high-activity sealed source" means a sealed source for which the activity of the contained radionuclide is equal to or exceeds the relevant activity value laid down in Annex III of the Basic Safety Standards Directive;";

(vi) for the definition of "orphan source" substitute—

""orphan source" has the same meaning as in the Basic Safety Standards Directive; ";

(vii) after the definition of "waste" insert—

"(1A) Any reference to "the HASS Directive" in this Act shall be deemed to be a reference to the Basic Safety Standards Directive.

(1B) Any reference to "high-activity source" in this Act shall be deemed to be a reference to "high-activity sealed source".";

(b) in subsection (5A) for "Council Directive 96/29/EURATOM" substitute "Council Directive 2013/59/EURATOM";

(c) for subsection (6) substitute —

"In the application of this section to Northern Ireland, the reference in subsection (2) to the Secretary of State shall have effect as a reference to the Department of Agriculture, Environment and Rural Affairs.".

(8) In Schedule 1A (tables of NORM industrial activities, radionuclides and summation rules) in so far as it relates to Northern Ireland—

(a) in Table 1, NORM Industrial Activities, in Part 2, after the row "China clay extraction" insert a further row called "Geothermal energy production";

(b) for Table 2 (concentration of radionuclides: NORM industrial activities) substitute—

"**Table 2**

Concentration of radionuclides: NORM industrial activities

Radionuclide	*Solid or relevant liquid concentration in becquerels per gram (Bq/g)*	*Any other liquid concentration in becquerels per litre (Bq/l)*	*Gaseous concentration in becquerels per cubic metre (Bq/m^3)*
U-238sec	1	0.1	0.001
U-238+	5	10	0.01
U-234	5	10	0.01
Th-230	10	10	0.001
Ra-226+	1	1	0.1
Pb-210+	5	0.1	0.1
Po-210	5	0.1	0.1
U-235sec	1	0.1	0.0001
U-235+	5	10	0.01
Pa-231	5	1	0.001
Ac-227+	1	0.1	0.001
Th-232sec	1	0.1	0.001
Th-232	5	10	0.001
Ra228+	1	0.1	0.01
Th-228+	1	1	0.001"

(c) for Table 3 (concentration of radionuclides) substitute—

"**Table 3**

Concentration of radionuclides

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
H-3	10^2
Be-7	10
C-14	10
F-18	10
Na-22	0.1
Na-24	1
Si-31	10^3
P-32	10^3
P-33	10^3
S-35	10^2
CI-36	1
CI-38	10
K-42	10^2
K-43	10
Ca-45	10^2
Ca-47	10
Sc-46	0.1
Sc-47	10^2
Sc-48	1
V-48	1
Cr-51	10^2
Mn-51	10
Mn-52	1
Mn-52m	10
Mn-53	10^2
Mn-54	0.1
Mn-56	10
Fe-52+	10
Fe-55	10^3
Fe-59	1
Co-55	10
Co-56	0.1
Co-57	1
Co-58	1
Co-58m	10^4
Co-60	0.1
Co-60m	10^3
Co-61	10^2
Co-62m	10
Ni-59	10^2
Ni-63	10^2
Ni-65	10
Cu-64	10^2
Zn-65	0.1
Zn-69	10^3
Zn-69m+	10

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Ga-72	10
Ge-71	10^4
As-73	10^3
As-74	10
As-76	10
As-77	10^3
Se-75	1
Br-82	1
Rb-86	10^2
Sr-85	1
Sr-85m	10^2
Sr-87m	10^2
Sr-89	10^3
Sr-90+	1
Sr-91+	10
Sr-92	10
Y-90	10^3
Y-91	10^2
Y-91m	10^2
Y-92	10^2
Y-93	10^2
Zr-93	10
Zr-95+	1
Zr-97+	10
Nb-93m	10
Nb-94	0.1
Nb-95	1
Nb-97+	10
Nb-98	10
Mo-90	10
Mo-93	10
Mo-99+	10
Mo-101+	10
Tc-96	1
Tc-96m	10^3
Tc-97	10
Tc-97m	10
Tc-99	1
Tc-99m	10^2
Ru-97	10
Ru-103+	1
Ru-105+	10
Ru-106+	0.1
Rh-103m	10^4
Rh-105	10^2
Pd-103+	10^3
Pd-109+	10^2
Ag-105	1
Ag-108m+	0.1
Ag-110m+	0.1
Ag-111	10
Cd-109+	1

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Cd-115+	10^2
Cd-115m+	10^2
In-111	10
In-113m	10^2
In-114m	10
In-115m	10^2
Sn-113+	1
Sn-125	10
Sb-122	10
Sb-124	1
Sb-125+	0.1
Te-123m	1
Te-125m	10^3
Te-127	10^3
Te-127m+	10
Te-129	10^2
Te-129m+	10
Te-131	10^2
Te-131m+	10
Te-132+	1
Te-133+	10
Te-133m+	10
Te-134	10
I-123	10^2
I-125	10^2
I-126	10
I-129	0.01
I-130	10
I-131+	10
I-132	10
I-133	10
I-134	10
I-135	10
Cs-129	10
Cs-131	10^3
Cs-132	10
Cs-134	0.1
Cs-134m	10^3
Cs-135	10^2
Cs-136	1
Cs-137+	1
Cs-138	10
Ba-131	10
Ba-140	1
La-140	1
Ce-139	1
Ce-141	100
Ce-143	10
Ce-144+	10
Pr-142	10^2
Pr-143	10^3
Nd-147	10^2

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Nd-149	10^2
Pm-147	10^3
Pm-149	10^3
Sm-151	10^3
Sm-153	10
Eu-152	0.1
Eu-152m	10
Eu-154	0.1
Eu-155	1
Gd-153	10
Gd-159	10^2
Tb-160	1
Dy-165	10^3
Dy-166	10^2
Ho-166	10^2
Er-169	10^3
Er-171	10^2
Tm-170	10^2
Tm-171	10^3
Yb-175	10^2
Lu-177	10^2
Hf-181	1
Ta-182	0.1
W-181	10
W-185	10^3
W-187	10
Re-186	10^3
Re-188	10^2
Os-185	10^3
Os-191	10^2
Os-191m	10^3
Os-193	10^2
Ir-190	1
Ir-192	1
Ir-194	10^2
Pt-191	10
Pt-193m	10^3
Pt-197	10^3
Pt-197m	10^2
Au-198	10
Au-199	10^2
Hg-197	10^2
Hg-197m	10^2
Hg-203	10
TI-200	10
TI-201	10^2
TI-202	10
TI-204	1
Pb-203	10
Pb-210+	0.01
Pb-212+	1
Bi-206	1

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Bi-207	0.1
Bi-210	10
Bi-212+	1
Po-203	10
Po-205	10
Po-207	10
Po-210	0.01
At-211	10^3
Ra-223+	1
Ra-224+	1
Ra-225	10
Ra-226+	0.01
Ra-227	10^2
Ra-228+	0.01
Ac-227+	0.01
Ac-228	1
Th-226+	10^3
Th-227	1
Th-228+	0.1
Th-229	0.1
Th-230	0.1
Th-231	10^2
Th-232	0.01
Th-232+	0.01
Th-232sec	0.01
Th-234+	10
Pa-230	10
Pa-231	0.01
Pa-233	10
U-230	10
U-231	10^2
U-232+	0.1
U-233	1
U-234	1
U-235+	1
U-235sec	0.01
U-236	10
U-237	10^2
U-238+	1
U-238sec	0.01
U-239	10^2
U-240+	10^2
Np-237+	1
Np-239	10^2
Np-240	10
Pu-234	10^3
Pu-235	10^2
Pu-236	1
Pu-237	10^2
Pu-238	0.1
Pu-239	0.1
Pu-240	0.1

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Pu-241	10
Pu-242	0.1
Pu-243	10^3
Pu-244+	0.1
Am-241	0.1
Am-242	10^3
Am-242m+	0.1
Am-243+	0.1
Cm-242	10
Cm-243	1
Cm-244	1
Cm-245	0.1
Cm-246	0.1
Cm-247+	0.1
Cm-248	0.1
Bk-249	10^2
Cf-246	10^3
Cf-248	1
Cf-249	0.1
Cf-250	1
Cf-251	0.1
Cf-252	1
Cf-253	10^2
Cf-253+	10^2
Cf-254	1
Es-253	10^2
Es-254+	0.1
Es-254m+	10
Fm-254	10^4
Fm-255	10^2
Any other solid or non-aqueous liquid radionuclide that is not of natural terrestrial or cosmic origin	0.01, unless the concentration which gives rise to the same 10 µSv/year dose criteria as used in column 2 of this table can be calculated by reference to the IAEA publication "Application of the Concepts of Exclusion, Exemption and Clearance" IAEA Safety Standards Series NO. RS-G-1.7."

Amendment of the Radioactive Substances Exemption (Northern Ireland) Order 2011

3.—(1) The Radioactive Substances Exemption (Northern Ireland) Order 2011(**a**) is amended in accordance with paragraphs (2) to (12).

(2) In Article 2(1) (interpretation)—

(a) at the appropriate alphabetical place insert—

""the Basic Safety Standards Directive" means Council Directive 2013/59/EURATOM laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation and repealing Directives 89/618/Euratom, 90/461/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom.;";

(b) after the definition of "gaseous tritium light device" insert—

""high-activity or similar source" means—

(**a**) S.R. 2011 No. 289

(a) a high-activity source, or

(b) such other sealed source which, in the opinion of the chief inspector, is of a similar level of potential hazard to a high-activity source;

"high-activity source" means a sealed source for which the activity of the contained radionuclide is equal to or exceeds the relevant activity value laid down in Annex III of the Basic Safety Standards Directive;";

(c) for the definition "sealed source" substitute—

""sealed source" has the same meaning as in the Basic Safety Standards Directive, excluding such a source where it is an electrodeposited source or a tritium foil source;"; and

(d) in the definition beginning "Table 1", after "Table 4," insert "Table 4A".

(3) In Article 3 (interpretation: NORM)—

(a) for paragraph (1), "NORM Waste" substitute—

"(1) In this Order "NORM waste" means a substance or article which—

(a) is solid radioactive waste under—

(i) section 1B; or

(ii) except where sub-paragraph (2) applies, section 1C where the waste arises from the remediation of land contaminated by radium;

(b) contains one or more of the radionuclides which are listed in column 1 of Table 4A;

(c) has a concentration of radioactivity that does not exceed the value specified in column 5 of Table 4A in respect of that radionuclide; and

(d) is not waste to which sub-paragraph (4) applies.";

(b) for paragraph (2) substitute—

"(2) Land is not contaminated under sub-paragraph (1)(a)(ii) unless the contamination occurred prior to 13 May 2000.";

(c) for paragraph (3) substitute—

"(3) In this Order—

(a) "type 1 NORM waste" means NORM waste which—

(i) has a concentration of radioactivity that does not exceed the value specified in column 2 of Table 4A; and

(ii) is not waste to which sub-paragraph (5) applies; and

(b) "type 2 NORM waste" means NORM waste which has a concentration of radioactivity that exceeds the value specified in column 2 of Table 4A.".

(d) after paragraph (3) insert—

"(4) This paragraph applies to waste where, prior to the disposal of that waste, a person has diluted it with the intention of ensuring that the concentration of radioactivity does not exceed the value specified in column 5 of Table 4A.

(5) This paragraph applies to waste where, prior to disposal of that waste, a person has diluted it with the intention of ensuring that the concentration of radioactivity does not exceed the value specified in column 2 of Table 4A.".

(4) In Article 6 (exemption from authorisation under section 14) in paragraph 2(a), after "high-activity" insert "or similar".

(5) In Article 7 (radioactive substances exempted under articles 5 and 6)—

(a) in paragraph (2) after "waste" insert "."; and omit "with a NORM waste concentration which is less than or equal to 10Bq/g.".

(6) In Article 9 (exemption from authorisation under section 14 for NORM waste)—

(a) in paragraph (1)—

(i) omit "Subject to paragraph (2),";

(ii) substitute "a" with "A"; and

(iii) after "waste" omit "with a NORM waste concentration that does not exceed 10Bq/g";

(b) omit paragraph (2).

(7) In Article 12 (solid radioactive waste)—

(a) in paragraph (1) for sub-paragraph (a) substitute—

"subject to paragraph (2)—

(i) solid radioactive waste described in an entry in column 1 of Table 3 which does not contain a concentration of radionuclides that exceeds the value specified in column 2 of that Table in respect of that kind of waste; or

(ii) a broken or damaged individual sealed source of the type described in the fourth entry in Table 6 (individual sealed sources which are solely radioactive waste because they contain tritium), which would not have exceeded that value specified in column 2 when the source was intact; or";

(b) in paragraph (2)—

(i) in sub-paragraph (b), after "waste" insert "." and omit "with a NORM waste concentration which is less than or equal to 10 Bq/g.".

(8) In Article 13 (conditions in respect of solid radioactive waste) in paragraph (2)(d), substitute "Annex II of the HASS Directive" with "Annex XIV of the Basic Safety Standards Directive".

(9) In Article 19 (exemption from authorisation under section 13 for NORM waste)—

(a) in paragraph (1), after "waste" omit "with a NORM waste concentration that does not exceed 10 Bq/g";

(b) in paragraph (2)—

(i) in sub-paragraph (a), after "NORM waste" omit "with a NORM waste concentration that does not exceed 5 Bq/g";

(ii) in sub-paragraph (a)(i), for "5 X 1010 Bq" substitute "the value specified in column 3 of Table 4A"; and

(iii) for sub-paragraph (b) substitute "the quantity of radionuclides exceeds the value specified in column 3 of Table 4A."

(c) in paragraph (3)—

(i) after "NORM waste" insert "."; and

(ii) omit "with a NORM waste concentration which exceeds 10 Bq/g.".

(10) After Article 19 (exemption from authorisation under section 13 for NORM waste) insert—

"Exemption for disposing of gaseous NORM waste from oil and gas production

19A. A person is exempt from authorisation under section 13 in respect of the disposal on premises of NORM waste where the only radioactive waste disposed of is gaseous NORM waste released in the production of oil and gas.".

(11) In Article 20 (conditions in respect of NORM waste)—

(a) for sub-paragraph (1)(c)(ii) substitute—

"(ii) by incineration (or transfer to a person for such incineration or treatment which is preparatory to the incineration of the waste), but not in respect of—

(aa) type 1 NORM waste, where in respect of the total amount of that waste that is incinerated (or transferred to a person for preparation or incineration) per year the quantity of radionuclides in the total amount of that waste exceeds the value in column 4 of Table 4A; or

(bb) type 2 NORM waste; or".

(12) In Schedule 1 (tables of radionuclides and descriptions of radioactive material and radioactive waste)—

(a) in Table 1 (radionuclides: values of quantities and concentrations), in the final row, in the second column, for "Health Protection Agency's" substitute "Public Health England";

(b) in Table 2 (radioactive material and accumulated radioactive waste: values of maximum quantities), in the final row, in the second column, for the words from "in respect" to the end substitute "2 x 10^8 Bq of all other radionuclides (no more than 1 x 10^8 Bq of which is contained in radioactive material)";

(c) after paragraph 3(b) following Table 4 (aqueous radioactive waste values) insert—

"**Table 4A**

NORM waste concentrations and maximum disposal quantities

Radionuclide	*Type 1 NORM concentration (Bq/g)*	*Type 1 NORM total activity for landfill (GBq/year)*	*Type 1 NORM total activity for incineration (MBq/year)*	*Type 2 NORM concentration (Bq/g)*
U-238sec	5	50	100	10
U-238+	5	50	100	10
U-234	5	50	100	10
Th-230	5	50	100	10
Ra-226+	5	50	100	10
Pb-210+	100	1000	100	200
Po-210	100	1000	100	200
U-235sec	5	50	100	10
U-235+	5	50	100	10
Pa-231	5	50	100	10
Ac-227+	5	50	100	10
Th-232sec	5	50	100	10
Th-232	5	50	100	10
Ra-228+	5	50	100	10

1. The summation rule in respect of columns 2 and 5 of Table 4A is the sum of the quotients A/B where—

(a) "A" means the concentration of each radionuclide listed in column 1 of Table 4A that is present in the substance or article; and

(b) "B" means the concentration of the radionuclide specified in column 2 or 5 (as appropriate) of Table 4A.

2. The summation rule in respect of columns 3 and 4 of Table 4A is the sum of the quotients C/D where—

(a) "C" means the quantity of each radionuclide listed in column 1 of Table 4A that is present in the substance or article; and

(b) "D" means the quantity of that radionuclide specified in column 3 or 4 (as appropriate) of Table 4A.".

(d) in Table 5 (radionuclides in secular equilibrium)—

(i) in the entry for Ra-226+—

(aa) after "Table 1 " insert "and Table 4A"; and

(bb) for "Pb-210, Bi-210, Po-210, Po-214" substitute "Po-214, Pb-210, Bi-210, Po-210"; and

(ii) in the entry for "U-238 sec" for Pb-210, Bi-210, Po-210, Po-214" substitute " Po-214, Pb-210, Bi-210, Po-210".

Amendment of the High-activity Sealed Radioactive Sources and Orphan Sources Regulations 2005

4.—(1) The High-activity Sealed Radioactive Sources and Orphan Sources Regulations 2005(**a**) for Northern Ireland purposes are amended in accordance with paragraphs (2) to (4).

(2) In regulation 2 (interpretation)—

(a) for the definition of "the Basic Safety Standards Directive" substitute—

""the Basic Safety Standards Directive" means Council Directive 2013/59/EURATOM laying down basic safety standards for protection against the dangers arising from the exposure to ionising radiation and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom;";

(b) omit the definition of "the HASS Directive";

(c) for the definition of "high-activity source" substitute—

""high-activity source" means a sealed source for which the activity of the contained radionuclide is equal to or exceeds the relevant activity value laid down in Annex III of the Basic Safety Standards Directive;";

(d) at the appropriate place insert—

""orphan source" has the same meaning as in the Basic Safety Standards Directive;

"sealed source" has the same meaning as in the Basic Safety Standards Directive;";

(e) after the definition of "sealed source" insert—

"(1A) Any reference to the "HASS Directive" in these regulations shall be deemed to be a reference to the Basic Safety Standards Directive.".

(3) After regulation 4 (variation of authorisations) insert—

"Exercise of the powers of the chief inspector

4A. In exercising the powers of the chief inspector in relation to a radioactive substances activity, as defined in sections 13 and 14 of the 1993 Act, the chief inspector shall comply with Articles 85, 86, 87, 89 and 91 of the Basic Safety Standards Directive.".

(4) For regulation 7 (records and inspections) substitute—

"Records and inspections

7. In relation to a high-activity source, the appropriate Agency or the chief inspector shall keep records of those matters —

(a) required by Article 90 of the Basic Safety Standards Directive; and

(b) notified to them under Article 91(1) of that Directive.".

Amendment of the Radioactive Substances (Basic Safety Standards) Regulations (Northern Ireland) 2003

5.—(1) The Radioactive Substances (Basic Safety Standards) Regulations (Northern Ireland) 2003(**b**) are amended in accordance with paragraphs (2) and (3)—

(2) in regulation 2 (interpretation)—

(a) at the appropriate place insert—

(**a**) S.I. 2005 No. 2686
(**b**) S.R. 2003 No. 208

""the Directive" means Council Directive 2013/59/EURATOM laying down basic safety standards for protection against the dangers arising from the exposure to ionising radiation and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom.".

(3) in regulation 3 (duty of Chief Inspector to observe requirements of the Directive)—

(a) in paragraph 1(b)—

(i) for "Article 13" substitute "Article 12"; and

(ii) for "Article 6(4)" substitute "Article 5(c);

(b) in paragraph 2(a) after "source" omit "from which radioactive discharges are first made after 1st May 2003";

(c) in paragraph (3)—

(i) for sub-paragraph "(a)" substitute—

"(a) when estimating effective dose and equivalent dose—

(i) from external exposure, chapters 4 and 5 of the International Commission for Radiological Protection Publication 116(**a**); and

(ii) from internal exposure, chapter 1 of the International Commission for Radiological Protection Publication 119(**b**); and";

(ii) in sub-paragraph (b)—

(aa) for "Article 45" substitute "Article 66"; and

(bb) after "Article 66" omit "; and" and substitute "."; and

(iii) omit sub-paragraph (c).

PART 2

Radioactive Contaminated Land

Amendment of the Radioactive Contaminated Land Regulations (Northern Ireland) 2006

6.—(1) The Radioactive Contaminated Land Regulations (Northern Ireland) 2006(**c**) are amended in accordance with regulations 2 and 3—

(2) In regulation 2 (interpretation)—

(a) for the definition of "the Department" substitute—

""the Department" means the Department of Agriculture, Environment and Rural Affairs;";

(b) for the definition of "the Directive" substitute—

""the Directive" means Council Directive 2013/59/EURATOM laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom;";

(c) for the definition of "exposure" substitute—

""exposure" means the act of exposing or condition of being exposed to ionising radiation emitted outside the body (external exposure) or within the body (internal exposure);";

(d) in the definition of "harm" for "a radiological emergency" substitute "an emergency";

(**a**) ICRP Publication 116
(**b**) ICRP Publication 119
(**c**) S.R. 2006 No.345 as amended by S.I. 2007 No.3236 and S.I. 2010 No.2145

(e) in the definition of "land contaminated by a nuclear occurrence"—

(i) in sub-paragraph (a) after "section 7," insert "7B,"; and

(ii) in sub-paragraph (b) after "so caused if," substitute—

"in section 7(1A)(b) or (1C)(b) of that Act, the words "other than licensee" or, in section 10(1)(b) of that Act, the words "other than the operator" had not been enacted;";

(iii) after sub-paragraph (b) insert—

"(ba) damage caused by preventative measures taken after a breach of duty imposed by section 7, 7B, 8, 9 or 10 of the 1965 Act in respect of which a claim for compensation may be made if section 11H(4) of that Act had not been enacted; or";

(iv) in sub-paragraph c(i) after "16(1)" insert —

", (1ZA), (1ZB), (2), (3B) or 3(C)";

(f) for the definition of "lasting exposure" after sub-paragraph (b)(iii) substitute—

"where the estimation of an effective dose is undertaken in accordance with Article 13 of the Directive;";

(g) in the definition for "substance" for "radiological emergency" substitute "an emergency".

(3) In regulation 3 (application of regulations in the implementation of Articles 48 and 53 of the Directive)—

(a) in the heading delete "Articles 48 and 53 of";

(b) in paragraph (2)—

(i) in sub-paragraph (b) after "arrangements are made" insert—

", including the establishment and implementation of strategies in accordance with Article 101 and Article 102 of the Directive,";

(ii) at the end of sub-paragraph (d) omit "." and substitute ";";

(iii) following sub-paragraph (d) insert—

"(e) affected members of the public are identified; and

(f) assessment of the means available to the individuals identified under section (e) for controlling their own exposure is made.";

(c) in paragraph (3), sub-paragraph (c) after "duration" insert—

"if the magnitude of individual doses, the likelihood of exposure and the number of individuals exposed are kept as low as reasonably achievable taking into account the current state of technical knowledge and economic and societal factors. ".

Sealed with the Official Seal of the Department of Agriculture, Environment and Rural Affairs on 10th May 2018

(L.S.)

John Mills
A senior officer of the
Department of Agriculture, Environment and Rural Affairs

EXPLANATORY NOTE

(This note is not part of the Order)

These Regulations are part of a package of measures to transpose Council Directive 2013/59/EURATOM laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation and repealing Council Directive 89/618/Euratom, 94/491/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom (the Basic Safety

Standards Directive)(**a**). Most of the transposition measures are being dealt with by amending or replacing existing statutory instruments. These regulations cover provisions in relation to planned public exposure situations and existing public exposure provisions by amending the Radioactive Substance Act 1993 Chapter 12(**b**), the Radioactive Substances Exemption (Northern Ireland) Order 2011(**c**), the High-activity Sealed Radioactive Sources and Orphan Sources Regulations 2005(**d**), the Radioactive Substances (Basic Safety Standards) Regulations (Northern Ireland) 2003(**e**) and the Radioactive Contaminated Land Regulations (Northern Ireland) 200(**f**)6.

Chapter 12 to the Radioactive Substances Act 1993 concerns radioactive substances activities. Where a radioactive substances activity is in scope (Section 1 of Chapter 12) authorisation is required unless an exemption under Articles 8, 11 or 15 applies. Amendments to the Radioactive Substances Act 1993 are set out in these Regulations.

These Regulations also amend existing references to and definitions from directives repealed by the Basic Safety Standards Directive.

Regulation 2 amends the Radioactive Substances Act 1993 Chapter 12.

Paragraph 2 adds a new provision prohibiting dilution; where the concentration of radioactivity in a substance or article is reduced by diluting it to make it out of scope of the Radioactive Substances Act 1993, it will remain in scope. It also add a new out of scope provision for historic radium contamination. Radioactive material or waste generated when contaminated land is remediated will be out of scope if the radium concentration is below the specified limit and the contamination occurred before 13 May 2000.

Paragraphs 3 to 5 inclusive impose certain duties on the chief inspector. Requirements are imposed in relation to the inspection programme the chief inspector establishes and the duty of the chief inspector to record and communicate inspection findings. The chief inspector shall require a person who holds an authorisation to undertake certain tasks and to seek advice on those tasks from a radioactive waste adviser. The chief inspector shall not allow the dilution of radioactive material for the purpose of it being released from regulatory control. The chief inspector shall require a person who holds an authorisation to monitor and report on authorised radioactive discharges. Where the monitoring relates to a nuclear power station or nuclear reprocessing plant, the chief inspector shall require monitoring in accordance with a direction issued by the appropriate Minister.

Paragraph 6 inserts a new requirement on the chief inspector to be prepared or have made provision for the control of any orphan source (that is, radiation source which should be but is not under regulatory control because, for example, it has been lost or stolen).

Paragraph 8 adds geothermal energy production to the list of NORM industrial activities (that is, industrial activities involving natural occurring radioactive material where the radioactivity is incidental to the activity) bringing such activity into the scope of the Radioactive Substances Act. In addition it replaces the table of concentration values for radionuclides arising from NORM industrial activities (Table 2). It also replaces the table of concentration of radionuclides, inserting new values for some radionuclides for the purposes of the definitions of radioactive material and waste (Table 3).

Regulation 3 amends the Radioactive Substances Exemption (Northern Ireland) Order 2011.

Paragraphs (2), (3), (5), (7)(b), (9) and (12) make a series of amendments to the definitions of Type 1 and Type 2 NORM waste for the purposes of exemptions for accumulating radioactive waste, disposing of solid radioactive waste and disposing of NORM waste. New radioactivity concentration limits are imposed (new Table 4A). Specific provision is made prohibiting dilution

(**a**) O.J. L.133, 17.01.2014, p.1.
(**b**) 1993 c.12 as relevantly amended by S.R. 2003 No. 208, S.I. 2005 No. 2686 and S.R. 2011 No. 289
(**c**) S.R. 2011 No. 289
(**d**) S.I. 2005 No. 2686
(**e**) S.R. 2003 No. 208
(**f**) S.R. 2006 No. 345 as relevantly amended by S.I. 2007 No. 3236 and S.I. 2010 No. 2145

for the purposes of reducing the concentration of radioactivity in waste to bring it within the NORM waste exemption.

Paragraph 7(a) inserts a new provision allowing the solid radioactive waste exemption to be claimed for broken sealed sources containing tritium (known as gaseous) tritium light devices.

Paragraph 10 inserts a new provision to create an exemption for the disposal of gaseous NORM waste released in oil and gas production (known as venting or flaring).

Regulation 4 amends the High-activity Sealed Radioactive Sources and Orphan Sources Regulations 2005

Paragraph 2 substitutes new definitions and in particular a new definition of high-activity sealed source, by reference to Annex III of the Basic Safety Standards Directive which sets out new radioactivity values for radionuclides contained in a sealed source.

Regulation 5 amends the Radioactive Substances (Basic Safety Standards) Regulations (Northern Ireland) 2003.

Paragraph 3 amends certain duties of the chief inspector to observe requirements of the Basic Safety Standards Directive and substitutes estimating effective dose and equivalent dose by reference to the International Commission for Radiological Protection Publications 116 and 119.

Regulation 6 amends the Radioactive Contaminated Land Regulations (Northern Ireland) 2006.

Paragraph 2 updates and substitutes new definitions.

Paragraph 3 inserts provision for the establishment and implementation of strategies, to include remedial and protective measures, to ensure appropriate management of existing exposure situations.

An updated transposition note is submitted with the Explanatory Memorandum which is available alongside the rule on www.legislation.gov.uk. A full impact assessment has not been produced for this rule as no, or no significant, impact on the private, voluntary or public sector is foreseen.

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