Chapter DHS 157

APPENDIX C

Limits for Broad Licenses

Radioactive Material	Type B License Column I curies	Type C License Column II curies	Radioactive Material	Type B License Column I curies	Type C License Column II curies
Antimony−122	1	0.01	Gadolinium−153	1	0.01
Antimony−124	1	0.01	Gadolinium−159	10	0.1
Antimony−125	1	0.01	Gallium−72	10	0.1
Arsenic−73	10	0.1	Germanium−71	100	1.0
Arsenic−74	1	0.01	Gold−198	10	0.1
Arsenic−76	1	0.01	Gold−199	10	0.1
Arsenic−77	10	0.1	Hafnium−181	1	0.01
Barium−131	10	0.1	Holmium−166	10	0.1
Barium−140	1	0.01	Hydrogen−3	100	1.0
Beryllium−7	10	0.1	Indium−113m	100	1.0
Bismuth−210	0.1	0.001	Indium−114m	1.0	0.01
Bromine−82	10	0.1	Indium−115m	100	1.0
Cadmium−109	1	0.01	Indium−115	1	0.01
Cadmium−115m	1	0.01	Iodine−125	0.1	0.001
Cadmium−115	10	0.1	Iodine−126	0.1	0.001
Calcium−45	1	0.01	Iodine−129	0.1	0.001
Calcium−47	10	0.1	Iodine−131	0.1	0.001
Carbon−14	100	1.0	Iodine−132	10	0.1
Cerium−141	10	0.1	Iodine−133	1.0	0.01
Cerium−143	10	0.1	Iodine−134	10	0.1
Cerium−144	0.1	0.001	Iodine−135	1.0	0.01
Cesium−131	100	1.0	Iridium−192	1.0	0.01
Cesium−134m	100	1.0	Iridium−194	10	0.1
Cesium−134	0.1	0.001	Iron−55	10	0.1
Cesium−135	1	0.01	Iron−59	1.0	0.01
Cesium−136	10	0.1	Krypton−85	100	1.0
Cesium−137	0.1	0.001	Krypton−87	10	0.1
Chlorine−36	1.0	0.01	Lanthanum−140	1.0	0.01
Chlorine−38	100	1.0	Lutetium−177	10	0.1
Chromium−51	100	1.0	Manganese−52	1.0	0.01
Cobalt−57	10	0.1	Manganese−54	1.0	0.01
Cobalt−58m	100	1.0	Manganese−56	10	0.1
Cobalt−58	1.0	0.01	Mercury−197m	10	0.1
Cobalt−60	0.1	0.001	Mercury−197	10	0.1
Copper−64	10	0.1	Mercury−203	1.0	0.01
Dysprosium−165	100	1.0	Molybdenum−99	10	0.1
Dysprosium−166	10	0.1	Neodymium−147	10	0.1
Erbium−169	10	0.1	Neodymium−149	10	0.1
Erbium−171	10	0.1	Nickel−59	10	0.1
Europium−152 (9.2 h)	10	0.1	Nickel−63	1.0	0.01
Europium−152 (13 y)	0.1	0.001	Nickel−65	10	0.1
Europium−154	0.1	0.001	Niobium−93m	1.0	0.01
Europium−155	1	0.01	Niobium−95	1.0	0.01
Fluorine−18	100	1.0	Niobium−97	100	1.0

Radioactive Material	Type B License Column I curies	Type C License Column II curies
Osmium−185	1.0	0.01
Osmium−191m	100	1.0
Osmium−191	10	0.1
Osmium−193	10	0.1
Palladium−103	10	0.1
Palladium−109	10	0.1
Phosphorus−32	1.0	0.01
Platinum−191	10	0.1
Platinum−193m	100	1.0
Platinum−193	10	0.1
Platinum−197m	100	1.0
Platinum−197	10	0.1
Polonium−210	0.01	0.0001
Potassium−42	1.0	0.01
Praseodymium−142	10	0.1
Praseodymium−143	10	0.1
Promethium−147	1.0	0.01
Promethium−149	10	0.1
Radium−226	0.01	0.0001
Rhenium−186	10	0.1
Rhenium−188	10	0.1
Rhodium−103m	1,000	10
Rhodium−105	10	0.1
Rubidium−86	1.0	0.01
Rubidium−87	1.0	0.01
Ruthenium−97	100	1.0
Ruthenium−103	1.0	0.01
Ruthenium−105	10	0.1
Ruthenium−106	0.1	0.001
Samarium−151	1.0	0.01
Samarium−153	10	0.1
Scandium−46	1.0	0.01
Scandium−47	10	0.1
Scandium−48	1.0	0.01
Selenium−75	1.0	0.01
Silicon−31	10	0.1
Silver−105	1.0	0.01
Silver−110m	0.1	0.001
Silver−111	10	0.1
Sodium−22	0.1	0.001
Sodium−24	1.0	0.01
Strontium−85m	1,000	10
Strontium−85	1.0	0.01
Strontium−89	1.0	0.01
Strontium−90	0.01	0.0001
Strontium−91	10	0.1
Strontium−92	10	0.1
Sulphur−35	10	0.1
Tantalum−182	1.0	0.01
Technetium−96	10	0.1
Technetium−97m	10	0.1
Technetium−97	10	0.1
Technetium−99m	100	1.0
Technetium−99	1.0	0.01
Tellurium−125m	1.0	0.01
Tellurium−127m	1.0	0.01
Tellurium−127	10	0.1
Tellurium−129m	1.0	0.01
Tellurium−129	100	1.0
Tellurium−131m	10	0.1
Tellurium−132	1.0	0.01
Terbium−160	1.0	0.01
Thallium−200	10	0.1
Thallium−201	10	0.1
Thallium−202	10	0.1
Thallium−204	1.0	0.01
Thulium−170	1.0	0.01
Thulium−171	1.0	0.01
Tin−113	1.0	0.01
Tin−125	1.0	0.01
Tungsten−181	1.0	0.01
Tungsten−185	1.0	0.01
Tungsten−187	10	0.1
Vanadium−48	1.0	0.01
Xenon−131m	1,000	10
Xenon−133	100	1.0
Xenon−135	100	1.0
Ytterbium−175	10	0.1
Yttrium−90	1.0	0.01
Yttrium−91	1.0	0.01
Yttrium−92	10	0.1
Yttrium−93	1.0	0.01
Zinc−65	1.0	0.01
Zinc−69m	10	0.1
Zinc−69	100	1.0
Zirconium−93	1.0	0.01
Zirconium−95	1.0	0.01
Zirconium−97	1.0	0.01
Any radioactive material other than source material, special nuclear material, or alpha emitting radioactive material not listed above.	0.1	0.001

Note 1: To convert curies (Ci) to SI units of gigabecquerels (GBq), multiply the above values by 37.

Example: Zirconium−97 (Col. II) (0.01 Ci multiplied by 37 is equivalent to 0.37 GBq).