

3701:1-40-22

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Appendix A

Byproduct Radioactive Material	Column I Type B		Column II Type C	
	GBq	Ci	GBq	Ci
Antimony-122	37	1	0.37	0.01
Antimony-124	37	1	0.37	0.01
Antimony-125	37	1	0.37	0.01
Arsenic-73	370	10	3.7	0.1
Arsenic-74	37	1	0.37	0.01
Arsenic-76	37	1	0.37	0.01
Arsenic-77	370	10	3.7	0.1
Barium-131	370	10	3.7	0.1
Barium-140	37	1	0.37	0.01
Beryllium-7	370	10	3.7	0.1
Bismuth-210	3.7	0.1	0.037	0.001
Bromine-82	370	10	3.7	0.1
Cadmium-109	37	1	0.37	0.01
Cadmium-115m	37	1	0.37	0.01
Cadmium-115	370	10	3.7	0.1
Calcium-45	37	1	0.37	0.01
Calcium-47	370	10	3.7	0.1
Carbon-14	3700	100	37	1
Cerium-141	370	10	3.7	0.1
Cerium-143	370	10	3.7	0.1
Cerium-144	3.7	0.1	3.7	0.001
Cesium-131	3700	100	37	1
Cesium-134m	3700	100	37	1
Cesium-134	3.7	0.1	0.037	0.001
Cesium-135	37	1	37	0.01

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	GBq	Ci	GBq	Ci
Cesium-136	370	10	3.7	0.1
Cesium-137	3.7	0.1	0.037	0.001
Chlorine-36	37	1	0.37	0.01
Chlorine-38	3700	100	37	1
Chromium-51	3700	100	37	1
Cobalt-57	370	10	3.7	0.1
Cobalt-58m	3700	100	37	1
Cobalt-58	37	1	0.37	0.01
Cobalt-60	3.7	0.1	0.037	0.001
Copper-64	370	10	3.7	0.1
Dysprosium-165	3700	100	37	1
Dysprosium-166	370	10	3.7	0.1
Erbium-169	370	10	3.7	0.1
Erbium-171	370	10	3.7	0.1
Europium-152 9.2 h	370	10	3.7	0.1
Europium-152 13 y	3.7	0.1	0.037	0.001
Europium-154	3.7	0.1	0.037	0.001
Europium-155	37	1	0.37	0.01
Fluorine-18	3700	100	37	1
Gadolinium-153	37	1	0.37	0.01
Gadolinium-159	370	10	3.7	0.1
Gallium-72	370	10	3.7	0.1
Germanium-71	3700	100	37	1
Gold-198	370	10	3.7	0.1
Gold-199	370	10	3.7	0.1
Hafnium-181	37	1	0.37	0.01

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	GBq	Ci	GBq	Ci
Holmium-166	370	10	3.7	0.1
Hydrogen-3	3700	100	37	1
Indium-113m	3700	100	37	1
Indium-114m	37	1	0.37	0.01
Indium-115m	3700	100	37	1
Indium-115	37	1	0.37	0.01
Iodine-125	3.7	0.1	0.037	0.001
Iodine-126	3.7	0.1	0.037	0.001
Iodine-129	3.7	0.1	0.037	0.001
Iodine-131	3.7	0.1	0.037	0.001
Iodine-132	370	10	3.7	0.1
Iodine-133	37	1	0.37	0.01
Iodine-134	370	10	3.7	0.1
Iodine-135	37	1	0.37	0.01
Iridium-192	37	1	0.37	0.01
Iridium-194	370	10	3.7	0.1
Iron-55	3.7	10	0.037	0.1
Iron-59	37	1	0.37	0.01
Krypton-85	3700	100	37	1
Krypton-87	370	10	3.7	0.1
Lanthanum-140	37	1	0.37	0.01
Lutetium-177	370	10	3.7	0.1
Manganese-52	37	1	0.37	0.01
Manganese-54	37	1	0.37	0.01
Manganese-56	370	10	3.7	0.1
Mercury-197m	370	10	3.7	0.1

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Byproduct Radioactive Material	Column I Type B		Column II Type C	
	GBq	Ci	GBq	Ci
Mercury-197	370	10	3.7	0.1
Mercury-203	37	1	0.37	0.01
Molybdenum-99	370	10	3.7	0.1
Neodymium-147	370	10	3.7	0.1
Neodymium-149	370	10	3.7	0.1
Nickel-59	370	10	3.7	0.1
Nickel-63	37	1	0.37	0.01
Nickel-65	370	10	3.7	0.1
Niobium-93m	37	1	0.37	0.01
Niobium-95	37	1	0.37	0.01
Niobium-97	3700	100	37	1
Osmium-185	37	1	0.37	0.01
Osmium-191m	3700	100	37	1
Osmium-191	370	10	3.70	0.1
Osmium-193	370	10	3.70	0.1
Palladium-103	370	10	3.70	0.1
Palladium-109	370	10	3.70	0.1
Phosphorus-32	37	1	0.37	0.01
Platinum-191	370	10	3.70	0.1
Platinum-193m	3700	100	37	1
Platinum-193	370	10	3.70	0.1
Platinum-197m	3700	100	37	1
Platinum-197	370	10	3.70	0.1
Polonium-210	0.37	0.01	0.0037	0.0001
Potassium-42	37	1	0.37	0.01
Praseodymium-142	370	10	3.7	0.1

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	GBq	Ci	GBq	Ci
Praseodymium-143	370	10	3.7	0.1
Promethium-147	37	1	0.37	0.01
Promethium-149	370	10	3.7	0.1
Radium-226	0.37	0.01	0.0037	0.0001
Rhenium-186	370	10	3.7	0.1
Rhenium-188	370	10	3.7	0.1
Rhodium-103m	37000	1,000	370	10
Rhodium-105	370	10	3.7	0.1
Rubidium-86	37	1	0.37	0.01
Rubidium-87	37	1	0.37	0.01
Ruthenium-97	3700	100	37	1
Ruthenium-103	37	1	0.37	0.01
Ruthenium-105	370	10	3.7	0.1
Ruthenium-106	3.7	0.1	0.037	0.001
Samarium-151	37	1	0.37	0.01
Samarium-153	370	10	3.7	0.1
Scandium-46	37	1	0.37	0.01
Scandium-47	370	10	3.7	0.1
Scandium-48	37	1	0.37	0.01
Selenium-75	37	1	0.37	0.01
Silicon-31	370	10	3.7	0.1
Silver-105	37	1	0.37	0.01
Silver-110m	3.7	0.1	0.037	0.1
Silver-111	370	10	3.7	0.1
Sodium-22	3.7	0.1	0.037	0.001
Sodium-24	37	1	0.37	0.01

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Byproduct Radioactive Material	Column I Type B		Column II Type C	
	GBq	Ci	GBq	Ci
Strontium-85m	37000	1,000	370	10
Strontium-85	37	1	0.37	0.01
Strontium-89	37	1	0.37	0.01
Strontium-90	0.37	0.01	0.0037	0.0001
Strontium-91	370	10	3.7	0.1
Strontium-92	370	10	3.7	0.1
Sulphur-35	370	10	3.7	0.1
Tantalum-182	37	1	0.37	0.01
Technetium-96	370	10	3.7	0.1
Technetium-97m	370	10	3.7	0.1
Technetium-97	370	10	3.7	0.1
Technetium-99m	3700	100	37	1
Technetium-99	37	1	0.37	0.01
Tellurium-125m	37	1	0.37	0.01
Tellurium-127m	37	1	0.37	0.01
Tellurium-127	370	10	3.7	0.1
Tellurium-129m	37	1	0.37	0.01
Tellurium-129	3700	100	37	1
Tellurium-131m	370	10	3.7	0.1
Tellurium-132	37	1	0.37	0.01
Terbium-160	37	1	0.37	0.01
Thallium-200	370	10	3.7	0.1
Thallium-201	370	10	3.7	0.1
Thallium-202	370	10	3.7	0.1
Thallium-204	37	1	0.37	0.01
Thulium-170	37	1	0.37	0.01

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Byproduct-Radioactive Material	Column I Type B		Column II Type C	
	GBq	Ci	GBq	Ci
Thulium-171	37	1	0.37	0.01
Tin-113	37	1	0.37	0.01
Tin-125	37	1	0.37	0.01
Tungsten-181	37	1	0.37	0.01
Tungsten-185	37	1	0.37	0.01
Tungsten-187	370	10	3.7	0.1
Vanadium-48	37	1	0.37	0.01
Xenon-131m	37000	1,000	370	10
Xenon-133	3700	100	37	1
Xenon-135	3700	100	37	1
Ytterbium-175	370	10	3.7	0.1
Yttrium-90	37	1	0.37	0.01
Yttrium-91	37	1	0.37	0.01
Yttrium-92	370	10	3.7	0.1
Yttrium-93	37	1	0.37	0.01
Zinc-65	37	1	0.37	0.01
Zinc-69m	370	10	3.7	0.10
Zinc-69	3700	100	37	1
Zirconium-93	37	1	0.37	0.01
Zirconium-95	37	1	0.37	0.01
Zirconium-97	37	1	0.37	0.01
Any byproduct-radioactive material other than alpha emitting byproduct radioactive material not listed above.	3.7	0.1	0.037	0.001