

Unofficial Text (See Printed Volume). Current through date and Register shown on Title Page.

## Chapter DHS 157

## APPENDIX C

## Limits for Broad Licenses

Radioactive Material	Type B License	Type C License	Radioactive Material	Type B License	Type C License
	Column I	Column II		Column I	Column II
	curies	curies		curies	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.
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.
Beryllium-7	10	0.1	Indium-113m	100	1.
Bismuth-210	0.1	0.001	Indium-114m	1	0.01
Bromine-82	10	0.1	Indium-115m	100	1.
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.	Iodine-132	10	0.1
Cerium-141	10	0.1	Iodine-133	1	0.01
Cerium-143	10	0.1	Iodine-134	10	0.1
Cerium-144	0.1	0.001	Iodine-135	1	0.01
Cesium-131	100	1.	Iridium-192	1	0.01
Cesium-134m	100	1.	Iridium-194	10	0.1
Cesium-134	0.1	0.001	Iron-55	10	0.1
Cesium-135	1	0.01	Iron-59	1	0.01
Cesium-136	10	0.1	Krypton-85	100	1.
Cesium-137	0.1	0.001	Krypton-87	10	0.1
Chlorine-36	1	0.01	Lanthanum-140	1	0.01
Chlorine-38	100	1.	Lutetium-177	10	0.1
Chromium-51	100	1.	Manganese-52	1	0.01
Cobalt-57	10	0.1	Manganese-54	1	0.01
Cobalt-58m	100	1.	Manganese-56	10	0.1
Cobalt-58	1	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	0.01
Dysprosium-165	100	1.	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	0.01
Europium-152 (13 y)	0.1	0.001	Nickel-65	10	0.1
Europium-154	0.1	0.001	Niobium-93m	1	0.01
Europium-155	1	0.01	Niobium-95	1	0.01
Fluorine-18	100	1.	Niobium-97	100	1.

Unofficial Text (See Printed Volume). Current through date and Register shown on Title Page.

Type B License			Type C License			Type B License			Type C License		
Column I			Column II			Column I			Column II		
Radioactive Material	curies		Radioactive Material	curies		Radioactive Material	curies		Radioactive Material	curies	
Osmium-185	1		Strontium-92	10		Strontium-92	10		Strontium-92	0.1	
Osmium-191m	100		Sulphur-35	10		Sulphur-35	10		Sulphur-35	0.1	
Osmium-191	10		Tantalum-182	1		Tantalum-182	1		Tantalum-182	0.01	
Osmium-193	10		Technetium-96	10		Technetium-96	10		Technetium-96	0.1	
Palladium-103	10		Technetium-97m	10		Technetium-97m	10		Technetium-97m	0.1	
Palladium-109	10		Technetium-97	10		Technetium-97	10		Technetium-97	0.1	
Phosphorus-32	1		Technetium-99m	100		Technetium-99m	100		Technetium-99m	1.	
Platinum-191	10		Technetium-99	1		Technetium-99	1		Technetium-99	0.01	
Platinum-193m	100		Tellurium-125m	1		Tellurium-125m	1		Tellurium-125m	0.01	
Platinum-193	10		Tellurium-127m	1		Tellurium-127m	1		Tellurium-127m	0.01	
Platinum-197m	100		Tellurium-127	10		Tellurium-127	10		Tellurium-127	0.1	
Platinum-197	10		Tellurium-129m	1		Tellurium-129m	1		Tellurium-129m	0.01	
Polonium-210	0.01		Tellurium-129	100		Tellurium-129	100		Tellurium-129	1.	
Potassium-42	1		Tellurium-131m	10		Tellurium-131m	10		Tellurium-131m	0.1	
Praseodymium-142	10		Tellurium-132	1		Tellurium-132	1		Tellurium-132	0.01	
Praseodymium-143	10		Terbium-160	1		Terbium-160	1		Terbium-160	0.01	
Promethium-147	1		Thallium-200	10		Thallium-200	10		Thallium-200	0.1	
Promethium-149	10		Thallium-201	10		Thallium-201	10		Thallium-201	0.1	
Radium-226	0.01		Thallium-202	10		Thallium-202	10		Thallium-202	0.1	
Rhenium-186	10		Thallium-204	1		Thallium-204	1		Thallium-204	0.01	
Rhenium-188	10		Thulium-170	1		Thulium-170	1		Thulium-170	0.01	
Rhodium-103m	1,000		Thulium-171	1		Thulium-171	1		Thulium-171	0.01	
Rhodium-105	10		Tin-113	1		Tin-113	1		Tin-113	0.01	
Rubidium-86	1		Tin-125	1		Tin-125	1		Tin-125	0.01	
Rubidium-87	1		Tungsten-181	1		Tungsten-181	1		Tungsten-181	0.01	
Ruthenium-97	100		Tungsten-185	1		Tungsten-185	1		Tungsten-185	0.01	
Ruthenium-103	1		Tungsten-187	10		Tungsten-187	10		Tungsten-187	0.1	
Ruthenium-105	10		Vanadium-48	1		Vanadium-48	1		Vanadium-48	0.01	
Ruthenium-106	0.1		Xenon-131m	1,000		Xenon-131m	1,000		Xenon-131m	10.	
Samarium-151	1		Xenon-133	100		Xenon-133	100		Xenon-133	1.	
Samarium-153	10		Xenon-135	100		Xenon-135	100		Xenon-135	1.	
Scandium-46	1		Ytterbium-175	10		Ytterbium-175	10		Ytterbium-175	0.1	
Scandium-47	10		Yttrium-90	1		Yttrium-90	1		Yttrium-90	0.01	
Scandium-48	1		Yttrium-91	1		Yttrium-91	1		Yttrium-91	0.01	
Selenium-75	1		Yttrium-92	10		Yttrium-92	10		Yttrium-92	0.1	
Silicon-31	10		Yttrium-93	1		Yttrium-93	1		Yttrium-93	0.01	
Silver-105	1		Zinc-65	1		Zinc-65	1		Zinc-65	0.01	
Silver-110m	0.1		Zinc-69m	10		Zinc-69m	10		Zinc-69m	0.1	
Silver-111	10		Zinc-69	100		Zinc-69	100		Zinc-69	1.	
Sodium-22	0.1		Zirconium-93	1		Zirconium-93	1		Zirconium-93	0.01	
Sodium-24	1		Zirconium-95	1		Zirconium-95	1		Zirconium-95	0.01	
Strontium-85m	1,000		Zirconium-97	1		Zirconium-97	1		Zirconium-97	0.01	
Strontium-85	1		Any radioactive material other than source material, special nuclear material, or alpha emitting radioactive material not listed above.			0.1			0.001		
Strontium-89	1		<b>Note 1:</b> To convert curies (Ci) to SI units of gigabecquerels (GBq), multiply the above values by 37.								
Strontium-90	0.01		Example: Zirconium-97 (Col. II) (0.01 Ci multiplied by 37 is equivalent to 0.37 GBq).								
Strontium-91	10										