Americium		
Am-237		$4\ 10^{12}$
Am-238		$6\ 10^{12}$
Am-239		$2\ 10^{12}$
Am-240		$4\ 10^{12}$
Am-241		$3\ 10^{8}$
Am-242		$1\ 10^{12}$
Am-242m		$3\ 10^{8}$
Am-243		$3\ 10^{8}$
Am-244		$2\ 10^{12}$
Am-244m		$2\ 10^{14}$
Am-245		$2\ 10^{12}$
Am-246		$1\ 10^{12}$
Am-246m		$2\ 10^{12}$
Antimony		
Sb-115		$2\ 10^{12}$
Sb-116		$2\ 10^{12}$
Sb-116m		$2\ 10^{12}$
Sb-117		$1\ 10^{13}$
Sb-118m		$7\ 10^{12}$

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)	$4\ 10^{13}$
Arsenic		

As-69		$7\ 10^{11}$
As-70		$1\ 10^{12}$
As-71		$3\ 10^{12}$
As-72		$9\ 10^{11}$
As-73		$8\ 10^{12}$
As-74		$2\ 10^{12}$
As-76		$9\ 10^{11}$
As-77		$2\ 10^{12}$
As-78		$7\ 10^{11}$
Astatine		
At-207		$4\ 10^{12}$
At-211		$2\ 10^{11}$
Barium		
Ba-126		$2\ 10^{13}$
Ba-128		$1\ 10^{13}$
Ba-131		$6\ 10^{12}$
Ba-131m		$3\ 10^{12}$
Ba-133		$4\ 10^{11}$
Ba-133m		$2\ 10^{12}$
Ba-135m		$2\ 10^{12}$

Ba-139		$11,^{012}$
Ba-140		$2\ 10^{12}$
Ba-141		$1\ 10^{12}$
Ba-142		$2\ 10^{12}$
Berkelium		
Bk-245		$3\ 10^{12}$
Bk-246		$6\ 10^{12}$
Bk-247		$3\ 10^{8}$
Bk-249		$2\ 10^{11}$
Bk-250		$2\ 10^{12}$
Beryllium		
Be-7		$2\ 10^{13}$
Be-10		$6\ 10^{11}$
Bismuth		
Bi-200		$2\ 10^{12}$
Bi-201		$2\ 10^{12}$
Bi-202		$3\ 10^{12}$
Bi-203		$4\ 10^{12}$
Bi-205		$2\ 10^{12}$
Bi-206		$2\ 10^{12}$

Bi-207		$1\ 10^{11}$
Bi-210		$2\ 10^{11}$
Bi-210m		$6\ 10^{9}$
Bi-212		$7\ 10^{11}$
Bi-213		$7\ 10^{11}$
Bi-214		$1\ 10^{12}$
Bromine		
Br-74		$8\ 10^{11}$
Br-74m		$6\ 10^{11}$
Br-75		$2\ 10^{12}$
Br-76		$1\ 10^{12}$
Br-77		$4\ 10^{13}$
Br-80		$1\ 10^{12}$
Br-80m		$5\ 10^{12}$
Br-82		$3\ 10^{12}$
Br-83		$2\ 10^{12}$
Br-84		$7\ 10^{11}$
Cadmium		
Cd-104		$1\ 10^{13}$
Cd-107		$4\ 10^{12}$

Cd-109		$2\ 10^{12}$
Cd-113		$2\ 10^{11}$
Cd-113m		$1\ 10^{11}$
Cd-115		$2\ 10^{12}$
Cd-115m		$2\ 10^{12}$
Cd-117		$2\ 10^{12}$
Cd-117m		$2\ 10^{12}$
Caesium		
Cs-125		$2\ 10^{12}$
Cs-127		$1\ 10^{13}$
Cs-129		$2\ 10^{13}$
Cs-130		$2\ 10^{12}$
Cs-131		$6\ 10^{13}$
Cs-132		$9\ 10^{12}$
Cs-134		$7\ 10^{10}$
Cs-134m		$4\ 10^{12}$
Cs-135		$9\ 10^{11}$
Cs-135m		$8\ 10^{12}$
Cs-136		$8\ 10^{11}$
Cs-137		$1\ 10^{11}$

Cs-138		$8\ 10^{11}$
Calcium		
Ca-41		$3\ 10^{13}$
Ca-45		$3\ 10^{12}$
Ca-47		$2\ 10^{12}$
Californium		
Cf-244		$2\ 10^{12}$
Cf-246		$5\ 10^{10}$
Cf-248		$2\ 10^{9}$
Cf-249		$3\ 10^{8}$
Cf-250		$7\ 10^{8}$
Cf-251		$3\ 10^{8}$
Cf-252		$1\ 10^{9}$
Cf-253		$2\ 10^{10}$
Cf-254		$4\ 10^{8}$
Carbon		
C-11		$2\ 10^{12}$
C-11	(vapour)	$1\ 10^{14}$
C-11	(dioxide gas)	$1\ 10^{14}$
C-11	(monoxide gas)	$1\ 10^{14}$

C-14		$3\ 10^{12}$
C-14	(vapour)	$4\ 10^{13}$
C-14	(dioxide gas)	$3\ 10^{15}$
C-14	(monoxide gas)	$1\ 10^{16}$
Cerium		
Ce-134		$1\ 10^{13}$
Ce-135		$2\ 10^{12}$
Ce-137		$2\ 10^{13}$
Ce-137m		$2\ 10^{12}$
Ce-139		$2\ 10^{12}$
Ce-141		$2\ 10^{12}$
Ce-143		$2\ 10^{12}$
Ce-144		$3\ 10^{11}$
Chlorine		
Cl-36		$2\ 10^{12}$
Cl-38		$6\ 10^{11}$
Cl-39		$1\ 10^{12}$
Chromium		
Cr-48		$4\ 10^{13}$
Cr-49		$2\ 10^{12}$

Cr-51		$3\ 10^{13}$
Cobalt		
Co-55		$2\ 10^{12}$
Co-56		$2\ 10^{11}$
Co-57		$1\ 10^{12}$
Co-58		$6\ 10^{11}$
Co-58m		$2\ 10^{13}$
Co-60		$6\ 10^{10}$
Co-60m		$7\ 10^{12}$
Co-61		$2\ 10^{12}$
Co-62m		$9\ 10^{11}$
Copper		
Cu-60		$1\ 10^{12}$
Cu-61		$2\ 10^{12}$
Cu-64		$4\ 10^{12}$
Cu-67		$3\ 10^{12}$
Curium		
Cm-238		$5\ 10^{12}$
Cm-240		$7\ 10^{9}$
Cm-241		$5\ 10^{11}$

Cm-242		$4\ 10^{9}$
Cm-243		$4\ 10^{8}$
Cm-244		$4\ 10^{8}$
Cm-245		$2\ 10^{8}$
Cm-246		$2\ 10^{8}$
Cm-247		$3\ 10^{8}$
Cm-248		$7\ 10^{7}$
Cm-249		$2\ 10^{12}$
Cm-250		$1\ 10^{7}$
Dysprosium		
Dy-155		$1\ 10^{13}$
Dy-157		$1\ 10^{14}$
Dy-159		$8\ 10^{12}$
Dy-165		$2\ 10^{12}$
Dy-166		$3\ 10^{12}$
Einsteinium		
Es-250		$1\ 10^{13}$
Es-251		$6\ 10^{12}$
Es-253		$8\ 10^{9}$
Es-254		$2\ 10^{9}$

Es-254m		$5\ 10^{10}$
Erbium		
Er-161		$6\ 10^{12}$
Er-165		$2\ 10^{14}$
Er-169		$3\ 10^{12}$
Er-171		$2\ 10^{12}$
Er-172		$3\ 10^{12}$
Europium		
Eu-145		$4\ 10^{12}$
Eu-146		$3\ 10^{12}$
Eu-147		$4\ 10^{12}$
Eu-148		$4\ 10^{11}$
Eu-149		$8\ 10^{12}$
Eu-150	(long lived isotope)	$1\ 10^{11}$
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		$2\ 10^{12}$
Eu-156		$2\ 10^{12}$

Eu-157		$2\ 10^{12}$
Eu-158		$1\ 10^{12}$
Fermium		
Fm-252		$7\ 10^{10}$
Fm-253		$6\ 10^{10}$
Fm-254		$3\ 10^{11}$
Fm-255		$9\ 10^{10}$
Fm-257		$3\ 10^{9}$
Fluorine		
F-18		$2\ 10^{12}$
Francium		
Fr-222		$1\ 10^{12}$
Fr-223		$2\ 10^{12}$
Gadolinium		
Gd-145		$2\ 10^{12}$
Gd-146		$2\ 10^{12}$
Gd-147		$5\ 10^{12}$
Gd-148		$9\ 10^{8}$
Gd-149		$6\ 10^{12}$
Gd-151		$5\ 10^{12}$

Gd-152		$1\ 10^{9}$
Gd-153		$2\ 10^{12}$
Gd-159		$2\ 10^{12}$
Gallium		
Ga-65		$1\ 10^{12}$
Ga-66		$9\ 10^{11}$
Ga-67		$5\ 10^{12}$
Ga-68		$2\ 10^{12}$
Ga-70		$1\ 10^{12}$
Ga-72		$2\ 10^{12}$
Ga-73		$2\ 10^{12}$
Germanium		
Ge-66		$3\ 10^{12}$
Ge-67		$7\ 10^{11}$
Ge-68		$1\ 10^{12}$
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		$7\ 10^{12}$
Au-194		$1\ 10^{13}$
Au-195		$3\ 10^{12}$
Au-198		$2\ 10^{12}$
Au-198m		$2\ 10^{12}$
Au-199		$3\ 10^{12}$
Au-200		$1\ 10^{12}$
Au-200m		$2\ 10^{12}$
Au-201		$2\ 10^{12}$
Hafnium		
Hf-170		$4\ 10^{12}$
Hf-172		$5\ 10^{11}$
Hf-173		$6\ 10^{12}$
Hf-175		$2\ 10^{12}$
Hf-177m		$2\ 10^{12}$
Hf-178m		$4\ 10^{10}$
Hf-179m		$2\ 10^{12}$
Hf-180m		$2\ 10^{12}$
Hf-181		$1\ 10^{12}$

Hf-182		$7\ 10^{10}$
Hf-182m		$2\ 10^{12}$
Hf-183		$2\ 10^{12}$
Hf-184		$2\ 10^{12}$
Holmium		
Ho-155		$2\ 10^{12}$
Ho-157		$4\ 10^{12}$
Ho-159		$6\ 10^{12}$
Ho-161		$1\ 10^{13}$
Ho-162		$5\ 10^{12}$
Ho-162m		$4\ 10^{12}$
Ho-164		$2\ 10^{12}$
Ho-164m		$4\ 10^{12}$
Ho-166		$1\ 10^{12}$
Ho-166m		$8\ 10^{10}$
Ho-167		$2\ 10^{12}$
Hydrogen		
H-3	(tritiated water)	$7\ 10^{13}$
H-3	(organically bound tritium)	$1\ 10^{14}$
H-3	(tritiated water vapour)	$1\ 10^{15}$

H-3	(gas)	$1\ 10^{18}$
H-3	(tritiated methane gas)	$1\ 10^{17}$
H-3	(organically bound tritium gas/ vapour)	$6\ 10^{14}$
Indium		
In-109		$7\ 10^{12}$
In-110	(long lived isotope)	$2\ 10^{13}$
In-110	(short lived isotope)	$1\ 10^{12}$
In-111		$9\ 10^{12}$
In-112		$2\ 10^{12}$
In-113m		$5\ 10^{12}$
In-114		$1\ 10^{12}$
In-114m		$9\ 10^{11}$
In-115		$6\ 10^{10}$
In-115m		$3\ 10^{12}$
In-116m		$2\ 10^{12}$
In-117		$2\ 10^{12}$
In-117m		$2\ 10^{12}$
In-119m		$9\ 10^{11}$
Iodine		
I-120		$6\ 10^{11}$

I-120	(elemental vapour)	$2\ 10^{13}$
I-120	(methyl iodide vapour)	$2\ 10^{13}$
I-120m		$7\ 10^{11}$
I-120m	(elemental vapour)	$2\ 10^{13}$
I-120m	(methyl iodide vapour)	$2\ 10^{13}$
I-121		$4\ 10^{12}$
I-121	(elemental vapour)	$1\ 10^{14}$
I-121	(methyl iodide vapour)	$1\ 10^{14}$
I-123		$9\ 10^{12}$
I-123	(elemental vapour)	$5\ 10^{13}$
I-123	(methyl iodide vapour)	$6\ 10^{13}$
I-124		$2\ 10^{12}$
I-124	(elemental vapour)	$9\ 10^{11}$
I-124	(methyl iodide vapour)	$1\ 10^{12}$
I-125		$1\ 10^{11}$
I-125	(elemental vapour)	$1\ 10^{12}$
I-125	(methyl iodide vapour)	$1\ 10^{12}$
I-126		$8\ 10^{11}$
I-126	(elemental vapour)	$5\ 10^{11}$
I-126	(methyl iodide vapour)	$6\ 10^{11}$

I-128		$1\ 10^{12}$
I-128	(elemental vapour)	$2\ 10^{14}$
I-128	(methyl iodide vapour)	$5\ 10^{14}$
I-129		$1\ 10^{10}$
I-129	(elemental vapour)	$2\ 10^{11}$
I-129	(methyl iodide vapour)	$2\ 10^{11}$
I-130		$3\ 10^{12}$
I-130	(elemental vapour)	$5\ 10^{12}$
I-130	(methyl iodide vapour)	$6\ 10^{12}$
I-131		$9\ 10^{10}$
I-131	(elemental vapour)	$6\ 10^{11}$
I-131	(methyl iodide vapour)	$7\ 10^{11}$
I-132		$2\ 10^{12}$
I-132	(elemental vapour)	$2\ 10^{13}$
I-132	(methyl iodide vapour)	$3\ 10^{13}$
I-132m		$2\ 10^{12}$
I-132m	(elemental vapour)	$4\ 10^{13}$
I-132m	(methyl iodide vapour)	$5\ 10^{13}$
I-133		$2\ 10^{12}$
I-133	(elemental vapour)	$2\ 10^{12}$

I-133	(methyl iodide vapour)	$3\ 10^{12}$
I-134		$2\ 10^{12}$
I-134	(elemental vapour)	$3\ 10^{13}$
I-134	(methyl iodide vapour)	$4\ 10^{13}$
I-135		$2\ 10^{12}$
I-135	(elemental vapour)	$9\ 10^{12}$
I-135	(methyl iodide vapour)	$1\ 10^{13}$
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		$6\ 10^{12}$
Ir-188		$5\ 10^{12}$
Ir-189		$9\ 10^{12}$
Ir-190		$2\ 10^{12}$
Ir-190m	(long lived isotope)	$3\ 10^{12}$
Ir-190m	(short lived isotope)	$1\ 10^{13}$
Ir-192		$6\ 10^{11}$

Ir-192m		$4\ 10^{11}$
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		$8\ 10^{12}$
Fe-59		$8\ 10^{11}$
Fe-60		$4\ 10^{10}$
Krypton		
Kr-74	(gas)	$5\ 10^{13}$
Kr-76	(gas)	$1\ 10^{14}$
Kr-77	(gas)	$6\ 10^{13}$
Kr-79	(gas)	$2\ 10^{14}$
Kr-81	(gas)	$7\ 10^{15}$
Kr-81m	(gas)	$5\ 10^{14}$
Kr-83m	(gas	$3\ 10^{16}$
Kr-85	(gas)	$1\ 10^{16}$

Kr-85m	(gas)	$4\ 10^{14}$
Kr-87	(gas)	$7\ 10^{13}$
Kr-88	(gas)	$3\ 10^{13}$
Lanthanum		
La-131		$2\ 10^{12}$
La-132		$2\ 10^{12}$
La-135		$2\ 10^{14}$
La-137		$2\ 10^{12}$
La-138		$2\ 10^{11}$
La-140		$2\ 10^{12}$
La-141		$1\ 10^{12}$
La-142		$1\ 10^{12}$
La-143		$7\ 10^{11}$
Lead		
Pb-195m		$2\ 10^{12}$
Pb-198		$4\ 10^{12}$
Pb-199		$6\ 10^{12}$
Pb-200		$3\ 10^{12}$
Pb-201		$8\ 10^{12}$
Pb-202		$6\ 10^{11}$

Pb-202m		$4\ 10^{12}$
Pb-203		$9\ 10^{12}$
Pb-205		$1\ 10^{13}$
Pb-209		$2\ 10^{12}$
Pb-210		$3\ 10^{9}$
Pb-211		$2\ 10^{12}$
Pb-212		$1\ 10^{11}$
Pb-214		$1\ 10^{12}$
Lutetium		
Lu-169		$6\ 10^{12}$
Lu-170		$3\ 10^{12}$
Lu-171		$4\ 10^{12}$
Lu-172		$3\ 10^{12}$
Lu-173		$2\ 10^{12}$
Lu-174		$1\ 10^{12}$
Lu-174m		$3\ 10^{12}$
Lu-176		$3\ 10^{11}$
Lu-176m		$2\ 10^{12}$
Lu-177		$3\ 10^{12}$
Lu-177m		$3\ 10^{11}$

Lu-178		$1\ 10^{12}$
Lu-178m		$1\ 10^{12}$
Lu-179		$2\ 10^{12}$
Magnesium		
Mg-28		$5\ 10^{12}$
Manganese		
Mn-51		$1\ 10^{12}$
Mn-52		$2\ 10^{12}$
Mn-52m		$8\ 10^{11}$
Mn-53		$1\ 10^{14}$
Mn-54		$3\ 10^{11}$
Mn-56		$1\ 10^{12}$
Mendelevium		
Md-257		$9\ 10^{11}$
Md-258		$4\ 10^{9}$
Mercury		
Hg-193	(organic)	$3\ 10^{12}$
Hg-193	(inorganic)	$3\ 10^{12}$
Hg-193	(vapour)	$2\ 10^{13}$
Hg-193m	(organic)	$2\ 10^{12}$

Hg-193m	(inorganic)	$2\ 10^{12}$
Hg-193m	(vapour)	$6\ 10^{12}$
Hg-194	(organic)	$3\ 10^{11}$
Hg-194	(inorganic)	$1\ 10^{12}$
Hg-194	(vapour)	$6\ 10^{11}$
Hg-195	(organic)	$5\ 10^{12}$
Hg-195	(inorganic)	$5\ 10^{12}$
Hg-195	(vapour)	$1\ 10^{13}$
Hg-195m	(organic)	$3\ 10^{12}$
Hg-195m	(inorganic)	$3\ 10^{12}$
Hg-195m	(vapour)	$3\ 10^{12}$
Hg-197	(organic)	$7\ 10^{12}$
Hg-197	(inorganic)	$7\ 10^{12}$
Hg-197	(vapour)	$5\ 10^{12}$
Hg-197m	(organic)	$2\ 10^{12}$
Hg-197m	(inorganic)	$2\ 10^{12}$
Hg-197m	(vapour)	$4\ 10^{12}$
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)	$3\ 10^{12}$
Hg-203	(vapour)	$3\ 10^{12}$
Molybdenum		
Mo-90		$2\ 10^{12}$
Mo-93		$2\ 10^{12}$
Mo-93m		$4\ 10^{12}$
Mo-99		$2\ 10^{12}$
Mo-101		$2\ 10^{12}$
Neodymium		
Nd-136		$4\ 10^{12}$
Nd-138		$5\ 10^{13}$
Nd-139		$2\ 10^{12}$
Nd-139m		$3\ 10^{12}$
Nd-141		$2\ 10^{13}$
Nd-147		$2\ 10^{12}$
Nd-149		$2\ 10^{12}$
Nd-151		$1\ 10^{12}$
Neon		
Ne-19	(gas)	$6\ 10^{13}$

Neptunium		
Np-232		$3\ 10^{12}$
Np-233		$2\ 10^{14}$
Np-234		$5\ 10^{12}$
Np-235		$2\ 10^{13}$
Np-236	(long lived isotope)	$3\ 10^{9}$
Np-236	(short lived isotope)	$3\ 10^{12}$
Np-237		$5\ 10^{8}$
Np-238		$2\ 10^{12}$
Np-239		$1\ 10^{12}$
Np-240		$7\ 10^{11}$
Nickel		
Ni-56		$4\ 10^{12}$
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		$5\ 10^{12}$
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)	$8\ 10^{11}$
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)	$6\ 10^{13}$
Osmium		
Os-180		$1\ 10^{13}$

Os-181		$3\ 10^{12}$
Os-182		$6\ 10^{12}$
Os-185		$7\ 10^{11}$
Os-189m		$1\ 10^{13}$
Os-191		$4\ 10^{12}$
Os-191m		$7\ 10^{12}$
Os-193		$2\ 10^{12}$
Os-194		$2\ 10^{11}$
Palladium		
Pd-100		$7\ 10^{12}$
Pd-101		$8\ 10^{12}$
Pd-103		$4\ 10^{13}$
Pd-107		$3\ 10^{13}$
Pd-109		$2\ 10^{12}$
Phosphorus		
P-32		$1\ 10^{11}$
P-33		$3\ 10^{12}$
Platinum		
Pt-186		$9\ 10^{13}$
Pt-188		$6\ 10^{12}$

Pt-189		$6\ 10^{12}$
Pt-191		$7\ 10^{12}$
Pt-193		$1\ 10^{14}$
Pt-193m		$3\ 10^{12}$
Pt-195m		$3\ 10^{12}$
Pt-197		$2\ 10^{12}$
Pt-197m		$2\ 10^{12}$
Pt-199		$2\ 10^{12}$
Pt-200		$2\ 10^{12}$
Plutonium		
Pu-234		$1\ 10^{12}$
Pu-235		$2\ 10^{13}$
Pu-236		$6\ 10^{8}$
Pu-237		$1\ 10^{13}$
Pu-238		$2\ 10^{8}$
Pu-239		$2\ 10^{8}$
Pu-240		$2\ 10^{8}$
Pu-241		$1\ 10^{10}$
Pu-242		$2\ 10^{8}$
Pu-243		$2\ 10^{12}$

Pu-244		$2\ 10^{8}$
Pu-245		$2\ 10^{12}$
Pu-246		$2\ 10^{12}$
Polonium		
Po-203		$3\ 10^{12}$
Po-205		$7\ 10^{12}$
Po-206		$1\ 10^{11}$
Po-207		$8\ 10^{12}$
Po-208		$2\ 10^{9}$
Po-209		$2\ 10^{9}$
Po-210		$4\ 10^{9}$
Potassium		
K-40		$2\ 10^{12}$
K-42		$7\ 10^{11}$
K-43		$2\ 10^{12}$
K-44		$6\ 10^{11}$
K-45		$9\ 10^{11}$
Praseodymium		
Pr-136		$1\ 10^{12}$
Pr-137		$2\ 10^{12}$

Pr-138m		$2\ 10^{12}$
Pr-139		$7\ 10^{12}$
Pr-142		$1\ 10^{12}$
Pr-142m		$2\ 10^{15}$
Pr-143		$2\ 10^{12}$
Pr-144		$2\ 10^{12}$
Pr-145		$1\ 10^{12}$
Pr-147		$1\ 10^{12}$
Promethium		
Pm-141		$1\ 10^{12}$
Pm-143		$9\ 10^{11}$
Pm-144		$2\ 10^{11}$
Pm-145		$3\ 10^{12}$
Pm-146		$2\ 10^{11}$
Pm-147		$4\ 10^{12}$
Pm-148		$1\ 10^{12}$
Pm-148m		$5\ 10^{11}$
Pm-149		$2\ 10^{12}$
Pm-150		$1\ 10^{12}$
Pm-151		$2\ 10^{12}$

Protactinium		
Pa-227		$3\ 10^{11}$
Pa-228		$3\ 10^{11}$
Pa-230		$3\ 10^{10}$
Pa-231		$2\ 10^{8}$
Pa-232		$2\ 10^{12}$
Pa-233		$2\ 10^{12}$
Pa-234		$5\ 10^{11}$
Radium		
Ra-223		$3\ 10^{9}$
Ra-224		$7\ 10^{9}$
Ra-225		$3\ 10^{9}$
Ra-226		$2\ 10^{9}$
Ra-227		$2\ 10^{12}$
Ra-228		$1\ 10^{9}$
Rhenium		
Re-177		$2\ 10^{12}$
Re-178		$2\ 10^{12}$
Re-181		$3\ 10^{12}$
Re-182	(long lived isotope)	$2\ 10^{12}$

Re-182	(short lived isotope)	$4\ 10^{12}$
Re-184		$1\ 10^{12}$
Re-184m		$7\ 10^{11}$
Re-186		$2\ 10^{12}$
Re-186m		$1\ 10^{12}$
Re-187		$5\ 10^{14}$
Re-188		$1\ 10^{12}$
Re-188m		$3\ 10^{12}$
Re-189		$2\ 10^{12}$
Rhodium		
Rh-99		$4\ 10^{12}$
Rh-99m		$9\ 10^{12}$
Rh-100		$4\ 10^{12}$
Rh-101		$7\ 10^{11}$
Rh-101m		$2\ 10^{13}$
Rh-102		$1\ 10^{11}$
Rh-102m		$6\ 10^{11}$
Rh-103m		$3\ 10^{15}$
Rh-105		$2\ 10^{12}$
Rh-106m		$2\ 10^{12}$

Rh-107		$2\ 10^{12}$
Rubidium		
Rb-79		$1\ 10^{12}$
Rb-81		$2\ 10^{12}$
Rb-81m		$4\ 10^{12}$
Rb-82m		$3\ 10^{12}$
Rb-83		$1\ 10^{12}$
Rb-84		$1\ 10^{12}$
Rb-86		$2\ 10^{11}$
Rb-87		$4\ 10^{12}$
Rb-88		$5\ 10^{11}$
Rb-89		$9\ 10^{11}$
Ruthenium		
Ru-94		$1\ 10^{14}$
Ru-94	(tetroxide vapour)	$1\ 10^{14}$
Ru-97		$3\ 10^{13}$
Ru-97	(tetroxide vapour)	$1\ 10^{14}$
Ru-103		$2\ 10^{12}$
Ru-103	(tetroxide vapour)	$1\ 10^{13}$
Ru-105		$2\ 10^{12}$

Ru-105	(tetroxide vapour)	$6\ 10^{13}$
Ru-106		$3\ 10^{11}$
Ru-106	(tetroxide vapour)	$8\ 10^{11}$
Samarium		
Sm-141		$1\ 10^{12}$
Sm-141m		$2\ 10^{12}$
Sm-142		$9\ 10^{12}$
Sm-145		$3\ 10^{12}$
Sm-146		$2\ 10^{9}$
Sm-147		$3\ 10^{9}$
Sm-151		$6\ 10^{12}$
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		$9\ 10^{12}$
Sc-46		$3\ 10^{11}$
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		$2\ 10^{12}$
Se-81m		$4\ 10^{12}$
Se-83		$2\ 10^{12}$
Silicon		
Si-31		$2\ 10^{12}$
Si-32		$2\ 10^{11}$
Silver		
Ag-102		$1\ 10^{12}$
Ag-103		$2\ 10^{12}$
Ag-104		$3\ 10^{12}$
Ag-104m		$2\ 10^{12}$
Ag-105		$2\ 10^{12}$

Ag-106		$2\ 10^{12}$
Ag-106m		$2\ 10^{12}$
Ag-108m		$1\ 10^{11}$
Ag-110m		$3\ 10^{10}$
Ag-111		$2\ 10^{12}$
Ag-112		$7\ 10^{11}$
Ag-115		$9\ 10^{11}$
Sodium		
Na-22		$1\ 10^{11}$
Na-24		$2\ 10^{12}$
Strontium		
Sr-80		$1\ 10^{14}$
Sr-81		$9\ 10^{11}$
Sr-82		$2\ 10^{12}$
Sr-83		$3\ 10^{12}$
Sr-85		$1\ 10^{12}$
Sr-85m		$3\ 10^{13}$
Sr-87m		$7\ 10^{12}$
Sr-89		$1\ 10^{12}$
Sr-90		$8\ 10^{10}$

Sr-91		$2\ 10^{12}$
Sr-92		$2\ 10^{12}$
Sulphur		
S-35	(inorganic)	$1\ 10^{12}$
S-35	(organic)	$2\ 10^{11}$
S-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		$3\ 10^{12}$
Ta-177		$1\ 10^{13}$
Ta-178	(long lived isotope)	$3\ 10^{12}$
Ta-179		$6\ 10^{12}$
Ta-180		$9\ 10^{11}$
Ta-180m		$6\ 10^{12}$
Ta-182		$3\ 10^{11}$

Ta-182m		$2\ 10^{12}$
Ta-183		$2\ 10^{12}$
Ta-184		$2\ 10^{12}$
Ta-185		$1\ 10^{12}$
Ta-186		$9\ 10^{11}$
Technetium		
Tc-93		$5\ 10^{13}$
Tc-93m		$4\ 10^{12}$
Tc-94		$6\ 10^{12}$
Tc-94m		$1\ 10^{12}$
Tc-95		$4\ 10^{13}$
Tc-95m		$1\ 10^{12}$
Tc-96		$4\ 10^{12}$
Tc-96m		$2\ 10^{13}$
Tc-97		$9\ 10^{12}$
Tc-97m		$5\ 10^{12}$
Tc-98		$1\ 10^{11}$
Tc-99		$5\ 10^{10}$
Tc-99m		$1\ 10^{13}$
Tc-101		$2\ 10^{12}$

Tc-104		$6\ 10^{11}$
Tellurium		
Te-116		$6\ 10^{12}$
Te-116	(vapour)	$2\ 10^{14}$
Te-121		$4\ 10^{12}$
Te-121	(vapour)	$3\ 10^{13}$
Te-121m		$1\ 10^{12}$
Te-121m	(vapour)	$3\ 10^{12}$
Te-123		$6\ 10^{12}$
Te-123	(vapour)	$2\ 10^{12}$
Te-123m		$2\ 10^{12}$
Te-123m	(vapour)	$5\ 10^{12}$
Te-125m		$2\ 10^{12}$
Te-125m	(vapour)	$8\ 10^{12}$
Te-127		$2\ 10^{12}$
Te-127	(vapour)	$2\ 10^{14}$
Te-127m		$1\ 10^{12}$
Te-127m	(vapour)	$2\ 10^{12}$
Te-129		$2\ 10^{12}$
Te-129	(vapour)	$4\ 10^{14}$

Te-129m		$1\ 10^{12}$
Te-129m	(vapour)	$3\ 10^{12}$
Te-131		$1\ 10^{12}$
Te-131	(vapour)	$1\ 10^{14}$
Te-131m		$2\ 10^{12}$
Te-131m	(vapour)	$5\ 10^{12}$
Te-132		$3\ 10^{12}$
Te-132	(vapour)	$2\ 10^{12}$
Te-133		$1\ 10^{12}$
Te-133	(vapour)	$7\ 10^{13}$
Te-133m		$1\ 10^{12}$
Te-133m	(vapour)	$2\ 10^{13}$
Te-134		$3\ 10^{12}$
Te-134	(vapour)	$7\ 10^{13}$
Terbium		
Tb-147		$2\ 10^{12}$
Tb-149		$2\ 10^{12}$
Tb-150		$2\ 10^{12}$
Tb-151		$4\ 10^{12}$
Tb-153		$7\ 10^{12}$

Tb-154		$4\ 10^{12}$
Tb-155		$1\ 10^{13}$
Tb-156		$3\ 10^{12}$
Tb-156m	(long lived isotope)	$1\ 10^{13}$
Tb-156m	(short lived isotope)	$4\ 10^{12}$
Tb-157		$1\ 10^{13}$
Tb-158		$2\ 10^{11}$
Tb-160		$5\ 10^{11}$
Tb-161		$2\ 10^{12}$
Thallium		
Tl-194		$1\ 10^{13}$
Tl-194m		$2\ 10^{12}$
Tl-195		$4\ 10^{12}$
Tl-197		$5\ 10^{12}$
Tl-198		$7\ 10^{12}$
Tl-198m		$2\ 10^{12}$
Tl-199		$6\ 10^{12}$
Tl-200		$1\ 10^{13}$
Tl-201		$7\ 10^{12}$
Tl-202		$7\ 10^{12}$

Tl-204		$2\ 10^{12}$
Thorium		
Th-226		$4\ 10^{11}$
Th-227		$2\ 10^{9}$
Th-228		$6\ 10^{8}$
Th-229		$1\ 10^{8}$
Th-230		$2\ 10^{8}$
Th-231		$2\ 10^{12}$
Th-232		$2\ 10^{8}$
Th-234		$3\ 10^{12}$
Thulium		
Tm-162		$2\ 10^{12}$
Tm-166		$3\ 10^{12}$
Tm-167		$4\ 10^{12}$
Tm-170		$2\ 10^{12}$
Tm-171		$1\ 10^{13}$
Tm-172		$2\ 10^{12}$
Tm-173		$2\ 10^{12}$
Tm-175		$2\ 10^{12}$
Tin		

Sn-110		$6\ 10^{13}$
Sn-111		$2\ 10^{12}$
Sn-113		$5\ 10^{12}$
Sn-117m		$3\ 10^{12}$
Sn-119m		$5\ 10^{12}$
Sn-121		$3\ 10^{12}$
Sn-121m		$4\ 10^{12}$
Sn-123		$2\ 10^{12}$
Sn-123m		$2\ 10^{12}$
Sn-125		$1\ 10^{12}$
Sn-126		$5\ 10^{11}$
Sn-127		$2\ 10^{12}$
Sn-128		$2\ 10^{12}$
Titanium		
Ti-44		$2\ 10^{11}$
Ti-45		$2\ 10^{12}$
Tungsten		
W-176		$5\ 10^{12}$
W-177		$3\ 10^{12}$
W-178		$6\ 10^{13}$

W-179		$1\ 10^{13}$
W-181		$1\ 10^{13}$
W-185		$4\ 10^{12}$
W-187		$2\ 10^{12}$
W-188		$3\ 10^{12}$
Uranium		
U-230		$2\ 10^{9}$
U-231		$7\ 10^{12}$
U-232		$6\ 10^{8}$
U-233		$3\ 10^{9}$
U-234		$3\ 10^{9}$
U-235		$3\ 10^{9}$
U-236		$3\ 10^{9}$
U-237		$2\ 10^{12}$
U-238		$3\ 10^{9}$
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)	$9\ 10^{13}$
Xe-125	(gas)	$2\ 10^{14}$
Xe-127	(gas)	$2\ 10^{14}$
Xe-129m	(gas)	$2\ 10^{15}$
Xe-131m	(gas)	$4\ 10^{15}$
Xe-133	(gas)	$1\ 10^{15}$
Xe-133m	(gas)	$2\ 10^{15}$
Xe-135	(gas)	$2\ 10^{14}$
Xe-135m	(gas)	$1\ 10^{14}$
Xe-138	(gas)	$5\ 10^{13}$
Ytterbium		
Yb-162		$1\ 10^{13}$
Yb-166		$8\ 10^{12}$
Yb-167		$4\ 10^{12}$
Yb-169		$3\ 10^{12}$

Yb-175		$4\ 10^{12}$
Yb-177		$2\ 10^{12}$
Yb-178		$2\ 10^{12}$
Yttrium		
Y-86		$2\ 10^{12}$
Y-86m		$1\ 10^{13}$
Y-87		$2\ 10^{13}$
Y-88		$2\ 10^{11}$
Y-90		$2\ 10^{12}$
Y-90m		$7\ 10^{12}$
Y-91		$2\ 10^{12}$
Y-91m		$2\ 10^{13}$
Y-92		$6\ 10^{11}$
Y-93		$8\ 10^{11}$
Y-94		$6\ 10^{11}$
Y-95		$6\ 10^{11}$
Zinc		
Zn-62		$1\ 10^{13}$
Zn-63		$1\ 10^{12}$
Zn-65		$5\ 10^{10}$

Zn-69		$2\ 10^{12}$
Zn-69m		$2\ 10^{13}$
Zn-71m		$2\ 10^{12}$
Zn-72		$3\ 10^{12}$
Zirconium		
Zr-86		$2\ 10^{13}$
Zr-88		$1\ 10^{12}$
Zr-89		$4\ 10^{12}$
Zr-93		$8\ 10^{11}$
Zr-95		$8\ 10^{11}$
Zr-97		$2\ 10^{12}$
Other radionuclides not listed above (see note)		$4\ 10^{7}$

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 Q_{lim}, namely -

$$\sum \frac{Q_p}{Q_{lim}}$$

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.

SCHEDULE 3

Regulation 3(1)

MASSES OF FISSILE MATERIAL

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;
(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

Table of radionuclides

Radionuclide name, symbol	***Radionuclide form***	***Quantity (Bq)***
Actinium		

Ac-225	(see note 1)	$6\ 10^{9}$
Ac-227	(see note 1)	$9\ 10^{7}$
Ac-228		$5\ 10^{11}$
Aluminium		
Al-26		$1\ 10^{11}$
Americium		
Am-241		$1\ 10^{9}$
Am-242m	(see note 1)	$1\ 10^{9}$
Am-243	(see note 1)	$1\ 10^{9}$
Antimony		
Sb-122		$4\ 10^{11}$
Sb-124		$6\ 10^{11}$
Sb-125		$1\ 10^{12}$
Sb-126		$4\ 10^{11}$
Argon		
Ar-37		$4\ 10^{13}$
Ar-39		$2\ 10^{13}$
Ar-41		$3\ 10^{11}$
Arsenic		
As-72		$3\ 10^{11}$

As-73		$4\ 10^{13}$
As-74		$9\ 10^{11}$
As-76		$3\ 10^{11}$
As-77		$7\ 10^{11}$
Astatine		
At-211	(see note 1)	$5\ 10^{11}$
Barium		
Ba-131	(see note 1)	$2\ 10^{12}$
Ba-133		$3\ 10^{12}$
Ba-133m		$6\ 10^{11}$
Ba-140	(see note 1)	$3\ 10^{11}$
Berkelium		
Bk-247		$8\ 10^{8}$
Bk-249	(see note 1)	$3\ 10^{11}$
Beryllium		
Be-7		$2\ 10^{13}$
Be-10		$6\ 10^{11}$
Bismuth		
Bi-205		$7\ 10^{11}$
Bi-206		$3\ 10^{11}$

Bi-207		$7\ 10^{11}$
Bi-210		$6\ 10^{11}$
Bi-210m	(see note 1)	$2\ 10^{10}$
Bi-212	(see note 1)	$6\ 10^{11}$
Bromine		
Br-76		$4\ 10^{11}$
Br-77		$3\ 10^{12}$
Br-82		$4\ 10^{11}$
Cadmium		
Cd-109		$2\ 10^{12}$
Cd-113m		$5\ 10^{11}$
Cd-115	(see note 1)	$4\ 10^{11}$
Cd-115m		$5\ 10^{11}$
Caesium		
Cs-129		$4\ 10^{12}$
Cs-131		$3\ 10^{13}$
Cs-132		$1\ 10^{12}$
Cs-134		$7\ 10^{11}$
Cs-134m		$6\ 10^{11}$
Cs-135		$1\ 10^{12}$

Cs-136		$5\ 10^{11}$
Cs-137	(see note 1)	$6\ 10^{11}$
Calcium		
Ca-41		unlimited
Ca-45		$1\ 10^{12}$
Ca-47	(see note 1)	$3\ 10^{11}$
Californium		
Cf-248		$6\ 10^{9}$
Cf-249		$8\ 10^{8}$
Cf-250		$2\ 10^{9}$
Cf-251		$7\ 10^{8}$
Cf-252		$3\ 10^{9}$
Cf-253	(see note 1)	$4\ 10^{10}$
Cf-254		$1\ 10^{9}$
Carbon		
C-11		$6\ 10^{11}$
C-14		$3\ 10^{12}$
Cerium		
Ce-139		$2\ 10^{12}$
Ce-141		$6\ 10^{11}$

Ce-143		$6\ 10^{11}$
Ce-144	(see note 1)	$2\ 10^{11}$
Chlorine		
Cl-36		$6\ 10^{11}$
Cl-38		$2\ 10^{11}$
Chromium		
Cr-51		$3\ 10^{13}$
Cobalt		
Co-55		$5\ 10^{11}$
Co-56		$3\ 10^{11}$
Co-57		$1\ 10^{13}$
Co-58		$1\ 10^{12}$
Co-58m		$4\ 10^{13}$
Co-60		$4\ 10^{11}$
Copper		
Cu-64		$1\ 10^{12}$
Cu-67		$7\ 10^{11}$
Curium		
Cm-240		$2\ 10^{10}$
Cm-241		$1\ 10^{12}$

Cm-242		$1\ 10^{10}$
Cm-243		$1\ 10^{9}$
Cm-244		$2\ 10^{9}$
Cm-245		$9\ 10^{8}$
Cm-246		$9\ 10^{8}$
Cm-247	(see note 1)	$1\ 10^{9}$
Cm-248		$3\ 10^{8}$
Dysprosium		
Dy-159		$2\ 10^{13}$
Dy-165		$6\ 10^{11}$
Dy-166	(see note 1)	$3\ 10^{11}$
Erbium		
Er-169		$1\ 10^{12}$
Er-171		$5\ 10^{11}$
Europium		
Eu-147		$2\ 10^{12}$
Eu-148		$5\ 10^{11}$
Eu-149		$2\ 10^{13}$
Eu-150	(long lived isotope)	$7\ 10^{11}$
Eu-150	(short lived isotope)	$7\ 10^{11}$

Eu-152		$1\ 10^{12}$
Eu-152m		$8\ 10^{11}$
Eu-154		$6\ 10^{11}$
Eu-155		$3\ 10^{12}$
Eu-156		$7\ 10^{11}$
Fluorine		
F-18		$6\ 10^{11}$
Gadolinium		
Gd-146	(see note 1)	$5\ 10^{11}$
Gd-148		$2\ 10^{9}$
Gd-153		$9\ 10^{12}$
Gd-159		$6\ 10^{11}$
Gallium		
Ga-67		$3\ 10^{12}$
Ga-68		$5\ 10^{11}$
Ga-72		$4\ 10^{11}$
Germanium		
Ge-68	(see note 1)	$5\ 10^{11}$
Ge-71		$4\ 10^{13}$
Ge-77		$3\ 10^{11}$

Gold		
Au-193		$2\ 10^{12}$
Au-194		$1\ 10^{12}$
Au-195		$6\ 10^{12}$
Au-198		$6\ 10^{11}$
Au-199		$6\ 10^{11}$
Hafnium		
Hf-172	(see note 1)	$6\ 10^{11}$
Hf-175		$3\ 10^{12}$
Hf-181		$5\ 10^{11}$
Hf-182		unlimited
Holmium		
Ho-166		$4\ 10^{11}$
Ho-166m		$5\ 10^{11}$
Hydrogen		
H-3		$4\ 10^{13}$
Indium		
In-111		$3\ 10^{12}$
In-113m		$2\ 10^{12}$
In-114m	(see note 1)	$5\ 10^{11}$

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		$6\ 10^{11}$
I-134		$3\ 10^{11}$
I-135	(see note 1)	$6\ 10^{11}$
Iridium		
Ir-189	(see note 1)	$1\ 10^{13}$
Ir-190		$7\ 10^{11}$
Ir-192		$6\ 10^{11}$
Ir-194		$3\ 10^{11}$
Iron		
Fe-52	(see note 1)	$3\ 10^{11}$
Fe-55		$4\ 10^{13}$

Fe-59		$9\ 10^{11}$
Fe-60	(see note 1)	$2\ 10^{11}$
Krypton		
Kr-81		$4\ 10^{13}$
Kr-85		$1\ 10^{13}$
Kr-85m		$3\ 10^{12}$
Kr-87		$2\ 10^{11}$
Lanthanum		
La-137		$6\ 10^{12}$
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		$6\ 10^{11}$
Lu-173		$8\ 10^{12}$

Lu-174		$9\ 10^{12}$
Lu-174m		$1\ 10^{13}$
Lu-177		$7\ 10^{11}$
Magnesium		
Mg-28	(see note 1)	$3\ 10^{11}$
Manganese		
Mn-52		$3\ 10^{11}$
Mn-53		unlimited
Mn-54		$1\ 10^{12}$
Mn-56		$3\ 10^{11}$
Mercury		
Hg-194	(see note 1)	$1\ 10^{12}$
Hg-195m	(see note 1)	$7\ 10^{11}$
Hg-197		$1\ 10^{13}$
Hg-197m		$4\ 10^{11}$
Hg-203		$1\ 10^{12}$
Molybdenum		
Mo-93		$2\ 10^{13}$
Mo-99	(see note 1)	$6\ 10^{11}$
Neodymium		

Nd-147		$6\ 10^{11}$
Nd-149		$5\ 10^{11}$
Neptunium		
Np-235		$4\ 10^{13}$
Np-236	(long lived isotope)	$2\ 10^{10}$
Np-236	(short lived isotope)	$2\ 10^{12}$
Np-237		$2\ 10^{9}$
Np-239		$4\ 10^{11}$
Nickel		
Ni-59		unlimited
Ni-63		$3\ 10^{13}$
Ni-65		$4\ 10^{11}$
Niobium		
Nb-93m		$3\ 10^{13}$
Nb-94		$7\ 10^{11}$
Nb-95		$1\ 10^{12}$
Nb-97		$6\ 10^{11}$
Nitrogen		
N-13		$6\ 10^{11}$
Osmium		

Os-185		$1\ 10^{12}$
Os-191		$2\ 10^{12}$
Os-191m		$3\ 10^{13}$
Os-193		$6\ 10^{11}$
Os-194	(see note 1)	$3\ 10^{11}$
Palladium		
Pd-103	(see note 1)	$4\ 10^{13}$
Pd-107		unlimited
Pd-109		$5\ 10^{11}$
Phosphorus		
P-32		$5\ 10^{11}$
P-33		$1\ 10^{12}$
Platinum		
Pt-188	(see note 1)	$8\ 10^{11}$
Pt-191		$3\ 10^{12}$
Pt-193		$4\ 10^{13}$
Pt-193m		$5\ 10^{11}$
Pt-195m		$5\ 10^{11}$
Pt-197		$6\ 10^{11}$
Pt-197m		$6\ 10^{11}$

Plutonium		
Pu-236		$3\ 10^{9}$
Pu-237		$2\ 10^{13}$
Pu-238		$1\ 10^{9}$
Pu-239		$1\ 10^{9}$
Pu-240		$1\ 10^{9}$
Pu-241	(see note 1)	$6\ 10^{10}$
Pu-242		$1\ 10^{9}$
Pu-244	(see note 1)	$1\ 10^{9}$
Polonium		
Po-210		$2\ 10^{10}$
Potassium		
K-40		$9\ 10^{11}$
K-42		$2\ 10^{11}$
K-43		$6\ 10^{11}$
Praseodymium		
Pr-142		$4\ 10^{11}$
Pr-143		$6\ 10^{11}$
Promethium		
Pm-143		$3\ 10^{12}$

Pm-144		$7\ 10^{11}$
Pm-145		$1\ 10^{13}$
Pm-147		$2\ 10^{12}$
Pm-148m	(see note 1)	$7\ 10^{11}$
Pm-149		$6\ 10^{11}$
Pm-151		$6\ 10^{11}$
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)	$7\ 10^{9}$
Ra-224	(see note 1)	$2\ 10^{10}$
Ra-225	(see note 1)	$4\ 10^{9}$
Ra-226	(see note 1)	$3\ 10^{9}$
Ra-228	(see note 1)	$2\ 10^{10}$
Radon		
Rn-222	(see note 1)	$4\ 10^{9}$
Rhenium		
Re-184		$1\ 10^{12}$

Re-184m		$1\ 10^{12}$
Re-186		$6\ 10^{11}$
Re-187		unlimited
Re-188		$4\ 10^{11}$
Re-189	(see note 1)	$6\ 10^{11}$
Re-natural		unlimited
Rhodium		
Rh-99		$2\ 10^{12}$
Rh-101		$3\ 10^{12}$
Rh-102		$5\ 10^{11}$
Rh-102m		$2\ 10^{12}$
Rh-103m		$4\ 10^{13}$
Rh-105		$8\ 10^{11}$
Rubidium		
Rb-81		$8\ 10^{11}$
Rb-83	(see note 1)	$2\ 10^{12}$
Rb-84		$1\ 10^{12}$
Rb-86		$5\ 10^{11}$
Rb-87		unlimited
Rb-natural		unlimited

Ruthenium		
Ru-97		$5\ 10^{12}$
Ru-103	(see note 1)	$2\ 10^{12}$
Ru-105		$6\ 10^{11}$
Ru-106	(see note 1)	$2\ 10^{11}$
Samarium		
Sm-145		$1\ 10^{13}$
Sm-147		unlimited
Sm-151		$1\ 10^{13}$
Sm-153		$6\ 10^{11}$
Scandium		
Sc-44		$5\ 10^{11}$
Sc-46		$5\ 10^{11}$
Sc-47		$7\ 10^{11}$
Sc-48		$3\ 10^{11}$
Selenium		
Se-75		$3\ 10^{12}$
Se-79		$2\ 10^{12}$
Silicon		
Si-31		$6\ 10^{11}$

Si-32		$5\ 10^{11}$
Silver		
Ag-105		$2\ 10^{12}$
Ag-108m	(see note 1)	$7\ 10^{11}$
Ag-110m	(see note 1)	$4\ 10^{11}$
Ag-111		$6\ 10^{11}$
Sodium		
Na-22		$5\ 10^{11}$
Na-24		$2\ 10^{11}$
Strontium		
Sr-82	(see note 1)	$2\ 10^{11}$
Sr-85		$2\ 10^{12}$
Sr-85m		$5\ 10^{12}$
Sr-87m		$3\ 10^{12}$
Sr-89		$6\ 10^{11}$
Sr-90	(see note 1)	$3\ 10^{11}$
Sr-91	(see note 1)	$3\ 10^{11}$
Sr-92	(see note 1)	$3\ 10^{11}$
Sulphur		
S-35		$3\ 10^{12}$

Tantalum		
Ta-178	(long lived isotope)	$8\ 10^{11}$
Ta-179		$3\ 10^{13}$
Ta-182		$5\ 10^{11}$
Technetium		
Tc-95m	(see note 1)	$2\ 10^{12}$
Tc-96		$4\ 10^{11}$
Tc-96m	(see note 1)	$4\ 10^{11}$
Tc-97		unlimited
Tc-97m		$1\ 10^{12}$
Tc-98		$7\ 10^{11}$
Tc-99		$9\ 10^{11}$
Tc-99m		$4\ 10^{12}$
Tellurium		
Te-121		$2\ 10^{12}$
Te-121m		$3\ 10^{12}$
Te-123m		$1\ 10^{12}$
Te-125m		$9\ 10^{11}$
Te-127		$7\ 10^{11}$
Te-127m	(see note 1)	$5\ 10^{11}$

Te-129		$6\ 10^{11}$
Te-129m	(see note 1)	$4\ 10^{11}$
Te-131m	(see note 1)	$5\ 10^{11}$
Te-132	(see note 1)	$4\ 10^{11}$
Terbium		
Tb-157		$4\ 10^{13}$
Tb-158		$1\ 10^{12}$
Tb-160		$6\ 10^{11}$
Thallium		
Tl-200		$9\ 10^{11}$
Tl-201		$4\ 10^{12}$
Tl-202		$2\ 10^{12}$
Tl-204		$7\ 10^{11}$
Thorium		
Th-227		$5\ 10^{9}$
Th-228	(see note 1)	$1\ 10^{9}$
Th-229		$5\ 10^{8}$
Th-230		$1\ 10^{9}$
Th-231		$2\ 10^{10}$
Th-232		unlimited

Th-234	(see note 1)	$3\ 10^{11}$
Th-natural		unlimited
Thulium		
Tm-167		$8\ 10^{11}$
Tm-170		$6\ 10^{11}$
Tm-171		$4\ 10^{13}$
Tin		
Sn-113	(see note 1)	$2\ 10^{12}$
Sn-117m		$4\ 10^{11}$
Sn-119m		$3\ 10^{13}$
Sn-121m	(see note 1)	$9\ 10^{11}$
Sn-123		$6\ 10^{11}$
Sn-125		$4\ 10^{11}$
Sn-126	(see note 1)	$4\ 10^{11}$
Titanium		
Ti-44	(see note 1)	$4\ 10^{11}$
Tungsten		
W-178	(see note 1)	$5\ 10^{12}$
W-181		$3\ 10^{13}$
W-185		$8\ 10^{11}$

W-187		$6\ 10^{11}$
W-188	(see note 1)	$3\ 10^{11}$
Uranium		
U-230	(fast lung absorption, see notes 1 and 2)	$1\ 10^{11}$
U-230	(medium lung absorption see notes 1 and 3)	$4\ 10^{9}$
U-230	(slow lung absorption, see notes 1 and 4)	$3\ 10^{9}$
U-232	(fast lung absorption, see note 2)	$1\ 10^{10}$
U-232	(medium lung absorption, see note 3)	$7\ 10^{9}$
U-232	(slow lung absorption, see note 4)	$1\ 10^{9}$
U-233	(fast lung absorption, see note 2)	$9\ 10^{10}$
U-233	(medium lung absorption, see note 3)	$2\ 10^{10}$
U-233	(slow lung aborption, see note 4)	$6\ 10^{9}$
U-234	(fast lung absorption, see note 2)	$9\ 10^{10}$
U-234		$2\ 10^{10}$
U-234	(medium lung absorption, see note 3)	$6\ 10^{9}$
U-235	(slow lung absorption, see note 4)	unlimited
U-236	(all lung absorption types, see notes 1, 2,	unlimited

	3 and 4)	
U-236	(fast lung absorption, see note 2)	$2\ 10^{10}$
U-236	(medium lung absorption, see note 3)	$6\ 10^{9}$
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		
V-48		$4\ 10^{11}$
V-49		$4\ 10^{13}$
Xenon		
Xe-122	(see note 1)	$4\ 10^{11}$
Xe-123		$7\ 10^{11}$
Xe-127		$2\ 10^{12}$
Xe-131m		$4\ 10^{13}$
Xe-133		$1\ 10^{13}$
Xe-135		$2\ 10^{12}$
Ytterbium		
Yb-169		$1\ 10^{12}$
Yb-175		

		$9\ 10^{11}$
Yttrium		
Y-87	(see note 1)	$1\ 10^{12}$
Y-88		$4\ 10^{11}$
Y-90		$3\ 10^{11}$
Y-91		$6\ 10^{11}$
Y-91m		$2\ 10^{12}$
Y-92		$2\ 10^{11}$
Y-93		$3\ 10^{11}$
Zinc		
Zn-65		$2\ 10^{12}$
Zn-69		$6\ 10^{11}$
Zn-69m	(see note 1)	$6\ 10^{11}$
Zirconium		
Zr-88		$3\ 10^{12}$
Zr-93		unlimited
Zr-95	(see note 1)	$8\ 10^{11}$
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)	$2\ 10^{10}$
Other radionuclides not listed above	(see note 6)	$9\ 10^{7}$

where alpha emitting nuclides are known to be present or no relevant data are available		

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.

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 -

$$\sum \frac{Q_p}{Q_{lim}}$$

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.

SCHEDULE 5