Table 4-19. Activity of radionuclides (typical) for one SRP fuel assembly at saturation

Group/radionuclide	Radioactive inventory (curies)	Half-life[a]	Percentage of inventory released by melting	Percentage of inventory passing through confinement
	NOBLE GASES			
Krypton-85	5.702×10^2	10.7y	100	100
Krypton-85m	6.734×10^4	4.48h	100	100
Krypton-87	1.283×10^5	1.27h	100	100
Krypton-88	1.809×10^5	2.86h	100	100
Xenon-133	3.516×10^5	5.25d	100	100
Xenon-135	2.317×10^4	9.10h	100	100
	IODINES			
Iodine-131	1.495×10^5	8.04d	50	0.6
Iodine-132	2.237×10^5	2.28h	50	0.6
Iodine-133	3.547×10^5	20.9h	50	0.6
Iodine-134	3.995×10^5	52.5m	50	0.6
Iodine-135	3.303×10^5	6.61h	50	0.6
	ALKALI METALS			
Rubidium-86	5.072×10^1	18.8d	1	0.005
Cesium-134	3.813×10^3	2.06y	1	0.005
Cesium-136	1.234×10^3	13.0d	1	0.005
Cesium-137	4.633×10^3	30.1y	1	0.005
	TELLURIUM-ANTIMONY			
Tellurium-127	6.977×10^3	9.35h	1	0.005
Tellurium-127m	4.040×10^2	109.d	1	0.005
Tellurium-129	3.210×10^4	1.16h	1	0.005
Tellurium-129m	8.705×10^3	33.5d	1	0.005
Tellurium-131m	1.930×10^4	1.25d	1	0.005
Tellurium-132	2.226×10^5	3.26d	1	0.005
Antimony-127	7.305×10^3	3.91d	1	0.005
Antimony-129	3.361×10^4	4.41h	1	0.005
	ALKALINE EARTHS			
Strontium-89	2.385×10^5	50.6d	1	0.005
Strontium-90	6.980×10^2	28.8y	1	0.005
Strontium-91	3.050×10^5	9.48h	1	0.005
Barium-140	3.298×10^5	12.8d	1	0.005

Table 4-19. Activity of radionuclides (typical) for one SRP fuel assembly at saturation (continued)

Group/radionuclide	Radioactive inventory (curies)	Half-life[a]	Percentage of inventory released by melting	Percentage of inventory passing through confinement
COBALT AND NOBLE METALS				
Cobalt-58	none	70.8d	1	0.005
Cobalt-60	none	5.27y	1	0.005
Molybdenum-99	3.215×10^5	2.75d	1	0.005
Technetium-99m	2.774×10^5	6.01h	1	0.005
Ruthenium-103	1.638×10^5	39.4d	1	0.005
Ruthenium-105	5.879×10^4	4.44h	1	0.005
Ruthenium-106	3.800×10^3	1.00y	1	0.005
Rhodium-105	4.919×10^4	1.48d	1	0.005
RARE EARTHS, REFRACTORY OXIDES AND TRANSURANICS				
Yttrium-90	7.600×10^3	2.67d	1	0.005
Yttrium-91	2.858×10^5	58.5d	1	0.005
Zirconium-95	3.059×10^5	64.0d	1	0.005
Zirconium-97	3.107×10^5	16.9h	1	0.005
Niobium-95	2.743×10^5	35.0d	1	0.005
Lanthanum-140	3.359×10^5	40.3h	1	0.005
Cerium-141	3.028×10^5	32.6d	1	0.005
Cerium-143	3.111×10^5	33.0h	1	0.005
Cerium-144	1.202×10^5	284.d	1	0.005
Praseodymium-143	3.067×10^5	13.6d	1	0.005
Neodymium-147	1.163×10^5	11.0d	1	0.005
Neptunium-239	1.360×10^5	2.35d	1	0.005
Plutonium-238	0.300×10^2	87.7y	1	0.005
Plutonium-239	9.902×10^{-1}	2.4×10^4y	1	0.005
Plutonium-240	9.033×10^{-1}	6.6×10^3y	1	0.005
Plutonium-241	2.241×10^2	14.4y	1	0.005
Americium-241	none	432.y	1	0.005
Curium-242	none	163.d	1	0.005
Curium-244	none	18.1y	1	0.005

[a]Half-life units are indicated by m for minutes, h for hours, d for days or y for years.