Appendix C

Annual Limits on Intake (ALIs) and Derived Air Concentrations (DACs) of Radionuclides for Occupational Exposure; Effluent Concentrations; Concentrations for Release to Sewerage

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
1	Hydrogen-3	Water, DAC includes skin absorption Gas (HT or T_2) Submersion a/: Use above values as HT and T_2 oxidize in air and in the body to HTO.	8E+4	8E+4	2E-5	1E-7	1E-3	1E-2
4	Beryllium-7	W, all compounds except those given for Y Y, oxides, halides, and nitrates	4E+4 -	2E+4 2E+4	9E-6 8E-6	3E-8 3E-8	6E-4 -	6E-3 -
4	Beryllium-10	W, see Be-7 Y, see Be-7	1E+3 LLI wall (1E+3) -	2E+2 1E+1	6E-8 6E-9	2E-10 2E-11	- 2E-5 -	- 2E-4 -
6	Carbon-11	Monoxide Dioxide Compounds	- - 4E+5	1E+6 6E+5 4E+5	5E-4 3E-4 2E-4	2E-6 9E-7 6E-7	- - 6E-3	- - 6E-2
6	Carbon-14	Monoxide Dioxide Compounds	- - 2E+3	2E+6 2E+5 2E+3	7E-4 9E- 9E-5 1E-6	2E-6 3E-7 3E-9	- - 3E-5	- - 3E-4
7	Nitrogen-13 b/	Submersion a/	-	-	4E-6	2E-8	-	-
8	Oxygen-15 b/	Submersion a/	-	-	4E-6	2E-8	-	-
9	Flourine-18 b/	D, fluorides of H, Li, Na, K, Rb, Cs, and Fr W, fluorides of Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, As, Sb, Bi, Fe, Ru, Os, Co, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, V, Nb, Ta, Mn, Tc, and Re Y, lanthanum fluoride	5E+4 St wall (5E+4) - -	7E+4 - 9E+4 8E+4	3E-5 - 4E-5 3E-5	1E-7 - 1E-7 1E-7	- 7E-4 - -	- 7E-3 - -
11	Sodium-22	D, all compounds	4E+2	6E+2	3E-7	9E-10	6E-6	6E-5
11	Sodium-24	D, all compounds	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
12	Magnesium-28	D, all compounds except those given for W W, oxides, hydroxides, carbides, halides, and nitrates	7E+2 -	2E+3 1E+3	7E-7 5E-7	2E-9 2E-9	9E-6 -	9E-5 -
13	Aluminum-26	D, all compounds except those given for W W, oxides, hydroxides, carbides, halides, and nitrates	4E+2 -	6E+1 9E+1	3E-8 4E-8	9E-11 1E-10	6E-6 -	6E-5 -

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			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
14	Silicon-31	D, all compounds except those given for W and Y	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, oxides, hydroxides, carbides, and nitrates	-	3E+4	1E-5	5E-8	-	-
		Y, aluminosilicate glass	-	3E+4	1E-5	4E-8	-	-
14	Silicon-32	D, see Si-31	2E+3 LLI wall (3E+3)	2E+2 -	1E-7 -	3E-10 -	- 4E-5	- 4E-4
		W, see Si-31	-	1E+2	5E-8	2E-10	-	-
		Y, see Si-31	-	5E+0	2E-9	7E-12	-	-
15	Phosphorus-32	D, all compounds except phosphates given for W	6E+2	9E+2	4E-7	1E-9	9E-6	9E-5
		W, phosphates of Zn2+, S3+, Mg2+, Fe3+, Bi3+, and lanthanides	-	4E+2	2E-7	5E-10	-	-
15	Phosphorus-33	D, see P-32	6E+3	8E+3	4E-6	1E-8	8E-5	8E-4
		W, see P-32	-	3E+3	1E-6	4E-9	-	-
16	Sulfur-35	Vapor	-	1E+4	6E-6	2E-8	-	-
		D, sulfides and sulfates except those given for W	1E+4 LLI wall (8E+3)	2E+4 -	7E-6 -	2E-8 -	- 1E-4	- 1E-3
		W, elemental sulfur, sulfides of Sr, Ba, Ge, Sn, Pb, As, Sb, Bi, Cu, Ag, Au, Zn, Cd, Hg, W, and Mo.	6E+3					
		Sulfates of Ca, Sr, Ba, Ra, As, Sb, and Bi	-	2E+2	1E-7	3E-10	-	-
17	Chlorine-36	D, chlorides of H, Li, Na, K, Rb, Cs, and Fr	2E+3	2E+3	1E-6	3E-9	2E-5	2E-4
		W, chlorides of lanthanides, Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, Ge, Sn, Pb, As, Sb, Bi, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Tc, and Re	-	2E+2	1E-7	3E-10	-	-
17	Chlorine-38 b/	D, see Cl-36	2E+4 St wall (3E+4)	4E+4 -	2E-5 -	6E-8 -	- 3E-4	- 3E-3
		W, see Cl-36	-	5E+4	2E-5	6E-8	-	-
17	Chlorine-39 b/	D, see Cl-36	2E+4 St wall (4E+4)	5E+4 -	2E-5 -	7E-8 -	- 5E-4	- 5E-3
		W, see Cl-36	-	6E+4	2E-5	8E-8	-	-
18	Argon-37	Submersion a/	-	-	1E+0	6E-3	-	-
18	Argon-39	Submersion a/	-	-	2E-4	8E-7	-	-
18	Argon-41	Submersion a/	-	-	3E-6	1E-8	-	-
19	Potassium-40	D, all compounds	3E+2	4E+2	2E-7	6E-10	4E-6	4E-5
19	Potassium-42	D, all compounds	5E+3	5E+3	2E-6	7E-9	6E-5	6E-4
19	Potassium-43	D, all compounds	6E+3	9E+3	4E-6	1E-8	9E-5	9E-4
19	Potassium-44 b/	D, all compounds	2E+4 St wall (4E+4)	7E+4 -	3E-5 -	9E-8 -	- 5E-4	- 5E-3

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19	Potassium-45 b/	D, all compounds	3E+4 St wall (5E+4)	1E+5 -	5E-5 -	2E-7 -	- 7E-4	- 7E-3
20	Calcium-41	W, all compounds	3E+3 Bone surf (4E+3)	4E+3 Bone surf (4E+3)	2E-6 -	- 5E-9	- 6E-5	- 6E-4
20	Calcium-45	W, all compounds	2E+3	8E+2	4E-7	1E-9	2E-5	2E-4
20	Calcium-47	W, all compounds	8E+2	9E+2	4E-7	1E-9	1E-5	1E-4
21	Scandium-43	Y, all compounds	7E+3	2E+4	9E-6	3E-8	1E-4	1E-3
21	Scandium-44m	Y, all compounds	5E+2	7E+2	3E-7	1E-9	7E-6	7E-5
21	Scandium-44	Y, all compounds	4E+3	1E+4	5E-6	2E-8	5E-5	5E-4
21	Scandium-46	Y, all compounds	9E+2	2E+2	1E-7	3E-10	1E-5	1E-4
21	Scandium-47	Y, all compounds	2E+3 LLI wall (3E+3)	3E+3 -	1E-6 -	4E-9 -	- 4E-5	- 4E-4
21	Scandium-48	Y, all compounds	8E+2	1E+3	6E-7	2E-9	1E-5	1E-4
21	Scandium-49 b/	Y, all compounds	2E+4	5E+4	2E-5	8E-8	3E-4	3E-3
22	Titanium-44	D, all compounds except those given for W and Y	3E+2	1E+1	5E-9	2E-11	4E-6	4E-5
		W, oxides, hydroxides, carbides, halides, and nitrates	-	3E+1	1E-8	4E-11	-	-
		Y, SrTi0	-	6E+0	2E-9	8E-12	-	-
22	Titanium-45	D, see Ti-44	9E+3	3E+4	1E-5	3E-8	1E-4	1E-3
		W, see Ti-44	-	4E+4	1E-5	5E-8	-	-
		Y, see Ti-44	-	3E+4	1E-5	4E-8	-	-
23	Vanadium-47 b/	D, all compounds except those given for W	3E+4 St wall (3E+4)	8E+4 -	3E-5 -	1E-7 -	- 4E-4	- 4E-3
		W, oxides, hydroxides, carbides, and halides	-	1E+5	4E-5	1E-7	-	-
23	Vanadium-48	D, see V-47	6E+2	1E+3	5E-7	2E-9	9E-6	9E-5
		W, see V-47	-	6E+2	3E-7	9E-10	-	-
23	Vanadium-49	D, see V-47	7E+4 LLI wall (9E+4)	3E+4 Bone surf (3E+4)	1E-5 -	- 5E-8	- 1E-3	- 1E-2
		W, see V-47	-	2E+4	8E-6	2E-8	-	-
24	Chromium-48	D, all compounds except those given for W and Y	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		W, halides and nitrates	-	7E+3	3E-6	1E-8	-	-
		Y, oxides and hydroxides	-	7E+3	3E-6	1E-8	-	-
24	Chromium-49 b/	D, see Cr-48	3E+4	8E+4	4E-5	1E-7	4E-4	4E-3
		W, see Cr-48	-	1E+5	4E-5	1E-7	-	-
		Y, see Cr-48	-	9E+4	4E-5	1E-7	-	-
24	Chromium-51	D, see Cr-48	4E+4	5E+4	2E-5	6E-8	5E-4	5E-3
		W, see Cr-48	-	2E+4	1E-5	3E-8	-	-
		Y, see Cr-48	-	2E+4	8E-6	3E-8	-	-
25	Manganese-51 b/	D, all compounds except those given for W	2E+4	5E+4	2E-5	7E-8	3E-4	3E-3
		W, oxides, hydroxides, halides, and nitrates	-	6E+4	3E-5	8E-8	-	-

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25	Manganese-52m b/	D, see Mn-51	3E+4 St wall (4E+4)	9E+4 -	4E-5 1 -	E-7 -	- 5E-4	- 5E-3
		W, see Mn-51	-	1E+5	4E-5	1E-7	-	-
25	Manganese-52	D, see Mn-51	7E+2	1E+3	5E-7	2E-9	1E-5	1E-4
		W, see Mn-51	-	9E+2	4E-7	1E-9	-	-
25	Manganese-53	D, see Mn-51	5E+4 -	1E+4 Bone surf (2E+4)	5E-6 -	- 3E-8	7E-4 -	7E-3 -
		W, see Mn-51	-	1E+4	5E-6	2E-8	-	-
25	Manganese-54	D, see Mn-51	2E+3	9E+2	4E-7	1E-9	3E-5	3E-4
		W, see Mn-51	-	8E+2	3E-7	1E-9	-	-
25	Manganese-56	D, see Mn-51	5E+3	2E+4	6E-6	2E-8	7E-5	7E-4
		W, see Mn-51	-	2E+4	9E-6	3E-8	-	-
26	Iron-52	D, all compounds except those given for W	9E+2	3E+3	1E-6	4E-9	1E-5	1E-4
		W, oxides, hydroxides, and halides	-	2E+3	1E-6	3E-9	-	-
26	Iron-55	D, see Fe-52	9E+3	2E+3	8E-7	3E-9	1E-4	1E-3
		W, see Fe-52	-	4E+3	2E-6	6E-9	-	-
26	Iron-59	D, see Fe-52	8E+2	3E+2	1E-7	5E-10	1E-5	1E-4
		W, see Fe-52	-	5E+2	2E-7	7E-10	-	-
26	Iron-60	D, see Fe-52	3E+1	6E+0	3E-9	9E-12	4E-7	4E-6
		W, see Fe-52	-	2E+1	8E-9	3E-11	-	-
27	Cobalt-55	W, all compounds except those given for Y	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		Y, oxides, hydroxides, halides, and nitrates	-	3E+3	1E-6	4E-9	-	-
27	Cobalt-56	W, see Co-55	5E+2	3E+2	1E-7	4E-10	6E-6	6E-5
		Y, see Co-55	4E+2	2E+2	8E-8	3E-10	-	-
27	Cobalt-57	W, see Co-55	8E+3	3E+3	1E-6	4E-9	6E-5	6E-4
		Y, see Co-55	4E+3	7E+2	3E-7	9E-10	-	-
27	Cobalt-58m	W, see Co-55	6E+4	9E+4	4E-5	1E-7	8E-4	8E-3
		Y, see Co-55	-	6E+4	3E-5	9E-8	-	-
27	Cobalt-58	W, see Co-55	2E+3	1E+3	5E-7	2E-9	2E-5	2E-4
		Y, see Co-55	1E+3	7E+2	3E-7	1E-9	-	-
27	Cobalt-60m b/	W, see Co-55	1E+6 St wall (1E+6)	4E+6 -	2E-3 -	6E-6 -	- 2E-2	- 2E-1
		Y, see Co-55	-	3E+6	1E-3	4E-6	-	-
27	Cobalt-60	W, see Co-55	5E+2	2E+2	7E-8	2E-10	3E-6	3E-5
		Y, see Co-55	2E+2	3E+1	1E-8	5E-11	-	-
27	Cobalt-61 b/	W, see Co-55	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		Y, see Co-55	2E+4	6E+4	2E-5	8E-8	-	-
27	Cobalt-62m b/	W, see Co-55	4E+4 St wall (5E+4)	2E+5 -	7E-5 -	2E-7 -	- 7E-4	- 7E-3
		Y, see Co-55	-	2E+5	6E-5	2E-7	-	-
28	Nickel-56	D, all compounds except those given for W	1E+3	2E+3	8E-7	3E-9	2E-5	2E-4
		W, oxides, hydroxides, and carbides	-	1E+3	5E-7	2E-9	-	-
		Vapor	-	1E+3	5E-7	2E-9	-	-

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28	Nickel-57	D, see Ni-56	2E+3	5E+3	2E-6	7E-9	2E-5	2E-4
		W, see Ni-56	-	3E+3	1E-6	4E-9	-	-
		Vapor	-	6E+3	3E-6	9E-9	-	-
28	Nickel-59	D, see Ni-56	2E+4	4E+3	2E-6	5E-9	3E-4	3E-3
		W, see Ni-56	-	7E+3	3E-6	1E-8	-	-
		Vapor	-	2E+3	8E-7	3E-9	-	-
28	Nickel-63	D, see Ni-56	9E+3	2E+3	7E-7	2E-9	1E-4	1E-3
		W, see Ni-56	-	3E+3	1E-6	4E-9	-	-
		Vapor	-	8E+2	3E-7	1E-9	-	-
28	Nickel-65	D, see Ni-56	8E+3	2E+4	1E-5	3E-8	1E-4	1E-3
		W, see Ni-56	-	3E+4	1E-5	4E-8	-	-
		Vapor	-	2E+4	7E-6	2E-8	-	-
28	Nickel-66	D, see Ni-56	4E+2 LLI wall (5E+2)	2E+3 -	7E-7 -	2E-9 -	- 6E-6	- 6E-5
		W, see Ni-56	-	6E+2	3E-7	9E-10	-	-
		Vapor	-	3E+3	1E-6	4E-9	-	-
29	Copper-60 b/	D, all compounds except those given for W and Y	3E+4 St wall (3E+4)	9E+4 -	4E-5 -	1E-7 -	- 4E-4	- 4E-3
		W, sulfides, halides, and nitrates	-	1E+5	5E-5	2E-7	-	-
		Y, oxides and hydroxides	-	1E+5	4E-5	1E-7	-	-
29	Copper-61	D, see Cu-60	1E+4	3E+4	1E-5	4E-8	2E-4	2E-3
		W, see Cu-60	-	4E+4	2E-5	6E-8	-	-
		Y, see Cu-60	-	4E+4	1E-5	5E-8	-	-
29	Copper-64	D, see Cu-60	1E+4	3E+4	1E-5	4E-8	2E-4	2E-3
		W, see Cu-60	-	2E+4	1E-5	3E-8	-	-
		Y, see Cu-60	-	2E+4	9E-6	3E-8	-	-
29	Copper-67	D, see Cu-60	5E+3	8E+3	3E-6	1E-8	6E-5	6E-4
		W, see Cu-60	-	5E+3	2E-6	7E-9	-	-
		Y, see Cu-60	-	5E+3	2E-6	6E-9	-	-
30	Zinc-62	Y, all compounds	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
30	Zinc-63 b/	Y, all compounds	2E+4 St wall (3E+4)	7E+4 -	3E-5 -	9E-8 -	- 3E-4	- 3E-3
30	Zinc-65	Y, all compounds	4E+2	3E+2	1E-7	4E-10	5E-6	5E-5
30	Zinc-69m	Y, all compounds	4E+3	7E+3	3E-6	1E-8	6E-5	6E-4
30	Zinc-69 b/	Y, all compounds	6E+4	1E+5	6E-5	2E-7	8E-4	8E-3
30	Zinc-71m	Y, all compounds	6E+3	2E+4	7E-6	2E-8	8E-5	8E-4
30	Zinc-72	Y, all compounds	1E+3	1E+3	5E-7	2E-9	1E-5	1E-4
31	Gallium-65 b/	D, all compounds except those given for W	5E+4 St wall (6E+4)	2E+5 -	7E-5 -	2E-7 -	- 9E-4	- 9E-3
		W, oxides, hydroxides, carbides, halides, and nitrates	-	2E+5	8E-5	3E-7	-	-

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31	Gallium-66	D, see Ga-65	1E+3	4E+3	1E-6	5E-9	1E-5	1E-4
		W, see Ga-65	-	3E+3	1E-6	4E-9	-	-
31	Gallium-67	D, see Ga-65	7E+3	1E+4	6E-6	2E-8	1E-4	1E-3
		W, see Ga-65	-	1E+4	4E-6	1E-8	-	-
31	Gallium-68 b/	D, see Ga-65	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see Ga-65	-	5E+4	2E-5	7E-8	-	-
31	Gallium-70 b/	D, see Ga-65	5E+4 St wall (7E+4)	2E+5	7E-5	2E-7	-	-
		W, see Ga-65	-	2E+5	8E-5	3E-7	1E-3	1E-2
							-	-
31	Gallium-72	D, see Ga-65	1E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		W, see Ga-65	-	3E+3	1E-6	4E-9	-	-
31	Gallium-73	D, see Ga-65	5E+3	2E+4	6E-6	2E-8	7E-5	7E-4
		W, see Ga-65	-	2E+4	6E-6	2E-8	-	-
32	Germanium-66	D, all compounds except those given for W	2E+4	3E+4	1E-5	4E-8	3E-4	3E-3
		W, oxides, sulfides, and halides	-	2E+4	8E-6	3E-8	-	-
32	Germanium-67 b/	D, see Ge-66	3E+4 St wall (4E+4)	9E+4	4E-5	1E-7	-	-
		W, see Ge-66	-	1E+5	4E-5	1E-7	6E-4	6E-3
							-	-
32	Germanium-68	D, see Ge-66	5E+3	4E+3	2E-6	5E-9	6E-5	6E-4
		W, see Ge-66	-	1E+2	4E-8	1E-10	-	-
32	Germanium-69	D, see Ge-66	1E+4	2E+4	6E-6	2E-8	2E-4	2E-3
		W, see Ge-66	-	8E+3	3E-6	1E-8	-	-
32	Germanium-71	D, see Ge-66	5E+5	4E+5	2E-4	6E-7	7E-3	7E-2
		W, see Ge-66	-	4E+4	2E-5	6E-8	-	-
32	Germanium-75 b/	D, see Ge-66	4E+4 St wall (7E+4)	8E+4	3E-5	1E-7	-	-
		W, see Ge-66	-	8E+4	4E-5	1E-7	9E-4	9E-3
							-	-
32	Germanium-77	D, see Ge-66	9E+3	1E+4	4E-6	1E-8	1E-4	1E-3
		W, see Ge-66	-	6E+3	2E-6	8E-9	-	-
32	Germanium-78 b/	D, see Ge-66	2E+4 St wall (2E+4)	2E+4	9E-6	3E-8	-	-
		W, see Ge-66	-	2E+4	9E-6	3E-8	3E-4	3E-3
							-	-
33	Arsenic-69 b/	W, all compounds	3E+4 St wall (4E+4)	1E+5	5E-5	2E-7	-	-
				-	-	-	6E-4	6E-3
33	Arsenic-70 b/	W, all compounds	1E+4	5E+4	2E-5	7E-8	2E-4	2E-3
33	Arsenic-71	W, all compounds	4E+3	5E+3	2E-6	6E-9	5E-5	5E-4
33	Arsenic-72	W, all compounds	9E+2	1E+3	6E-7	2E-9	1E-5	1E-4
33	Arsenic-73	W, all compounds	8E+3	2E+3	7E-7	2E-9	1E-4	1E-3
33	Arsenic-74	W, all compounds	1E+3	8E+2	3E-7	1E-9	2E-5	2E-4
33	Arsenic-76	W, all compounds	1E+3	1E+3	6E-7	2E-9	1E-5	1E-4
33	Arsenic-77	W, all compounds	4E+3 LLI wall (5E+3)	5E+3	2E-6	7E-9	-	-
				-	-	-	6E-5	6E-4
33	Arsenic-78 b/	W, all compounds	8E+3	2E+4	9E-6	3E-8	1E-4	1E-3

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
34	Selenium-70 b/	D, all compounds except those given for W	2E+4	4E+4	2E-5	5E-8	1E-4	1E-3
		W, oxides, hydroxides, carbides, and elemental Se	1E+4	4E+4	2E-5	6E-8	-	-
34	Selenium-73m b/	D, see Se-70	6E+4	2E+5	6E-5	2E-7	4E-4	4E-3
		W, see Se-70	3E+4	1E+5	6E-5	2E-7	-	-
34	Selenium-73	D, see Se-70	3E+3	1E+4	5E-6	2E-8	4E-5	4E-4
		W, see Se-70	-	2E+4	7E-6	2E-8	-	-
34	Selenium-75	D, see Se-70	5E+2	7E+2	3E-7	1E-9	7E-6	7E-5
		W, see Se-70	-	6E+2	3E-7	8E-10	-	-
34	Selenium-79	D, see Se-70	6E+2	8E+2	3E-7	1E-9	8E-6	8E-5
		W, see Se-70	-	6E+2	2E-7	8E-10	-	-
34	Selenium-81m b/	D, see Se-70	4E+4	7E+4	3E-5	9E-8	3E-4	3E-3
		W, see Se-70	2E+4	7E+4	3E-5	1E-7	-	-
34	Selenium-81 b/	D, see Se-70	6E+4 St wall (8E+4)	2E+5	9E-5	3E-7	-	-
				-	-	-	1E-3	1E-2
		W, see Se-70	-	2E+5	1E-4	3E-7	-	-
34	Selenium-83 b/	D, see Se-70	4E+4	1E+5	5E-5	2E-7	4E-4	4E-3
		W, see Se-70	3E+4	1E+5	5E-5	2E-7	-	-
35	Bromine-74m b/	D, bromides of H, Li, Na, K, Rb, Cs, and Fr	1E+4 St wall (2E+4)	4E+4	2E-5	5E-8	-	-
				-	-	-	3E-4	3E-3
		W, bromides of lanthanides, Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, Ge, Sn, Pb, As, Sb, Bi, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, Hf, V, Nb, Ta, Mn, Tc, and Re	-	4E+4	2E-5	6E-8	-	-
35	Bromine-74 b/	D, see Br-75m	2E+4 St wall (4E+4)	7E+4	3E-5	1E-7	-	-
				-	-	-	5E-4	5E-3
		W, see Br-75m	-	8E+4	4E-5	1E-7	-	-
35	Bromine-75 b/	D, see Br-75m	3E+4 St wall (4E+4)	5E+4	2E-5	7E-8	-	-
				-	-	-	5E-4	5E-3
		W, see Br-75m	-	5E+4	2E-5	7E-8	-	-
35	Bromine-76	D, see Br-75m	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
		W, see Br-75m	-	4E+3	2E-6	6E-9	-	-
35	Bromine-77	D, see Br-75m	2E+4	2E+4	1E-5	3E-8	2E-4	2E-3
		W, see Br-75m	-	2E+4	8E-6	3E-8	-	-
35	Bromine-80m	D, see Br-75m	2E+4	2E+4	7E-6	2E-8	3E-4	3E-3
		W, see Br-75m	-	1E+4	6E-6	2E-8	-	-
35	Bromine-80 b/	D, see Br-75m	5E+4 St wall (9E+4)	2E+5	8E-5	3E-7	-	-
				-	-	-	1E-3	1E-2
		W, see Br-75m	-	2E+5	9E-5	3E-7	-	-
35	Bromine-82	D, see Br-75m	3E+3	4E+3	2E-6	6E-9	4E-5	4E-4
		W, see Br-75m	-	4E+3	2E-6	5E-9	-	-
35	Bromine-83	D, see Br-75m	5E+4 St wall (7E+4)	6E+4	3E-5	9E-8	-	-
				-	-	-	9E-4	9E-3
		W, see Br-75m	-	6E+4	3E-5	9E-8	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
35	Bromine-84 b/	D, see Br-75m	2E+4 St wall (3E+4)	6E+4 -	2E-5 -	8E-8 -	- 4E-4	- 4E-3
		W, see Br-75m	-	6E+4	3E-5	9E-8	-	-
36	Krypton-74 b/	Submersion a/	-	-	3E-6	1E-8	-	-
36	Krypton-76	Submersion a/	-	-	9E-6	4E-8	-	-
36	Krypton-77 b/	Submersion a/	-	-	4E-6	2E-8	-	-
36	Krypton-79	Submersion a/	-	-	2E-5	7E-8	-	-
36	Krypton-81	Submersion a/	-	-	7E-4	3E-6	-	-
36	Krypton-83m b/	Submersion a/	-	-	1E-2	5E-5	-	-
36	Krypton-85m	Submersion a/	-	-	2E-5	1E-7	-	-
36	Krypton-85	Submersion a/	-	-	1E-4	7E-7	-	-
36	Krypton-87 b/	Submersion a/	-	-	5E-6	2E-8	-	-
36	Krypton-88	Submersion a/	-	-	2E-6	9E-9	-	-
37	Rubidium-79 b/	D, all compounds	4E+4 St wall (6E+4)	1E+5 -	5E-5 -	2E-7 -	- 8E-4	- 8E-3
37	Rubidium-81m b/	D, all compounds	2E+5 St wall (3E+5)	3E+5 -	1E-4 -	5E-7 -	- 4E-3	- 4E-2
37	Rubidium-81	D, all compounds	4E+4	5E+4	2E-5	7E-8	5E-4	5E-3
37	Rubidium-82m	D, all compounds	1E+4	2E+4	7E-6	2E-8	2E-4	2E-3
37	Rubidium-83	D, all compounds	6E+2	1E+3	4E-7	1E-9	9E-6	9E-5
37	Rubidium-84	D, all compounds	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
37	Rubidium-86	D, all compounds	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
37	Rubidium-87	D, all compounds	1E+3	2E+3	6E-7	2E-9	1E-5	1E-4
37	Rubidium-88 b/	D, all compounds	2E+4 St wall (3E+4)	6E+4 -	3E-5 -	9E-8 -	- 4E-4	- 4E-3
37	Rubidium-89 b/	D, all compounds	4E+4 St wall (6E+4)	1E+5 -	6E-5 -	2E-7 -	- 9E-4	- 9E-3
38	Strontium-80 b/	D, all soluble compounds except $SrTiO_3$	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		Y, all insoluble compounds and $SrTi0_3$	-	1E+4	5E-6	2E-8	-	-
38	Strontium-81 b/	D, see Sr-80	3E+4	8E+4	3E-5	1E-7	3E-4	3E-3
		Y, see Sr-80	2E+4	8E+4	3E-5	1E-7	-	-
38	Strontium-82	D, see Sr-80	3E+2 LLI wall (2E+2)	4E+2 -	2E-7 -	6E-10 -	- 3E-6	- 3E-5
		Y, see Sr-80	2E+2	9E+1	4E-8	1E-10	-	-
38	Strontium-83	D, see Sr-80	3E+3	7E+3	3E-6	1E-8	3E-5	3E-4
		Y, see Sr-80	2E+3	4E+3	1E-6	5E-9	-	-
38	Strontium-85m b/	D, see Sr-80	2E+5	6E+5	3E-4	9E-7	3E-3	3E-2
		Y, see Sr-80	-	8E+5	4E-4	1E-6	-	-
38	Strontium-85	D, see Sr-80	3E+3	3E+3	1E-6	4E-9	4E-5	4E-4
		Y, see Sr-80	-	2E+3	6E-7	2E-9	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
38	Strontium-87m	D, see Sr-80	5E+4	1E+5	5E-5	2E-7	6E-4	6E-3
		Y, see Sr-80	4E+4	2E+5	6E-5	2E-7	-	-
38	Strontium-89	D, see Sr-80	6E+2 LLI wall (6E+2)	8E+2 -	4E-7 -	1E-9 -	- 8E-6	- 8E-5
		Y, see Sr-80	5E+2	1E+2	6E-8	2E-10	-	-
38	Strontium-90	D, see Sr-80	3E+1 Bone surf (4E+1)	2E+1 Bone surf (2E+1)	8E-9 -	- 3E-11	- 5E-7	- 5E-6
		Y, see Sr-80	-	4E+0	2E-9	6E-12	-	-
38	Strontium-91	D, see Sr-80	2E+3	6E+3	2E-6	8E-9	2E-5	2E-4
		Y, see Sr-80	-	4E+3	1E-6	5E-9	-	-
38	Strontium-92	D, see Sr-80	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		Y, see Sr-80	-	7E+3	3E-6	9E-9	-	-
39	Yttrium-86m b/	W, all compounds except those given for Y	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
		Y, oxides and hydroxides	-	5E+4	2E-5	8E-8	-	-
39	Yttrium-86	W, see Y-86m	1E+3	3E+3	1E-6	5E-9	2E-5	2E-4
		Y, see Y-86m	-	3E+3	1E-6	5E-9	-	-
39	Yttrium-87	W, see Y-86m	2E+3	3E+3	1E-6	5E-9	3E-5	3E-4
		Y, see Y-86m	-	3E+3	1E-6	5E-9	-	-
39	Yttrium-88	W, see Y-86m	1E+3	3E+2	1E-7	3E-10	1E-5	1E-4
		Y, see Y-86m	-	2E+2	1E-7	3E-10	-	-
39	Yttrium-90m	W, see Y-86m	8E+3	1E+4	5E-6	2E-8	1E-4	1E-3
		Y, see Y-86m	-	1E+4	5E-6	2E-8	-	-
39	Yttrium-90	W, see Y-86m	4E+2 LLI wall (5E+2)	7E+2 -	3E-7 -	9E-10 -	- 7E-6	- 7E-5
		Y, see Y-86m	-	6E+2	3E-7	9E-10	-	-
39	Yttrium-91m b/	W, see Y-86m	1E+5	2E+5	1E-4	3E-7	2E-3	2E-2
		Y, see Y-86m	-	2E+5	7E-5	2E-7	-	-
39	Yttrium-91	W, see Y-86m	5E+2 LLI wall (6E+2)	2E+2 -	7E-8 -	2E-10 -	- 8E-6	- 8E-5
		Y, see Y-86m	-	1E+2	5E-8	2E-10	-	-
39	Yttrium-92	W, see Y-86m	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		Y, see Y-86m	-	8E+3	3E-6	1E-8	-	-
39	Yttrium-93	W, see Y-86m	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		Y, see Y-86m	-	2E+3	1E-6	3E-9	-	-
39	Yttrium-94 b/	W, see Y-86m	2E+4 St wall (3E+4)	8E+4 -	3E-5 -	1E-7 -	- 4E-4	- 4E-3
		Y, see Y-86m	-	8E+4	3E-5	1E-7	-	-
39	Yttrium-95 b/	W, see Y-86m	4E+4 St wall (5E+4)	2E+5 -	6E-5 -	2E-7 -	- 7E-4	- 7E-3
		Y, see Y-86m	-	1E+5	6E-5	2E-7	-	-
40	Zirconium-86	D, all compounds except those given for W and Y	1E+3	4E+3	2E-6	6E-9	2E-5	2E-4
		W, oxides, hydroxides, halides, and nitrates	-	3E+3	1E-6	4E-9	-	-
		Y, carbide	-	2E+3	1E-6	3E-9	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
40	Zirconium-88	D, see Zr-86	4E+3	2E+2	9E-8	3E-10	5E-5	5E-4
		W, see Zr-86	-	5E+2	2E-7	7E-10	-	-
		Y, see Zr-86	-	3E+2	1E-7	4E-10	-	-
40	Zirconium-89	D, see Zr-86	2E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		W, see Zr-86	-	2E+3	1E-6	3E-9	-	-
		Y, see Zr-86	-	2E+3	1E-6	3E-9	-	-
40	Zirconium-93	D, see Zr-86	1E+3 Bone surf (3E+3)	6E+0 Bone surf (2E+1)	3E-9 -	- 2E-11	- 4E-5	- 4E-4
		W, see Zr-86	-	2E+1	1E-8	-	-	-
			-	Bone surf (6E+1)	-	9E-11	-	-
		Y, see Zr-86	-	6E+1	2E-8	-	-	-
			-	Bone surf (7E+1)	-	9E-11	-	-
40	Zirconium-95	D, see Zr-86	1E+3	1E+2	5E-8	-	2E-5	2E-4
			-	Bone surf (3E+2)	-	4E-10	-	-
		W, see Zr-86	-	4E+2	2E-7	5E-10	-	-
		Y, see Zr-86	-	3E+2	1E-7	4E-10	-	-
40	Zirconium-97	D, see Zr-86	6E+2	2E+3	8E-7	3E-9	9E-6	9E-5
		W, see Zr-86	-	1E+3	6E-7	2E-9	-	-
		Y, see Zr-86	-	1E+3	5E-7	2E-9	-	-
41	Niobium-88 b/	W, all compounds except those given for Y	5E+4 St wall (7E+4)	2E+5 -	9E-5 -	3E-7 -	- 1E-3	- 1E-2
		Y, oxides and hydroxides	-	2E+5	9E-5	3E-7	-	-
41	Niobium-89 b/ (66 min)	W, see Nb-88	1E+4	4E+4	2E-5	6E-8	1E-4	1E-3
		Y, see Nb-88	-	4E+4	2E-5	5E-8	-	-
41	Niobium-89 (122 min)	W, see Nb-88	5E+3	2E+4	8E-6	3E-8	7E-5	7E-4
		Y, see Nb-88	-	2E+4	6E-6	2E-8	-	-
41	Niobium-90	W, see Nb-88	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		Y, see Nb-88	-	2E+3	1E-6	3E-9	-	-
41	Niobium-93m	W, see Nb-88	9E+3 LLI wall (1E+4)	2E+3 -	8E-7 -	3E-9 -	- 2E-4	- 2E-3
		Y, see Nb-88	-	2E+2	7E-8	2E-10	-	-
41	Niobium-94	W, see Nb-88	9E+2	2E+2	8E-8	3E-10	1E-5	1E-4
		Y, see Nb-88	-	2E+1	6E-9	2E-11	-	-
41	Niobium-95m	W, see Nb-88	2E+3 LLI wall (2E+3)	3E+3 -	1E-6 -	4E-9 -	- 3E-5	- 3E-4
		Y, see Nb-88	-	2E+3	9E-7	3E-9	-	-
41	Niobium-95	W, see Nb-88	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
		Y, see Nb-88	-	1E+3	5E-7	2E-9	-	-
41	Niobium-96	W, see Nb-88	1E+3	3E+3	1E-6	4E-9	2E-5	2E-4
		Y, see Nb-88	-	2E+3	1E-6	3E-9	-	-
41	Niobium-97 b/	W, see Nb-88	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
		Y, see Nb-88	-	7E+4	3E-5	1E-7	-	-
41	Niobium-98 b/	W, see Nb-88	1E+4	5E+4	2E-5	8E-8	2E-4	2E-3
		Y, see Nb-88	-	5E+4	2E-5	7E-8	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
42	Molybdenum-90	D, all compounds except those given for Y	4E+3	7E+3	3E-6	1E-8	3E-5	3E-4
		Y, oxides, hydroxides, and MoS_2	2E+3	5E+3	2E-6	6E-9	-	-
42	Molybdenum-93m	D, see Mo-90	9E+3	2E+4	7E-6	2E-8	6E-5	6E-4
		Y, see Mo-90	4E+3	1E+4	6E-6	2E-8	-	-
42	Molybdenum-93	D, see Mo-90	4E+3	5E+3	2E-6	8E-9	5E-5	5E-4
		Y, see Mo-90	2E+4	2E+2	8E-8	2E-10	-	-
42	Molybdenum-99	D, see Mo-90	2E+3 LLI wall (1E+3)	3E+3 -	1E-6 -	4E-9 -	- 2E-5	- 2E-4
		Y, see Mo-90	1E+3	1E+3	6E-7	2E-9	-	-
42	Molybdenum-101 b/	D, see Mo-90	4E+4 St wall (5E+4)	1E+5 -	6E-5 -	2E-7 -	- 7E-4	- 7E-3
		Y, see Mo-90	-	1E+5	6E-5	2E-7	-	-
43	Technetium-93m b/	D, all compounds except those given for W	7E+4	2E+5	6E-5	2E-7	1E-3	1E-2
		W, oxides, hydroxides, halides, and nitrates	-	3E+5	1E-4	4E-7	-	-
43	Technetium-93	D, see Tc-93m	3E+4	7E+4	3E-5	1E-7	4E-4	4E-3
		W, see Tc-93m	-	1E+5	4E-5	1E-7	-	-
43	Technetium-94m b/	D, see Tc-93m	2E+4	4E+4	2E-5	6E-8	3E-4	3E-3
		W, see Tc-93m	-	6E+4	2E-5	8E-8	-	-
43	Technetium-94	D, see Tc-93m	9E+3	2E+4	8E-6	3E-8	1E-4	1E-3
		W, see Tc-93m	-	2E+4	1E-5	3E-8	-	-
43	Technetium-95m	D, see Tc-93m	4E+3	5E+3	2E-6	8E-9	5E-5	5E-4
		W, see Tc-93m	-	2E+3	8E-7	3E-9	-	-
43	Technetium-95	D, see Tc-93m	1E+4	2E+4	9E-6	3E-8	1E-4	1E-3
		W, see Tc-93m	-	2E+4	8E-6	3E-8	-	-
43	Technetium-96m b/	D, see Tc-93m	2E+5	3E+5	1E-4	4E-7	2E-3	2E-2
		W, see Tc-93m	-	2E+5	1E-4	3E-7	-	-
43	Technetium-96	D, see Tc-93m	2E+3	3E+3	1E-6	5E-9	3E-5	3E-4
		W, see Tc-93m	-	2E+3	9E-7	3E-9	-	-
43	Technetium-97m	D, see Tc-93m	5E+3 -	7E+3 St wall (7E+3)	3E-6 -	- 1E-8	6E-5 -	6E-4 -
		W, see Tc-93m	-	1E+3	5E-7	2E-9	-	-
43	Technetium-97	D, see Tc-93m	4E+4	5E+4	2E-5	7E-8	5E-4	5E-3
		W, see Tc-93m	-	6E+3	2E-6	8E-9	-	-
43	Technetium-98	D, see Tc-93m	1E+3	2E+3	7E-7	2E-9	1E-5	1E-4
		W, see Tc-93m	-	3E+2	1E-7	4E-10	-	-
43	Tchnetium-99m	D, see Tc-93m	8E+4	2E+5	6E-5	2E-7	1E-3	1E-2
		W, see Tc-93m	-	2E+5	1E-4	3E-7	-	-
43	Technetium-99	D, see Tc-93m	4E+3 -	5E+3 St wall (6E+3)	2E-6 -	- 8E-9	6E-5 -	6E-4 -
		W, see Tc-93m	-	7E+2	3E-7	9E-10	-	-
43	Technetium-101 b/	D, see Tc-93m	9E+4 St wall (1E+5)	3E+5 -	1E-4 -	5E-7 -	- 2E-3	- 2E-2
		W, see Tc-93m	-	4E+5	2E-4	5E-7	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
43	Technetium-104 b/	D, see Tc-93m	2E+4 St wall (3E+4)	7E+4 -	3E-5 -	1E-7 -	- 4E-4	- 4E-3
		W, see Tc-93m	-	9E+4	4E-5	1E-7	-	-
44	Ruthenium-94 b/	D, all compounds except those given for W and Y	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, halides	-	6E+4	3E-5	9E-8	-	-
		Y, oxides and hydroxides	-	6E+4	2E-5	8E-8	-	-
44	Ruthenium-97	D, see Ru-94	8E+3	2E+4	8E-6	3E-8	1E-4	1E-3
		W, see Ru-94	-	1E+4	5E-6	2E-8	-	-
		Y, see Ru-94	-	1E+4	5E-6	2E-8	-	-
44	Ruthenium-103	D, see Ru-94	2E+3	2E+3	7E-7	2E-9	3E-5	3E-4
		W, see Ru-94	-	1E+3	4E-7	1E-9	-	-
		Y, see Ru-94	-	6E+2	3E-7	9E-10	-	-
44	Ruthenium-105	D, see Ru-94	5E+3	1E+4	6E-6	2E-8	7E-5	7E-4
		W, see Ru-94	-	1E+4	6E-6	2E-8	-	-
		Y, see Ru-94	-	1E+4	5E-6	2E-8	-	-
44	Ruthenium-106	D, see Ru-94	2E+2 LLI wall (2E+2)	9E+1 -	4E-8 -	1E-10 -	- 3E-6	- 3E-5
		W, see Ru-94	-	5E+1	2E-8	8E-11	-	-
		Y, see Ru-94	-	1E+1	5E-9	2E-11	-	-
45	Rhodium-99m	D, all compounds except those given for W and Y	2E+4	6E+4	2E-5	8E-8	2E-4	2E-3
		W, halides	-	8E+4	3E-5	1E-7	-	-
		Y, oxides and hydroxides	-	7E+4	3E-5	9E-8	-	-
45	Rhodium-99	D, see Rh-99m	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
		W, see Rh-99m	-	2E+3	9E-7	3E-9	-	-
		Y, see Rh-99m	-	2E+3	8E-7	3E-9	-	-
45	Rhodium-100	D, see Rh-99m	2E+3	5E+3	2E-6	7E-9	2E-5	2E-4
		W, see Rh-99m	-	4E+3	2E-6	6E-9	-	-
		Y, see Rh-99m	-	4E+3	2E-6	5E-9	-	-
45	Rhodium-101m	D, see Rh-99m	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		W, see Rh-99m	-	8E+3	4E-6	1E-8	-	-
		Y, see Rh-99m	-	8E+3	3E-6	1E-8	-	-
45	Rhodium-101	D, see Rh-99m	2E+3	5E+2	2E-7	7E-10	3E-5	3E-4
		W, see Rh-99m	-	8E+2	3E-7	1E-9	-	-
		Y, see Rh-99m	-	2E+2	6E-8	2E-10	-	-
45	Rhodium-102m	D, see Rh-99m	1E+3 LLI wall (1E+3)	5E+2 -	2E-7 -	7E-10 -	- 2E-5	- 2E-4
		W, see Rh-99m	-	4E+2	2E-7	5E-10	-	-
		Y, see Rh-99m	-	1E+2	5E-8	2E-10	-	-
45	Rhodium-102	D, see Rh-99m	6E+2	9E+1	4E-8	1E-10	8E-6	8E-5
		W, see Rh-99m	-	2E+2	7E-8	2E-10	-	-
		Y, see Rh-99m	-	6E+1	2E-8	8E-11	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
45	Rhodium-103m b/	D, see Rh-99m	4E+5	1E+6	5E-4	2E-6	6E-3	6E-2
		W, see Rh-99m	-	1E+6	5E-4	2E-6	-	-
		Y, see Rh-99m	-	1E+6	5E-4	2E-6	-	-
45	Rhodium-105	D, see Rh-99m	4E+3 LLI wall (4E+3)	1E+4 -	5E-6 -	2E-8 -	- 5E-5	- 5E-4
		W, see Rh-99m	-	6E+3	3E-6	9E-9	-	-
		Y, see Rh-99m	-	6E+3	2E-6	8E-9	-	-
45	Rhodium-106m	D, see Rh-99m	8E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, see Rh-99m	-	4E+4	2E-5	5E-8	-	-
		Y, see Rh-99m	-	4E+4	1E-5	5E-8	-	-
45	Rhodium-107 b/	D, see Rh-99m	7E+4 St wall (9E+4)	2E+5 -	1E-4 -	3E-7 -	- 1E-3	- 1E-2
		W, see Rh-99m	-	3E+5	1E-4	4E-7	-	-
		Y, see Rh-99m	-	3E+5	1E-4	3E-7	-	-
46	Palladium-100	D, all compounds except those given for W and Y	1E+3	1E+3	6E-7	2E-9	2E-5	2E-4
		W, nitrates	-	1E+3	5E-7	2E-9	-	-
		Y, oxides and hydroxides	-	1E+3	6E-7	2E-9	-	-
46	Palladium-101	D, see Pd-100	1E+4	3E+4	1E-5	5E-8	2E-4	2E-3
		W, see Pd-100	-	3E+4	1E-5	5E-8	-	-
		Y, see Pd-100	-	3E+4	1E-5	4E-8	-	-
46	Palladium-103	D, see Pd-100	6E+3 LLI wall (7E+3)	6E+3 -	3E-6 -	9E-9 -	- 1E-4	- 1E-3
		W, see Pd-100	-	4E+3	2E-6	6E-9	-	-
		Y, see Pd-100	-	4E+3	1E-6	5E-9	-	-
46	Palladium-107	D, see Pd-100	3E+4 LLI wall (4E+4)	2E+4 Kidneys (2E+4)	9E-6 -	- 3E-8	- 5E-4	- 5E-3
		W, see Pd-100	-	7E+3	3E-6	1E-8	-	-
		Y, see Pd-100	-	4E+2	2E-7	6E-10	-	-
46	Palladium-109	D, see Pd-100	2E+3	6E+3	3E-6	9E-9	3E-5	3E-4
		W, see Pd-100	-	5E+3	2E-6	8E-9	-	-
		Y, see Pd-100	-	5E+3	2E-6	6E-9	-	-
47	Silver-102 b/	D, all compounds except those given for W and Y	5E+4 St wall (6E+4)	2E+5 -	8E-5 -	2E-7 -	- 9E-4	- 9E-3
		W, nitrates and sulfides	-	2E+5	9E-5	3E-7	-	-
		Y, oxides and hydroxides	-	2E+5	8E-5	3E-7	-	-
47	Silver-103 b/	D, see Ag-102	4E+4	1E+5	4E-5	1E-7	5E-4	5E-3
		W, see Ag-102	-	1E+5	5E-5	2E-7	-	-
		Y, see Ag-102	-	1E+5	5E-5	2E-7	-	-
47	Silver-104m b/	D, see Ag-102	3E+4	9E+4	4E-5	1E-7	4E-4	4E-3
		W, see Ag-102	-	1E+5	5E-5	2E-7	-	-
		Y, see Ag-102	-	1E+5	5E-5	2E-7	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
47	Silver-104 b/	D, see Ag-102	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
		W, see Ag-102	-	1E+5	6E-5	2E-7	-	-
		Y, see Ag-102	-	1E+5	6E-5	2E-7	-	-
47	Silver-105	D, see Ag-102	3E+3	1E+3	4E-7	1E-9	4E-5	4E-4
		W, see Ag-102	-	2E+3	7E-7	2E-9	-	-
		Y, see Ag-102	-	2E+3	7E-7	2E-9	-	-
47	Silver-106m	D, see Ag-102	8E+2	7E+2	3E-7	1E-9	1E-5	1E-4
		W, see Ag-102	-	9E+2	4E-7	1E-9	-	-
		Y, see Ag-102	-	9E+2	4E-7	1E-9	-	-
47	Silver-106 b/	D, see Ag-102	6E+4 St wall (6E+4)	2E+5 -	8E-5 -	3E-7 -	- 9E-4	- 9E-3
		W, see Ag-102	-	2E+5	9E-5	3E-7	-	-
		Y, see Ag-102	-	2E+5	8E-5	3E-7	-	-
47	Silver-108m	D, see Ag-102	6E+2	2E+2	8E-8	3E-10	9E-6	9E-5
		W, see Ag-102	-	3E+2	1E-7	4E-10	-	-
		Y, see Ag-102	-	2E+1	1E-8	3E-11	-	-
47	Silver-110m	D, see Ag-102	5E+2	1E+2	5E-8	2E-10	6E-6	6E-5
		W, see Ag-102	-	2E+2	8E-8	3E-10	-	-
		Y, see Ag-102	-	9E+1	4E-8	1E-10	-	-
47	Silver-111	D, see Ag-102	9E+2 LLI wall (1E+3)	2E+3 Liver (2E+3)	6E-7 -	- 2E-9	- 2E-5	- 2E-4
		W, see Ag-102	-	9E+2	4E-7	1E-9	-	-
		Y, see Ag-102	-	9E+2	4E-7	1E-9	-	-
47	Silver-112	D, see Ag-102	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
		W, see Ag-102	-	1E+4	4E-6	1E-8	-	-
		Y, see Ag-102	-	9E+3	4E-6	1E-8	-	-
47	Silver-115 b/	D, see Ag-102	3E+4 St wall (3E+4)	9E+4 -	4E-5 -	1E-7 -	- 4E-4	- 4E-3
		W, see Ag-102	-	9E+4	4E-5	1E-7	-	-
		Y, see Ag-102	-	8E+4	3E-5	1E-7	-	-
48	Cadmium-104 b/	D, all compounds except those given for W and Y	2E+4	7E+4	3E-5	9E-8	3E-4	3E-3
		W, sulfides, halides, and nitrates	-	1E+5	5E-5	2E-7	-	-
		Y, oxides and hydroxides	-	1E+5	5E-5	2E-7	-	-
48	Cadmium-107	D, see Cd-104	2E+4	5E+4	2E-5	8E-8	3E-4	3E-3
		W, see Cd-104	-	6E+4	2E-5	8E-8	-	-
		Y, see Cd-104	-	5E+4	2E-5	7E-8	-	-
48	Cadmium-109	D, see Cd-104	3E+2 Kidneys (4E+2)	4E+1 Kidneys (5E+1)	1E-8 -	- 7E-11	- 6E-6	- 6E-5
		W, see Cd-104	-	1E+2	5E-8	-	-	-
			-	Kidneys (1E+2)	-	2E-10	-	-
		Y, see Cd-104	-	1E+2	5E-8	2E-10	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
48	Cadmium-113m	D, see Cd-104	2E+1 Kidneys (4E+1)	2E+0 Kidneys (4E+0)	1E-9 -	- 5E-12	- 5E-7	- 5E-6
		W, see Cd-104	- -	8E+0 Kidneys (1E+1)	4E-9 -	- 2E-11	- -	- -
		Y, see Cd-104	-	1E+1	5E-9	2E-11	-	-
48	Cadmium-113	D, see Cd-104	2E+1 Kidneys (3E+1)	2E+0 Kidneys (3E+0)	9E-10 -	- 5E-12	- 4E-7	- 4E-6
		W, see Cd-104	- -	8E+0 Kidneys (1E+1)	3E-9 -	- 2E-11	- -	- -
		Y, see Cd-104	-	1E+1	6E-9	2E-11	-	-
48	Cadmium-115m	D, see Cd-104	3E+2 -	5E+1 Kidneys (8E+1)	2E-8 -	- 1E-10	4E-6 -	4E-5 -
		W, see Cd-104	-	1E+2	5E-8	2E-10	-	-
		Y, see Cd-104	-	1E+2	6E-8	2E-10	-	-
48	Cadmium-115	D, see Cd-104	9E+2 LLI wall (1E+3)	1E+3 -	6E-7 -	2E-9 -	- 1E-5	- 1E-4
		W, see Cd-104	-	1E+3	5E-7	2E-9	-	-
		Y, see Cd-104	-	1E+3	6E-7	2E-9	-	-
48	Cadmium-117m	D, see Cd-104	5E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		W, see Cd-104	-	2E+4	7E-6	2E-8	-	-
		Y, see Cd-104	-	1E+4	6E-6	2E-8	-	-
48	Cadmium-117	D, see Cd-104	5E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		W, see Cd-104	-	2E+4	7E-6	2E-8	-	-
		Y, see Cd-104	-	1E+4	6E-6	2E-8	-	-
49	Indium-109	D, all compounds except those given for W	2E+4	4E+4	2E-5	6E-8	3E-4	3E-3
		W, oxides, hydroxides, halides, and nitrates	-	6E+4	3E-5	9E-8	-	-
49	Indium-110 b/ (69.1 min)	D, see In-109	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see In-109	-	6E+4	2E-5	8E-8	-	-
49	Indium-110 (4.9 h)	D, see In-109	5E+3	2E+4	7E-6	2E-8	7E-5	7E-4
		W, see In-109	-	2E+4	8E-6	3E-8	-	-
49	Indium-111	D, see In-109	4E+3	6E+3	3E-6	9E-9	6E-5	6E-4
		W, see In-109	-	6E+3	3E-6	9E-9	-	-
49	Indium-112 b/	D, see In-109	2E+5	6E+5	3E-4	9E-7	2E-3	2E-2
		W, see In-109	-	7E+5	3E-4	1E-6	-	-
49	Indium-113m b/	D, see In-109	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
		W, see In-109	-	2E+5	8E-5	3E-7	-	-
49	Indium-114m	D, see In-109	3E+2 LLI wall (4E+2)	6E+1 -	3E-8 -	9E-11 -	- 5E-6	- 5E-5
		W, see In-109	-	1E+2	4E-8	1E-10	-	-
49	Indium-115m	D, see In-109	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see In-109	-	5E+4	2E-5	7E-8	-	-
49	Indium-115	D, see In-109	4E+1	1E+0	6E-10	2E-12	5E-7	5E-6
		W, see In-109	-	5E+0	2E-9	8E-12	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
49	Indium-116m b/	D, see In-109	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
		W, see In-109	-	1E+5	5E-5	2E-7	-	-
49	Indium-117m b/	D, see In-109	1E+4	3E+4	1E-5	5E-8	2E-4	2E-3
		W, see In-109	-	4E+4	2E-5	6E-8	-	-
49	Indium-117 b/	D, see In-109	6E+4	2E+5	7E-5	2E-7	8E-4	8E-3
		W, see In-109	-	2E+5	9E-5	3E-7	-	-
49	Indium-119m b/	D, see In-109	4E+4 St wall (5E+4)	1E+5	5E-5	2E-7	-	-
				-	-	-	7E-4	7E-3
		W, see In-109	-	1E+5	6E-5	2E-7	-	-
50	Tin-110	D, all compounds except those given for W	4E+3	1E+4	5E-6	2E-8	5E-5	5E-4
		W, sulfides, oxides, hydroxides, halides, nitrates, and stannic phosphate	-	1E+4	5E-6	2E-8	-	-
50	Tin-111 b/	D, see Sn-110	7E+4	2E+5	9E-5	3E-7	1E-3	1E-2
		W, see Sn-110	-	3E+5	1E-4	4E-7	-	-
50	Tin-113	D, see Sn-110	2E+3 LLI wall (2E+3)	1E+3	5E-7	2E-9	-	-
				-	-	-	3E-5	3E-4
		W, see Sn-110	-	5E+2	2E-7	8E-10	-	-
50	Tin-117m	D, see Sn-110	2E+3 LLI wall (2E+3)	1E+3 Bone surf (2E+3)	5E-7	-	-	-
					-	3E-9	3E-5	3E-4
		W, see Sn-110	-	1E+3	6E-7	2E-9	-	-
50	Tin-119m	D, see Sn-110	3E+3 LLI wall (4E+3)	2E+3	1E-6	3E-9	-	-
				-	-	-	6E-5	6E-4
		W, see Sn-110	-	1E+3	4E-7	1E-9	-	-
50	Tin-121m	D, see Sn-110	3E+3 LLI wall (4E+3)	9E+2	4E-7	1E-9	-	-
				-	-	-	5E-5	5E-4
		W, see Sn-110	-	5E+2	2E-7	8E-10	-	-
50	Tin-121	D, see Sn-110	6E+3 LLI wall (6E+3)	2E+4	6E-6	2E-8	-	-
				-	-	-	8E-5	8E-4
		W, see Sn-110	-	1E+4	5E-6	2E-8	-	-
50	Tin-123m b/	D, see Sn-110	5E+4	1E+5	5E-5	2E-7	7E-4	7E-3
		W, see Sn-110	-	1E+5	6E-5	2E-7	-	-
50	Tin-123	D, see Sn-110	5E+2 LLI wall (6E+2)	6E+2	3E-7	9E-10	-	-
				-	-	-	9E-6	9E-5
		W, see Sn-110	-	2E+2	7E-8	2E-10	-	-
50	Tin-125	D, see Sn-110	4E+2 LLI wall (5E+2)	9E+2	4E-7	1E-9	-	-
				-	-	-	6E-6	6E-5
		W, see Sn-110	-	4E+2	1E-7	5E-10	-	-
50	Tin-126	D, see Sn-110	3E+2	6E+1	2E-8	8E-11	4E-6	4E-5
		W, see Sn-110	-	7E+1	3E-8	9E-11	-	-
50	Tin-127	D, see Sn-110	7E+3	2E+4	8E-6	3E-8	9E-5	9E-4
		W, see Sn-110	-	2E+4	8E-6	3E-8	-	-
50	Tin-128 b/	D, see Sn-110	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, see Sn-110	-	4E+4	1E-5	5E-8	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
51	Antimony-115 b/	D, all compounds except those given for W	8E+4	2E+5	1E-4	3E-7	1E-3	1E-2
		W, oxides, hydroxides, halides, sulfides, sulfates, and nitrates	-	3E+5	1E-4	4E-7	-	-
51	Antimony-116m b/	D, see Sb-115	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
		W, see Sb-115	-	1E+5	6E-5	2E-7	-	-
51	Antimony-116 b/	D, see Sb-115	7E+4 St wall (9E+4)	3E+5	1E-4	4E-7	-	-
				-	-	-	1E-3	1E-2
		W, see Sb-115	-	3E+5	1E-4	5E-7	-	-
51	Antimony-117	D, see Sb-115	7E+4	2E+5	9E-5	3E-7	9E-4	9E-3
		W, see Sb-115	-	3E+5	1E-4	4E-7	-	-
51	Antimony-118m	D, see Sb-115	6E+3	2E+4	8E-6	3E-8	7E-5	7E-4
		W, see Sb-115	5E+3	2E+4	9E-6	3E-8	-	-
51	Antimony-119	D, see Sb-115	2E+4	5E+4	2E-5	6E-8	2E-4	2E-3
		W, see Sb-115	2E+4	3E+4	1E-5	4E-8	-	-
51	Antimony-120 b/ (6 min)	D, see Sb-115	1E+5 St wall (2E+5)	4E+5	2E-4	6E-7	-	-
				-	-	-	2E-3	2E-2
		W, see Sb-115	-	5E+5	2E-4	7E-7	-	-
51	Antimony-120 (5.76 d)	D, see Sb-115	1E+3	2E+3	9E-7	3E-9	1E-5	1E-4
		W, see Sb-115	9E+2	1E+3	5E-7	2E-9	-	-
51	Antimony-122	D, see Sb-115	8E+2 LLI wall (8E+2)	2E+3	1E-6	3E-9	-	-
				-	-	-	1E-5	1E-4
		W, see Sb-115	7E+2	1E+3	4E-7	2E-9	-	-
51	Antimony-124m b/	D, see Sb-115	3E+5	8E+5	4E-4	1E-6	3E-3	3E-2
		W, see Sb-115	2E+5	6E+5	2E-4	8E-7	-	-
51	Antimony-124	D, see Sb-115	6E+2	9E+2	4E-7	1E-9	7E-6	7E-5
		W, see Sb-115	5E+2	2E+2	1E-7	3E-10	-	-
51	Antimony-125	D, see Sb-115	2E+3	2E+3	1E-6	3E-9	3E-5	3E-4
		W, see Sb-115	-	5E+2	2E-7	7E-10	-	-
51	Antimony-126m b/	D, see Sb-115	5E+4 St wall (7E+4)	2E+5	8E-5	3E-7	-	-
				-	-	-	9E-4	9E-3
		W, see Sb-115	-	2E+5	8E-5	3E-7	-	-
51	Antimony-126	D, see Sb-115	6E+2	1E+3	5E-7	2E-9	7E-6	7E-5
		W, see Sb-115	5E+2	5E+2	2E-7	7E-10	-	-
51	Antimony-127	D, see Sb-115	8E+2 LLI wall (8E+2)	2E+3	9E-7	3E-9	-	-
				-	-	-	1E-5	1E-4
		W, see Sb-115	7E+2	9E+2	4E-7	1E-9	-	-
51	Antimony-128 b/ (10.4 min)	D, see Sb-115	8E+4 St wall (1E+5)	4E+5	2E-4	5E-7	-	-
				-	-	-	1E-3	1E-2
		W, see Sb-115	-	4E+5	2E-4	6E-7	-	-
51	Antimony-128 (9.01 h)	D, see Sb-115	1E+3	4E+3	2E-6	6E-9	2E-5	2E-4
		W, see Sb-115	-	3E+3	1E-6	5E-9	-	-
51	Antimony-129	D, see Sb-115	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		W, see Sb-115	-	9E+3	4E-6	1E-8	-	-
51	Antimony-130 b/	D, see Sb-115	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		W, see Sb-115	-	8E+4	3E-5	1E-7	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
51	Antimony-131 b/	D, see Sb-115	1E+4 Thyroid (2E+4)	2E+4 Thyroid (4E+4)	1E-5 -	- 6E-8	- 2E-4	- 2E-3
		W, see Sb-115	- -	2E+4 Thyroid (4E+4)	1E-5 -	- 6E-8	- -	- -
52	Tellurium-116	D, all compounds except those given for W	8E+3	2E+4	9E-6	3E-8	1E-4	1E-3
		W, oxides, hydroxides, and nitrates	-	3E+4	1E-5	4E-8	-	-
52	Tellurium-121m	D, see Te-116	5E+2 Bone surf (7E+2)	2E+2 Bone surf (4E+2)	8E-8 -	- 5E-10	- 1E-5	- 1E-4
		W, see Te-116	-	4E+2	2E-7	6E-10	-	-
52	Tellurium-121	D, see Te-116	3E+3	4E+3	2E-6	6E-9	4E-5	4E-4
		W, see Te-116	-	3E+3	1E-6	4E-9	-	-
52	Tellurium-123m	D, see Te-116	6E+2 Bone surf (1E+3)	2E+2 Bone surf (5E+2)	9E-8 -	- 8E-10	- 1E-5	- 1E-4
		W, see Te-116	-	5E+2	2E-7	8E-10	-	-
52	Tellurium-123	D, see Te-116	5E+2 Bone surf (1E+3)	2E+2 Bone surf (5E+2)	8E-8 -	- 7E-10	- 2E-5	- 2E-4
		W, see Te-116	- -	4E+2 Bone surf (1E+3)	2E-7 -	- 2E-9	- -	- -
52	Tellurium-125m	D, see Te-116	1E+3 Bone surf (1E+3)	4E+2 Bone surf (1E+3)	2E-7 -	- 1E-9	- 2E-5	- 2E-4
		W, see Te-116	-	7E+2	3E-7	1E-9	-	-
52	Tellurium-127m	D, see Te-116	6E+2 -	3E+2 Bone surf (4E+2)	1E-7 -	- 6E-10	9E-6 -	9E-5 -
		W, see Te-116	-	3E+2	1E-7	4E-10	-	-
52	Tellurium-127	D, see Te-116	7E+3	2E+4	9E-6	3E-8	1E-4	1E-3
		W, see Te-116	-	2E+4	7E-6	2E-8	-	-
52	Tellurium-129m	D, see Te-116	5E+2	6E+2	3E-7	9E-10	7E-6	7E-5
		W, see Te-116	-	2E+2	1E-7	3E-10	-	-
52	Tellurium-129 b/	D, see Te-116	3E+4	6E+4	3E-5	9E-8	4E-4	4E-3
		W, see Te-116	-	7E+4	3E-5	1E-7	-	-
52	Tellurium-131m	D, see Te-116	3E+2 Thyroid (6E+2)	4E+2 Thyroid (1E+3)	2E-7 -	- 2E-9	- 8E-6	- 8E-5
		W, see Te-116	- -	4E+2 Thyroid (9E+2)	2E-7 -	- 1E-9	- -	- -
52	Tellurium-131 b/	D, see Te-116	3E+3 Thyroid (6E+3)	5E+3 Thyroid (1E+4)	2E-6 -	- 2E-8	- 8E-5	- 8E-4
		W, see Te-116	- -	5E+3 Thyroid (1E+4)	2E-6 -	- 2E-8	- -	- -
52	Tellurium-132	D, see Te-116	2E+2 Thyroid (7E+2)	2E+2 Thyroid (8E+2)	9E-8 -	- 1E-9	- 9E-6	- 9E-5
		W, see Te-116	- -	2E+2 Thyroid (6E+2)	9E-8 -	- 9E-10	- -	- -

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
52	Tellurium-133m b/	D, see Te-116	3E+3 Thyroid (6E+3)	5E+3 Thyroid (1E+4)	2E-6 -	- 2E-8	- 9E-5	- 9E-4
		W, see Te-116	- -	5E+3 Thyroid (1E+4)	2E-6 -	- 2E-8	- -	- -
52	Tellurium-133 b/	D, see Te-116	1E+4 Thyroid (3E+4)	2E+4 Thyroid (6E+4)	9E-6 -	- 8E-8	- 4E-4	- 4E-3
		W, see Te-116	- -	2E+4 Thyroid (6E+4)	9E-6 -	- 8E-8	- -	- -
52	Tellurium-134 b/	D, see Te-116	2E+4 Thyroid (2E+4)	2E+4 Thyroid (5E+4)	1E-5 -	- 7E-8	- 3E-4	- 3E-3
		W, see Te-116	- -	2E+4 Thyroid (5E+4)	1E-5 -	- 7E-8	- -	- -
53	Iodine-120m b/	D, all compounds	1E+4 Thyroid (1E+4)	2E+4 -	9E-6 -	3E-8 -	- 2E-4	- 2E-3
53	Iodine-120 b/	D, all compounds	4E+3 Thyroid (8E+3)	9E+3 Thyroid (1E+4)	4E-6 -	- 2E-8	- 1E-4	- 1E-3
53	Iodine-121	D, all compounds	1E+4 Thyroid (3E+4)	2E+4 Thyroid (5E+4)	8E-6 -	- 7E-8	- 4E-4	- 4E-3
53	Iodine-123	D, all compounds	3E+3 Thyroid (1E+4)	6E+3 Thyroid (2E+4)	3E-6 -	- 2E-8	- 1E-4	- 1E-3
53	Iodine-124	D, all compounds	5E+1 Thyroid (2E+2)	8E+1 Thyroid (3E+2)	3E-8 -	- 4E-10	- 2E-6	- 2E-5
53	Iodine-125	D, all compounds	4E+1 Thyroid (1E+2)	6E+1 Thyroid (2E+2)	3E-8 -	- 3E-10	- 2E-6	- 2E-5
53	Iodine-126	D, all compounds	2E+1 Thyroid (7E+1)	4E+1 Thyroid (1E+2)	1E-8 -	- 2E-10	- 1E-6	- 1E-5
53	Iodine-128 b/	D, all compounds	4E+4 St wall (6E+4)	1E+5 -	5E-5 -	2E-7 -	- 8E-4	- 8E-3
53	Iodine-129	D, all compounds	5E+0 Thyroid (2E+1)	9E+0 Thyroid (3E+1)	4E-9 -	- 4E-11	- 2E-7	- 2E-6
53	Iodine-130	D, all compounds	4E+2 Thyroid (1E+3)	7E+2 Thyroid (2E+3)	3E-7 -	- 3E-9	- 2E-5	- 2E-4
53	Iodine-131	D, all compounds	3E+1 Thyroid (9E+1)	5E+1 Thyroid (2E+2)	2E-8 -	- 2E-10	- 1E-6	- 1E-5
53	Iodine-132m b/	D, all compounds	4E+3 Thyroid (1E+4)	8E+3 Thyroid (2E+4)	4E-6 -	- 3E-8	- 1E-4	- 1E-3
53	Iodine-132	D, all compounds	4E+3 Thyroid (9E+3)	8E+3 Thyroid (1E+4)	3E-6 -	- 2E-8	- 1E-4	- 1E-3
53	Iodine-133	D, all compounds	1E+2 Thyroid (5E+2)	3E+2 Thyroid (9E+2)	1E-7 -	- 1E-9	- 7E-6	- 7E-5
53	Iodine-134 b/	D, all compounds	2E+4 Thyroid (3E+4)	5E+4 -	2E-5 -	6E-8 -	- 4E-4	- 4E-3
53	Iodine-135	D, all compounds	8E+2 Thyroid (3E+3)	2E+3 Thyroid (4E+3)	7E-7 -	- 6E-9	- 3E-5	- 3E-4
54	Xenon-120 b/	Submersion a/	-	-	1E-5	4E-8	-	-
54	Xenon-121 b/	Submersion a/	-	-	2E-6	1E-8	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
54	Xenon-122	Submersion a/	-	-	7E-5	3E-7	-	-
54	Xenon-123	Submersion a/	-	-	6E-6	3E-8	-	-
54	Xenon-125	Submersion a/	-	-	2E-5	7E-8	-	-
54	Xenon-127	Submersion a/	-	-	1E-5	6E-8	-	-
54	Xenon-129m	Submersion a/	-	-	2E-4	9E-7	-	-
54	Xenon-131m	Submersion a/	-	-	4E-4	2E-6	-	-
54	Xenon-133m	Submersion a/	-	-	1E-4	6E-7	-	-
54	Xenon-133	Submersion a/	-	-	1E-4	5E-7	-	-
54	Xenon-135m b/	Submersion a/	-	-	9E-6	4E-8	-	-
54	Xenon-135	Submersion a/	-	-	1E-5	7E-8	-	-
54	Xenon-138 b/	Submersion a/	-	-	4E-6	2E-8	-	-
55	Cesium-125 b/	D, all compounds	5E+4 St wall (9E+4)	1E+5 -	6E-5 -	2E-7 -	- 1E-3	- 1E-2
55	Cesium-127	D, all compounds	6E+4	9E+4	4E-5	1E-7	9E-4	9E-3
55	Cesium-129	D, all compounds	2E+4	3E+4	1E-5	5E-8	3E-4	3E-3
55	Cesium-130 b/	D, all compounds	6E+4 St wall (1E+5)	2E+5 -	8E-5 -	3E-7 -	- 1E-3	- 1E-2
55	Cesium-131	D, all compounds	2E+4	3E+4	1E-5	4E-8	3E-4	3E-3
55	Cesium-132	D, all compounds	3E+3	4E+3	2E-6	6E-9	4E-5	4E-4
55	Cesium-134m	D, all compounds	1E+5 St wall (1E+5)	1E+5 -	6E-5 -	2E-7 -	- 2E-3	- 2E-2
55	Cesium-134	D, all compounds	7E+1	1E+2	4E-8	2E-10	9E-7	9E-6
55	Cesium-135m b/	D, all compounds	1E+5	2E+5	8E-5	3E-7	1E-3	1E-2
55	Cesium-135	D, all compounds	7E+2	1E+3	5E-7	2E-9	1E-5	1E-4
55	Cesium-136	D, all compounds	4E+2	7E+2	3E-7	9E-10	6E-6	6E-5
55	Cesium-137	D, all compounds	1E+2	2E+2	6E-8	2E-10	1E-6	1E-5
55	Cesium-138 b/	D, all compounds	2E+4 St wall (3E+4)	6E+4 -	2E-5 -	8E-8 -	- 4E-4	- 4E-3
56	Barium-126 b/	D, all compounds	6E+3	2E+4	6E-6	2E-8	8E-5	8E-4
56	Barium-128	D, all compounds	5E+2	2E+3	7E-7	2E-9	7E-6	7E-5
56	Barium-131m b/	D, all compounds	4E+5 St wall (5E+5)	1E+6 -	6E-4 -	2E-6 -	- 7E-3	- 7E-2
56	Barium-131	D, all compounds	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
56	Barium-133m	D, all compounds	2E+3 LLI wall (3E+3)	9E+3 -	4E-6 -	1E-8 -	- 4E-5	- 4E-4
56	Barium-133	D, all compounds	2E+3	7E+2	3E-7	9E-10	2E-5	2E-4
56	Barium-135m	D, all compounds	3E+3	1E+4	5E-6	2E-8	4E-5	4E-4
56	Barium-139 b/	D, all compounds	1E+4	3E+4	1E-5	4E-8	2E-4	2E-3
56	Barium-140	D, all compounds	5E+2 LLI wall (6E+2)	1E+3 -	6E-7 -	2E-9 -	- 8E-6	- 8E-5

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
56	Barium-141 b/	D, all compounds	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
56	Barium-142 b/	D, all compounds	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
57	Lanthanum-131 b/	D, all compounds except those given for W	5E+4	1E+5	5E-5	2E-7	6E-4	6E-3
		W, oxides and hydroxides	-	2E+5	7E-5	2E-7	-	-
57	Lanthanum-132	D, see La-131	3E+3	1E+4	4E-6	1E-8	4E-5	4E-4
		W, see La-131	-	1E+4	5E-6	2E-8	-	-
57	Lanthanum-135	D, see La-131	4E+4	1E+5	4E-5	1E-7	5E-4	5E-3
		W, see La-131	-	9E+4	4E-5	1E-7	-	-
57	Lanthanum-137	D, see La-131	1E+4	6E+1 Liver	3E-8	-	2E-4	2E-3
			-	(7E+1)	-	1E-10	-	-
		W, see La-131	-	3E+2	1E-7	-	-	-
			-	Liver (3E+2)	-	4E-10	-	-
57	Lanthanum-138	D, see La-131	9E+2	4E+0	1E-9	5E-12	1E-5	1E-4
		W, see La-131	-	1E+1	6E-9	2E-11	-	-
57	Lanthanum-140	D, see La-131	6E+2	1E+3	6E-7	2E-9	9E-6	9E-5
		W, see La-131	-	1E+3	5E-7	2E-9	-	-
57	Lanthanum-141	D, see La-131	4E+3	9E+3	4E-6	1E-8	5E-5	5E-4
		W, see La-131	-	1E+4	5E-6	2E-8	-	-
57	Lanthanum-142 b/	D, see La-131	8E+3	2E+4	9E-6	3E-8	1E-4	1E-3
		W, see La-131	-	3E+4	1E-5	5E-8	-	-
57	Lanthanum-143 b/	D, see La-131	4E+4 St wall (4E+4)	1E+5	4E-5	1E-7	-	-
				-	-	-	5E-4	5E-3
		W, see La-131	-	9E+4	4E-5	1E-7	-	-
58	Cerium-134	W, all compounds except those given for Y	5E+2 LLI wall (6E+2)	7E+2	3E-7	1E-9	-	-
				-	-	-	8E-6	8E-5
		Y, oxides, hydroxides, and fluorides	-	7E+2	3E-7	9E-10	-	-
58	Cerium-135	W, see Ce-134	2E+3	4E+3	2E-6	5E-9	2E-5	2E-4
		Y, see Ce-134	-	4E+3	1E-6	5E-9	-	-
58	Cerium-137m	W, see Ce-134	2E+3 LLI wall (2E+3)	4E+3	2E-6	6E-9	-	-
				-	-	-	3E-5	3E-4
		Y, see Ce-134	-	4E+3	2E-6	5E-9	-	-
58	Cerium-137	W, see Ce-134	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
		Y, see Ce-134	-	1E+5	5E-5	2E-7	-	-
58	Cerium-139	W, see Ce-134	5E+3	8E+2	3E-7	1E-9	7E-5	7E-4
		Y, see Ce-134	-	7E+2	3E-7	9E-10	-	-
58	Cerium-141	W, see Ce-134	2E+3 LLI wall (2E+3)	7E+2	3E-7	1E-9	-	-
				-	-	-	3E-5	3E-4
		Y, see Ce-134	-	6E+2	2E-7	8E-10	-	-
58	Cerium-143	W, see Ce-134	1E+3 LLI wall (1E+3)	2E+3	8E-7	3E-9	-	-
				-	-	-	2E-5	2E-4
		Y, see Ce-134	-	2E+3	7E-7	2E-9	-	-
58	Cerium-144	W, see Ce-134	2E+2 LLI wall (3E+2)	3E+1	1E-8	4E-11	-	-
				-	-	-	3E-6	3E-5
		Y, see Ce-134	-	1E+1	6E-9	2E-11	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
59	Praseodymium-136 b/	W, all compounds except those given for Y	5E+4 St wall (7E+4)	2E+5	1E-4	3E-7	-	-
				-	-	-	1E-3	1E-2
		Y, oxides, hydroxides, carbides, and fluorides	-	2E+5	9E-5	3E-7	-	-
59	Praseodymium-137 b/	W, see Pr-136	4E+4	2E+5	6E-5	2E-7	5E-4	5E-3
		Y, see Pr-136	-	1E+5	6E-5	2E-7	-	-
59	Praseodymium-138m	W, see Pr-136	1E+4	5E+4	2E-5	8E-8	1E-4	1E-3
		Y, see Pr-136	-	4E+4	2E-5	6E-8	-	-
59	Praseodymium-139	W, see Pr-136	4E+4	1E+5	5E-5	2E-7	6E-4	6E-3
		Y, see Pr-136	-	1E+5	5E-5	2E-7	-	-
59	Praseodymium-142m b/	W, see Pr-136	8E+4	2E+5	7E-5	2E-7	1E-3	1E-2
		Y, see Pr-136	-	1E+5	6E-5	2E-7	-	-
59	Praseodymium-142	W, see Pr-136	1E+3	2E+3	9E-7	3E-9	1E-5	1E-4
		Y, see Pr-136	-	2E+3	8E-7	3E-9	-	-
59	Praseodymium-143	W, see Pr-136	9E+2 LLI wall (1E+3)	8E+2	3E-7	1E-9	-	-
				-	-	-	2E-5	2E-4
		Y, see Pr-136	-	7E+2	3E-7	9E-10	-	-
59	Praseodymium-144 b/	W, see Pr-136	3E+4 St wall (4E+4)	1E+5	5E-5	2E-7	-	-
				-	-	-	6E-4	6E-3
		Y, see Pr-136	-	1E+5	5E-5	2E-7	-	-
59	Praseodymium-145	W, see Pr-136	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		Y, see Pr-136	-	8E+3	3E-6	1E-8	-	-
59	Praseodymium-147 b/	W, see Pr-136	5E+4 St wall (8E+4)	2E+5	8E-5	3E-7	-	-
				-	-	-	1E-3	1E-2
		Y, see Pr-136	-	2E+5	8E-5	3E-7	-	-
60	Neodymium-136 b/	W, all compounds except those given for Y	1E+4	6E+4	2E-5	8E-8	2E-4	2E-3
		Y, oxides, hydroxides, carbides, and fluorides	-	5E+4	2E-5	8E-8	-	-
60	Neodymium-138	W, see Nd-136	2E+3	6E+3	3E-6	9E-9	3E-5	3E-4
		Y, see Nd-136	-	5E+3	2E-6	7E-9	-	-
60	Neodymium-139m	W, see Nd-136	5E+3	2E+4	7E-6	2E-8	7E-5	7E-4
		Y, see Nd-136	-	1E+4	6E-6	2E-8	-	-
60	Neodymium-139 b/	W, see Nd-136	9E+4	3E+5	1E-4	5E-7	1E-3	1E-2
		Y, see Nd-136	-	3E+5	1E-4	4E-7	-	-
60	Neodymium-141	W, see Nd-136	2E+5	7E+5	3E-4	1E-6	2E-3	2E-2
		Y, see Nd-136	-	6E+5	3E-4	9E-7	-	-
60	Neodymium-147	W, see Nd-136	1E+3 LLI wall (1E+3)	9E+2	4E-7	1E-9	-	-
				-	-	-	2E-5	2E-4
		Y, see Nd-136	-	8E+2	4E-7	1E-9	-	-
60	Neodymium-149 b/	W, see Nd-136	1E+4	3E+4	1E-5	4E-8	1E-4	1E-3
		Y, see Nd-136	-	2E+4	1E-5	3E-8	-	-
60	Neodymium-151 b/	W, see Nd-136	7E+4	2E+5	8E-5	3E-7	9E-4	9E-3
		Y, see Nd-136	-	2E+5	8E-5	3E-7	-	-
61	Promethium-141 b/	W, all compounds except those given for Y	5E+4 St wall (6E+4)	2E+5	8E-5	3E-7	-	-
				-	-	-	8E-4	8E-3
		Y, oxides, hydroxides, carbides, and fluorides	-	2E+5	7E-5	2E-7	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
61	Promethium-143	W, see Pm-141 Y, see Pm-141	5E+3 -	6E+2 7E+2	2E-7 3E-7	8E-10 1E-9	7E-5 -	7E-4 -
61	Promethium-144	W, see Pm-141 Y, see Pm-141	1E+3 -	1E+2 1E+2	5E-8 5E-8	2E-10 2E-10	2E-5 -	2E-4 -
61	Promethium-145	W, see Pm-141 Y, see Pm-141	1E+4 - -	2E+2 Bone surf (2E+2) 2E+2	7E-8 - 8E-8	- 3E-10 3E-10	1E-4 - -	1E-3 - -
61	Promethium-146	W, see Pm-141 Y, see Pm-141	2E+3 -	5E+1 4E+1	2E-8 2E-8	7E-11 6E-11	2E-5 -	2E-4 -
61	Promethium-147	W, see Pm-141 Y, see Pm-141	4E+3 LLI wall (5E+3) -	1E+2 Bone surf (2E+2) 1E+2	5E-8 - 6E-8	- 3E-10 2E-10	- 7E-5 -	- 7E-4 -
61	Promethium-148m	W, see Pm-141 Y, see Pm-141	7E+2 -	3E+2 3E+2	1E-7 1E-7	4E-10 5E-10	1E-5 -	1E-4 -
61	Promethium-148	W, see Pm-141 Y, see Pm-141	4E+2 LLI wall (5E+2) -	5E+2 - 5E+2	2E-7 - 2E-7	8E-10 - 7E-10	- 7E-6 -	- 7E-5 -
61	Promethium-149	W, see Pm-141 Y, see Pm-141	1E+3 LLI wall -	2E+3 2E+3	8E-7 8E-7	3E-9 2E-9	- -	- -
61	Promethium-150	W, see Pm-141 Y, see Pm-141	5E+3 -	2E+4 2E+4	8E-6 7E-6	3E-8 2E-8	7E-5 -	7E-4 -
61	Promethium-151	W, see Pm-141 Y, see Pm-141	2E+3 -	4E+3 3E+3	1E-6 1E-6	5E-9 4E-9	2E-5 -	2E-4 -
62	Samarium-141m b/	W, all compounds	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3
62	Samarium-141 b/	W, all compounds	5E+4 St wall (6E+4)	2E+5 -	8E-5 -	2E-7 -	- 8E-4	- 8E-3
62	Samarium-142 b/	W, all compounds	8E+3	3E+4	1E-5	4E-8	1E-4	1E-3
62	Samarium-145	W, all compounds	6E+3	5E+2	2E-7	7E-10	8E-5	8E-4
62	Samarium-146	W, all compounds	1E+1 Bone surf (3E+1)	4E-2 Bone surf (6E-2)	1E-11 -	- 9E-14	- 3E-7	- 3E-6
62	Samarium-147	W, all compounds	2E+1 Bone surf (3E+1)	4E-2 Bone surf (7E-2)	2E-11 -	- 1E-13	- 4E-7	- 4E-6
62	Samarium-151	W, all compounds	1E+4 LLI wall (1E+4)	1E+2 Bone surf (2E+2)	4E-8 -	- 2E-10	- 2E-4	- 2E-3
62	Samarium-153	W, all compounds	2E+3 LLI wall (2E+3)	3E+3 -	1E-6 -	4E-9 -	- 3E-5	- 3E-4
62	Samarium-155 b/	W, all compounds	6E+4 St wall (8E+4)	2E+5 -	9E-5 -	3E-7 -	- 1E-3	- 1E-2
62	Samarium-156	W, all compounds	5E+3	9E+3	4E-6	1E-8	7E-5	7E-4
63	Europium-145	W, all compounds	2E+3	2E+3	8E-7	3E-9	2E-5	2E-4
63	Europium-146	W, all compounds	1E+3	1E+3	5E-7	2E-9	1E-5	1E-4
63	Europium-147	W, all compounds	3E+3	2E+3	7E-7	2E-9	4E-5	4E-4
63	Europium-148	W, all compounds	1E+3	4E+2	1E-7	5E-10	1E-5	1E-4
63	Europium-149	W, all compounds	1E+4	3E+3	1E-6	4E-9	2E-4	2E-3

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
63	Europium-150 (12.62 h)	W, all compounds	3E+3	8E+3	4E-6	1E-8	4E-5	4E-4
63	Europium-150 (34.2 y)	W, all compounds	8E+2	2E+1	8E-9	3E-11	1E-5	1E-4
63	Europium-152m	W, all compounds	3E+3	6E+3	3E-6	9E-9	4E-5	4E-4
63	Europium-152	W, all compounds	8E+2	2E+1	1E-8	3E-11	1E-5	1E-4
63	Europium-154	W, all compounds	5E+2	2E+1	8E-9	3E-11	7E-6	7E-5
63	Europium-155	W, all compounds	4E+3 -	9E+1 Bone surf (1E+2)	4E-8 -	- 2E-10	5E-5 -	5E-4 -
63	Europium-156	W, all compounds	6E+2	5E+2	2E-7	6E-10	8E-6	8E-5
63	Europium-157	W, all compounds	2E+3	5E+3	2E-6	7E-9	3E-5	3E-4
63	Europium-158 b/	W, all compounds	2E+4	6E+4	2E-5	8E-8	3E-4	3E-4
64	Gadolinium-145 b/	D, all compounds except those given for W W, oxides, hydroxides, and fluorides	5E+4 St wall -	2E+5 2E+5	6E-5 7E-5	2E-7 2E-7	- -	- -
64	Gadolinium-146	D, see Gd-145 W, see Gd-145	1E+3 -	1E+2 3E+2	5E-8 1E-7	2E-10 4E-10	2E-5 -	2E-4 -
64	Gadolinium-147	D, see Gd-145 W, see Gd-145	2E+3 -	4E+3 4E+3	2E-6 1E-6	6E-9 5E-9	3E-5 -	3E-4 -
64	Gadolinium-148	D, see Gd-145 W, see Gd-145	1E+1 Bone surf (2E+1) - -	8E-3 Bone surf (2E-2) 3E-2 Bone surf (6E-2)	3E-12 - 1E-11 -	- 2E-14 - 8E-14	- 3E-7 - -	- 3E-6 - -
64	Gadolinium-149	D, see Gd-145 W, see Gd-145	3E+3 -	2E+3 2E+3	9E-7 1E-6	3E-9 3E-9	4E-5 -	4E-4 -
64	Gadolinium-151	D, see Gd-145 W, see Gd-145	6E+3 - -	4E+2 Bone surf (6E+2) 1E+3	2E-7 - 5E-7	- 9E-10 2E-9	9E-5 - -	9E-4 - -
64	Gadolinium-152	D, see Gd-145 W, see Gd-145	2E+1 Bone surf (3E+1) - -	1E-2 Bone surf (2E-2) 4E-2 Bone surf (8E-2)	4E-12 - 2E-11 -	- 3E-14 - 1E-13	- 4E-7 - -	- 4E-6 - -
64	Gadolinium- 153	D, see Gd-145 W, see Gd-145	5E+3 - -	1E+2 Bone surf (2E+2) 6E+2	6E-8 - 2E-7	- 3E-10 8E-10	6E-5 - -	6E-4 - -
64	Gadolinium-159	D, see Gd-145 W, see Gd-145	3E+3 -	8E+3 6E+3	3E-6 2E-6	1E-8 8E-9	4E-5 -	4E-4 -
65	Terbium-147 b/	W, all compounds	9E+3	3E+4	1E-5	5E-8	1E-4	1E-3
65	Terbium-149	W, all compounds	5E+3	7E+2	3E-7	1E-9	7E-5	7E-4
65	Terbium-150	W, all compounds	5E+3	2E+4	9E-6	3E-8	7E-5	7E-4
65	Terbium-151	W, all compounds	4E+3	9E+3	4E-6	1E-8	5E-5	5E-4
65	Terbium-153	W, all compounds	5E+3	7E+3	3E-6	1E-8	7E-5	7E-4
65	Terbium-154	W, all compounds	2E+3	4E+3	2E-6	6E-9	2E-5	2E-4
65	Terbium-155	W, all compounds	6E+3	8E+3	3E-6	1E-8	8E-5	8E-4

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
65	Terbium-156m (5.0 h)	W, all compounds	2E+4	3E+4	1E-5	4E-8	2E-4	2E-3
65	Terbium-156m (24.4 h)	W, all compounds	7E+3	8E+3	3E-6	1E-8	1E-4	1E-3
65	Terbium-156	W, all compounds	1E+3	1E+3	6E-7	2E-9	1E-5	1E-4
65	Terbium-157	W, all compounds	5E+4 LLI wall (5E+4)	3E+2 Bone surf (6E+2)	1E-7 -	- 8E-10	- 7E-4	- 7E-3
65	Terbium-158	W, all compounds	1E+3	2E+1	8E-9	3E-11	2E-5	2E-4
65	Terbium-160	W, all compounds	8E+2	2E+2	9E-8	3E-10	1E-5	1E-4
65	Terbium-161	W, all compounds	2E+3 LLI wall (2E+3)	2E+3 -	7E-7 -	2E-9 -	- 3E-5	- 3E-4
66	Dysprosium-155	W, all compounds	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
66	Dysprosium-157	W, all compounds	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
66	Dysprosium-159	W, all compounds	1E+4	2E+3	1E-6	3E-9	2E-4	2E-3
66	Dysprosium-165	W, all compounds	1E+4	5E+4	2E-5	6E-8	2E-4	2E-3
66	Dysprosium-166	W, all compounds	6E+2 LLI wall (8E+2)	7E+2 -	3E-7 -	1E-9 -	- 1E-5	- 1E-4
67	Holmium-155 b/	W, all compounds	4E+4	2E+5	6E-5	2E-7	6E-4	6E-3
67	Holmium-157 b/	W, all compounds	3E+5	1E+6	6E-4	2E-6	4E-3	4E-2
67	Holmium-159 b/	W, all compounds	2E+5	1E+6	4E-4	1E-6	3E-3	3E-2
67	Holmium-161	W, all compounds	1E+5	4E+5	2E-4	6E-7	1E-3	1E-2
67	Holmium-162m b/	W, all compounds	5E+4	3E+5	1E-4	4E-7	7E-4	7E-3
67	Holmium-162 b/	W, all compounds	5E+5 St wall (8E+5)	2E+6 -	1E-3 -	3E-6 -	- 1E-2	- 1E-1
67	Holmium-164m b/	W, all compounds	1E+5	3E+5	1E-4	4E-7	1E-3	1E-2
67	Holmium-164 b/	W, all compounds	2E+5 St wall (2E+5)	6E+5 -	3E-4 -	9E-7 -	- 3E-3	- 3E-2
67	Holmium-166m	W, all compounds	6E+2	7E+0	3E-9	9E-12	9E-6	9E-5
67	Holmium-166	W, all compounds	9E+2 LLI wall (9E+2)	2E+3 -	7E-7 -	2E-9 -	- 1E-5	- 1E-4
67	Holmium-167	W, all compounds	2E+4	6E+4	2E-5	8E-8	2E-4	2E-3
68	Erbium-161	W, all compounds	2E+4	6E+4	3E-5	9E-8	2E-4	2E-3
68	Erbium-165	W, all compounds	6E+4	2E+5	8E-5	3E-7	9E-4	9E-3
68	Erbium-169	W, all compounds	3E+3 LLI wall (4E+3)	3E+3 -	1E-6 -	4E-9 -	- 5E-5	- 5E-4
68	Erbium-171	W, all compounds	4E+3	1E+4	4E-6	1E-8	5E-5	5E-4
68	Erbium-172	W, all compounds	1E+3 LLI wall (1E+3)	1E+3 -	6E-7 -	2E-9 -	- 2E-5	- 2E-4
69	Thulium-162 b/	W, all compounds	7E+4 St wall (7E+4)	3E+5 -	1E-4 -	4E-7 -	- 1E-3	- 1E-2
69	Thulium-166	W, all compounds	4E+3	1E+4	6E-6	2E-8	6E-5	6E-4
69	Thulium-167	W, all compounds	2E+3 LLI wall (2E+3)	2E+3 -	8E-7 -	3E-9 -	- 3E-5	- 3E-4

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
69	Thulium-170	W, all compounds	8E+2 LLI wall (1E+3)	2E+2 -	9E-8 -	3E-10 -	- 1E-5	- 1E-4
69	Thulium-171	W, all compounds	1E+4 LLI wall (1E+4)	3E+2 Bone surf (6E+2)	1E-7 -	- 8E-10	- 2E-4	- 2E-3
69	Thulium-172	W, all compounds	7E+2 LLI wall (8E+2)	1E+3 -	5E-7 -	2E-9 -	- 1E-5	- 1E-4
69	Thulium-173	W, all compounds	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
69	Thulium-175 b/	W, all compounds	7E+4 St wall (9E+4)	3E+5 -	1E-4 -	4E-7 -	- 1E-3	- 1E-2
70	Ytterbium-162 b/	W, all compounds except those given for Y Y, oxides, hydroxides, and fluorides	7E+4 -	3E+5 3E+5	1E-4 1E-4	4E-7 4E-7	1E-3 -	1E-2 -
70	Ytterbium-166	W, see Yb-162 Y, see Yb-162	1E+3 -	2E+3 2E+3	8E-7 8E-7	3E-9 3E-9	2E-5 -	2E-4 -
70	Ytterbium-167 b/	W, see Yb-162 Y, see Yb-162	3E+5 -	8E+5 7E+5	3E-4 3E-4	1E-6 1E-6	4E-3 -	4E-2 -
70	Ytterbium-169	W, see Yb-162 Y, see Yb-162	2E+3 -	8E+2 7E+2	4E-7 3E-7	1E-9 1E-9	2E-5 -	2E-4 -
70	Ytterbium-175	W, see Yb-162 Y, see Yb-162	3E+3 LLI wall (3E+3) -	4E+3 3E+3	1E-6 1E-6	5E-9 5E-9	- 4E-5 -	- 4E-4 -
70	Ytterbium-177 b/	W, see Yb-162 Y, see Yb-162	2E+4 -	5E+4 5E+4	2E-5 2E-5	7E-8 6E-8	2E-4 -	2E-3 -
70	Ytterbium-178 b/	W, see Yb-162 Y, see Yb-162	1E+4 -	4E+4 4E+4	2E-5 2E-5	6E-8 5E-8	2E-4 -	2E-3 -
71	Lutetium-169	W, all compounds except those given for Y Y, oxides, hydroxides, and fluorides	3E+3 -	4E+3 4E+3	2E-6 2E-6	6E-9 6E-9	3E-5 -	3E-4 -
71	Lutetium-170	W, see Lu-169 Y, see Lu-169	1E+3 -	2E+3 2E+3	9E-7 8E-7	3E-9 3E-9	2E-5 -	2E-4 -
71	Lutetium-171	W, see Lu-169 Y, see Lu-169	2E+3 -	2E+3 2E+3	8E-7 8E-7	3E-9 3E-9	3E-5 -	3E- 4 -
71	Lutetium-172	W, see Lu-169 Y, see Lu-169	1E+3 -	1E+3 1E+3	5E-7 5E-7	2E-9 2E-9	1E-5 -	1E-4 -
71	Lutetium-173	W, see Lu-169 Y, see Lu-169	5E+3 - -	3E+2 Bone surf (5E+2) 3E+2	1E-7 - 1E-7	- 6E-10 4E-10	7E-5 - -	7E-4 - -
71	Lutetium-174m	W, see Lu-169 Y, see Lu-169	2E+3 LLI wall (3E+3) -	2E+2 Bone surf (3E+2) 2E+2	1E-7 - 9E-8	- 5E-10 3E-10	- 4E-5 -	- 4E-4 -
71	Lutetium-174	W, see Lu-169 Y, see Lu-169	5E+3 - -	1E+2 Bone surf (2E+2) 2E+2	5E-8 - 6E-8	- 3E-10 2E-10	7E-5 - -	7E-4 - -
71	Lutetium-176m	W, see Lu-169 Y, see Lu-169	8E+3 -	3E+4 2E+4	1E-5 9E-6	3E-8 3E-8	1E-4 -	1E-3 -

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
71	Lutetium-176	W, see Lu-169	7E+2	5E+0 Bone surf	2E-9	-	1E-5	1E-4
			-	(1E+1)	-	2E-11	-	-
		Y, see Lu-169	-	8E+0	3E-9	1E-11	-	-
71	Lutetium-177m	W, see Lu-169	7E+2	1E+2 Bone surf	5E-8	-	1E-5	1E-4
			-	(1E+2)	-	2E-10	-	-
		Y, see Lu-169	-	8E+1	3E-8	1E-10	-	-
71	Lutetium-177	W, see Lu-169	2E+3 LLI wall (3E+3)	2E+3	9E-7	3E-9	-	-
				-	-	-	4E-5	4E-4
		Y, see Lu-169	-	2E+3	9E-7	3E-9	-	-
71	Lutetium-178m b/	W, see Lu-169	5E+4 St wall (6E+4)	2E+5	8E-5	3E-7	-	-
				-	-	-	8E-4	8E-3
		Y, see Lu-169	-	2E+5	7E-5	2E-7	-	-
71	Lutetium-178 b/	W, see Lu-169	4E+4 St wall (4E+4)	1E+5	5E-5	2E-7	-	-
				-	-	-	6E-4	6E-3
		Y, see Lu-169	-	1E+5	5E-5	2E-7	-	-
71	Lutetium-179	W, see Lu-169	6E+3	2E+4	8E-6	3E-8	9E-5	9E-4
		Y, see Lu-169	-	2E+4	6E-6	3E-8	-	-
72	Hafnium-170	D, all compounds except those given for W	3E+3	6E+3	2E-6	8E-9	4E-5	4E-4
		W, oxides, hydroxides, carbides, and nitrates	-	5E+3	2E-6	6E-9	-	-
72	Hafnium-172	D, see Hf-170	1E+3	9E+0 Bone surf	4E-9	-	2E-5	2E-4
			-	(2E+1)	-	3E-11	-	-
		W, see Hf-170	-	4E+1 Bone surf	2E-8	-	-	-
			-	(6E+1)	-	8E-11	-	-
72	Hafnium-173	D, see Hf-170	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W, see Hf-170	-	1E+4	5E-6	2E-8	-	-
72	Hafnium-175	D, see Hf-170	3E+3	9E+2 Bone surf	4E-7	-	4E-5	4E-4
			-	(1E+3)	-	1E-9	-	-
		W, see Hf-170	-	1E+3	5E-7	2E-9	-	-
72	Hafnium-177m b/	D, see Hf-170	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
		W, see Hf-170	-	9E+4	4E-5	1E-7	-	-
72	Hafnium-178m	D, see Hf-170	3E+2	1E+0 Bone surf	5E-10	-	3E-6	3E-5
			-	(2E+0)	-	3E-12	-	-
		W, see Hf-170	-	5E+0 Bone surf	2E-9	-	-	-
			-	(9E+0)	-	1E-11	-	-
72	Hafnium-179m	D, see Hf-170	1E+3	3E+2 Bone surf	1E-7	-	1E-5	1E-4
			-	(6E+2)	-	8E-10	-	-
		W, see Hf-170	-	6E+2	3E-7	8E-10	-	-
72	Hafnium-180m	D, see Hf-170	7E+3	2E+4	9E-6	3E-8	1E-4	1E-3
		W, see Hf-170	-	3E+4	1E-5	4E-8	-	-
72	Hafnium-181	D, see Hf-170	1E+3	2E+2 Bone surf	7E-8	-	2E-5	2E-4
			-	(4E+2)	-	6E-10	-	-
		W, see Hf-170	-	4E+2	2E-7	6E-10	-	-
72	Hafnium-182m b/	D, see Hf-170	4E+4	9E+4	4E-5	1E-7	5E-4	5E-3
		W, see Hf-170	-	1E+5	6E-5	2E-7	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
72	Hafnium-182	D, see Hf-170	2E+2 Bone surf (4E+2)	8E-1 Bone surf (2E+0)	3E-10 -	- 2E-12	- 5E-6	- 5E-5
		W, see Hf-170	- -	3E+0 Bone surf (7E+0)	1E-9 -	- 1E-11	- -	- -
72	Hafnium-183 b/	D, see Hf-170	2E+4	5E+4	2E-5	6E-8	3E-4	3E-3
		W, see Hf-170	-	6E+4	2E-5	8E-8	-	-
72	Hafnium-184	D, see Hf-170	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		W, see Hf-170	-	6E+3	3E-6	9E-9	-	-
73	Tantalum-172 b/	W, all compounds except those given for Y	4E+4	1E+5	5E-5	2E-7	5E-4	5E-3
		Y, elemental Ta, oxides, hydroxides, halides, carbides, nitrates, and nitrides	-	1E+5	4E-5	1E-7	-	-
73	Tantalum-173	W, see Ta-172	7E+3	2E+4	8E-6	3E-8	9E-5	9E-4
		Y, see Ta-172	-	2E+4	7E-6	2E-8	-	-
73	Tantalum- 74 b/	W, see Ta-172	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3
		Y, see Ta-172	-	9E+4	4E-5	1E-7	-	-
73	Tantalum-175	W, see Ta-172	6E+3	2E+4	7E-6	2E-8	8E-5	8E-4
		Y, see Ta-172	-	1E+4	6E-6	2E-8	-	-
73	Tantalum-176	W, see Ta-172	4E+3	1E+4	5E-6	2E-8	5E-5	5E-4
		Y, see Ta-172	-	1E+4	5E-6	2E-8	-	-
73	Tantalum-177	W, see Ta-172	1E+4	2E+4	8E-6	3E-8	2E-4	2E-3
		Y, see Ta-172	-	2E+4	7E-6	2E-8	-	-
73	Tantalum-178	W, see Ta-172	2E+4	9E+4	4E-5	1E-7	2E-4	2E-3
		Y, see Ta-172	-	7E+4	3E-5	1E-7	-	-
73	Tantalum-179	W, see Ta-172	2E+4	5E+3	2E-6	8E-9	3E-4	3E-3
		Y, see Ta-172	-	9E+2	4E-7	1E-9	-	-
73	Tantalum-180m	W, see Ta-172	2E+4	7E+4	3E-5	9E-8	3E-4	3E-3
		Y, see Ta-172	-	6E+4	2E-5	8E-8	-	-
73	Tantalum-180	W, see Ta-172	1E+3	4E+2	2E-7	6E-10	2E-5	2E-4
		Y, see Ta-172	-	2E+1	1E-8	3E-11	-	-
73	Tantalum-182m b/	W, see Ta-172	2E+5 St wall (2E+5)	5E+5 -	2E-4 -	8E-7 -	- 3E-3	- 3E-2
		Y, see Ta-172	-	4E+5	2E-4	6E-7	-	-
73	Tantalum-182	W, see Ta-172	8E+2	3E+2	1E-7	5E-10	1E-5	1E-4
		Y, see Ta-172	-	1E+2	6E-8	2E-10	-	-
73	Tantalum-183	W, see Ta-172	9E+2 LLI wall (1E+3)	1E+3 -	5E-7 -	2E-9 -	- 2E-5	- 2E-4
		Y, see Ta-172	-	1E+3	4E-7	1E-9	-	-
73	Tantalum-184	W, see Ta-172	2E+3	5E+3	2E-6	8E-9	3E-5	3E-4
		Y, see Ta-172	-	5E+3	2E-6	7E-9	-	-
73	Tantalum-185 b/	W, see Ta-172	3E+4	7E+4	3E-5	1E-7	4E-4	4E-3
		Y, see Ta-172	-	6E+4	3E-5	9E-8	-	-
73	Tantalum-186 b/	W, see Ta-172	5E+4 St wall (7E+4)	2E+5 -	1E-4 -	3E-7 -	- 1E-3	- 1E-2
		Y, see Ta-172	-	2E+5	9E-5	3E-7	-	-
74	Tungsten-176	D, all compounds	1E+4	5E+4	2E-5	7E-8	1E-4	1E-3

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
74	Tungsten-177	D, all compounds	2E+4	9E+4	4E-5	1E-7	3E-4	3E-3
74	Tungsten-178	D, all compounds	5E+3	2E+4	8E-6	3E-8	7E-5	7E-4
74	Tungsten-179 b/	D, all compounds	5E+5	2E+6	7E-4	2E-6	7E-3	7E-2
74	Tungsten-181	D, all compounds	2E+4	3E+4	1E-5	5E-8	2E-4	2E-3
74	Tungsten-185	D, all compounds	2E+3 LLI wall (3E+3)	7E+3 -	3E-6 -	9E-9 -	- 4E-5	- 4E-4
74	Tungsten-187	D, all compounds	2E+3	9E+3	4E-6	1E-8	3E-5	3E-4
74	Tungsten-188	D, all compounds	4E+2 LLI wall (5E+2)	1E+3 -	5E-7 -	2E-9 -	- 7E-6	- 7E-5
75	Rhenium-177 b/	D, all compounds except those given for W W, oxides, hydroxides, and nitrates	9E+4 St wall (1E+5) -	3E+5 - 4E+5	1E-4 - 1E-4	4E-7 - 5E-7	- 2E-3 -	- 2E-2 -
75	Rhenium-178 b/	D, see Re-177 W, see Re-177	7E+4 St wall (1E+5) -	3E+5 - 3E+5	1E-4 - 1E-4	4E-7 - 4E-7	- 1E-3 -	- 1E-2 -
75	Rhenium-181	D, see Re-177 W, see Re-177	5E+3 -	9E+3 9E+3	4E-6 4E-6	1E-8 1E-8	7E-5 -	7E-4 -
75	Rhenium-182 (12.7 h)	D, see Re-177 W, see Re-177	7E+3 -	1E+4 2E+4	5E-6 6E-6	2E-8 2E-8	9E-5 -	9E-4 -
75	Rhenium-182 (64.0 h)	D, see Re-177 W, see Re-177	1E+3 -	2E+3 2E+3	1E-6 9E-7	3E-9 3E-9	2E-5 -	2E-4 -
75	Rhenium-184m	D, see Re-177 W, see Re-177	2E+3 -	3E+3 4E+2	1E-6 2E-7	4E-9 6E-10	3E-5 -	3E-4 -
75	Rhenium-184	D, see Re-177 W, see Re-177	2E+3 -	4E+3 1E+3	1E-6 6E-7	5E-9 2E-9	3E-5 -	3E-4 -
75	Rhenium-186m	D, see Re-177 W, see Re-177	1E+3 St wall (2E+3) -	2E+3 St wall (2E+3) 2E+2	7E-7 - 6E-8	- 3E-9 2E-10	- 2E-5 -	- 2E-4 -
75	Rhenium-186	D, see Re-177 W, see Re-177	2E+3 -	3E+3 2E+3	1E-6 7E-7	4E-9 2E-9	3E-5 -	3E-4 -
75	Rhenium-187	D, see Re-177 W, see Re-177	6E+5 - -	8E+5 St wall (9E+5) 1E+5	4E-4 - 4E-5	- 1E-6 1E-7	8E-3 - -	8E-2 - -
75	Rhenium-188m b/	D, see Re-177 W, see Re-177	8E+4 -	1E+5 1E+5	6E-5 6E-5	2E-7 2E-7	1E-3 -	1E-2 -
	Rhenium-188	D, see Re-177 W, see Re-177	2E+3 -	3E+3 3E+3	1E-6 1E-6	4E-9 4E-9	2E-5 -	2E-4 -
75	Rhenium-189	D, see Re-177 W, see Re-177	3E+3 -	5E+3 4E+3	2E-6 2E-6	7E-9 6E-9	4E-5 -	4E-4 -
76	Osmium-180 b/	D, all compounds except those given for W and Y W, halides and nitrates Y, oxides and hydroxides	1E+5 - -	4E+5 5E+5 5E+5	2E-4 2E-4 2E-4	5E-7 7E-7 6E-7	1E-3 - -	1E-2 - -

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
76	Osmium-181 b/	D, see Os-180	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see Os-180	-	5E+4	2E-5	6E-8	-	-
		Y, see Os-180	-	4E+4	2E-5	6E-8	-	-
76	Osmium-182	D, see Os-180	2E+3	6E+3	2E-6	8E-9	3E-5	3E-4
		W, see Os-180	-	4E+3	2E-6	6E-9	-	-
		Y, see Os-180	-	4E+3	2E-6	6E-9	-	-
76	Osmium-185	D, see Os-180	2E+3	5E+2	2E-7	7E-10	3E-5	3E-4
		W, see Os-180	-	8E+2	3E-7	1E-9	-	-
		Y, see Os-180	-	8E+2	3E-7	1E-9	-	-
76	Osmium-189m	D, see Os-180	8E+4	2E+5	1E-4	3E-7	1E-3	1E-2
		W, see Os-180	-	2E+5	9E-5	3E-7	-	-
		Y, see Os-180	-	2E+5	7E-5	2E-7	-	-
76	Osmium-191m	D, see Os-180	1E+4	3E+4	1E-5	4E-8	2E-4	2E-3
		W, see Os-180	-	2E+4	8E-6	3E-8	-	-
		Y, see Os-180	-	2E+4	7E-6	2E-8	-	-
76	Osmium-191	D, see Os-180	2E+3 LLI wall (3E+3)	2E+3 -	9E-7 -	3E-9 -	- 3E-5	- 3E-4
		W, see Os-180	-	2E+3	7E-7	2E-9	-	-
		Y, see Os-180	-	1E+3	6E-7	2E-9	-	-
76	Osmium-193	D, see Os-180	2E+3 LLI wall (2E+3)	5E+3 -	2E-6 -	6E-9 -	- 2E-5	- 2E-4
		W, see Os-180	-	3E+3	1E-6	4E-9	-	-
		Y, see Os-180	-	3E+3	1E-6	4E-9	-	-
76	Osmium-194	D, see Os-180	4E+2 LLI wall (6E+2)	4E+1 -	2E-8 -	6E-11 -	- 8E-6	- 8E-5
		W, see Os-180	-	6E+1	2E-8	8E-11	-	-
		Y, see Os-180	-	8E+0	3E-9	1E-11	-	-
77	Iridium-182 b/	D, all compounds except those given for W and Y	4E+4 St wall (4E+4)	1E+5 -	6E-5 -	2E-7 -	- 6E-4	- 6E-3
		W, halides, nitrates, and metallic iridium	-	2E+5	6E-5	2E-7	-	-
		Y, oxides and hydroxides	-	1E+5	5E-5	2E-7	-	-
77	Iridium-184	D, see Ir-182	8E+3	2E+4	1E-5	3E-8	1E-4	1E-3
		W, see Ir-182	-	3E+4	1E-5	5E-8	-	-
		Y, see Ir-182	-	3E+4	1E-5	4E-8	-	-
77	Iridium-185	D, see Ir-182	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W, see Ir-182	-	1E+4	5E-6	2E-8	-	-
		Y, see Ir-182	-	1E+4	4E-6	1E-8	-	-
77	Iridium-186	D, see Ir-182	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		W, see Ir-182	-	6E+3	3E-6	9E-9	-	-
		Y, see Ir-182	-	6E+3	2E-6	8E-9	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
77	Iridium-187	D, see Ir-182	1E+4	3E+4	1E-5	5E-8	1E-4	1E-3
		W, see Ir-182	-	3E+4	1E-5	4E-8	-	-
		Y, see Ir-182	-	3E+4	1E-5	4E-8	-	-
77	Iridium-188	D, see Ir-182	2E+3	5E+3	2E-6	6E-9	3E-5	3E-4
		W, see Ir-182	-	4E+3	1E-6	5E-9	-	-
		Y, see Ir-182	-	3E+3	1E-6	5E-9	-	-
77	Iridium-189	D, see Ir-182	5E+3 LLI wall (5E+3)	5E+3 -	2E-6 -	7E-9 -	- 7E-5	- 7E-4
		W, see Ir-182	-	4E+3	2E-6	5E-9	-	-
		Y, see Ir-182	-	4E+3	1E-6	5E-9	-	-
77	Iridium-190m b/	D, see Ir-182	2E+5	2E+5	8E-5	3E-7	2E-3	2E-2
		W, see Ir-182	-	2E+5	9E-5	3E-7	-	-
		Y, see Ir-182	-	2E+5	8E-5	3E-7	-	-
77	Iridium-190	D, see Ir-182	1E+3	9E+2	4E-7	1E-9	1E-5	1E-4
		W, see Ir-182	-	1E+3	4E-7	1E-9	-	-
		Y, see Ir-182	-	9E+2	4E-7	1E-9	-	-
77	Iridium-192m	D, see Ir-182	3E+3	9E+1	4E-8	1E-10	4E-5	4E-4
		W, see Ir-182	-	2E+2	9E-8	3E-10	-	-
		Y, see Ir-182	-	2E+1	6E-9	2E-11	-	-
77	Iridium-192	D, see Ir-182	9E+2	3E+2	1E-7	4E-10	1E-5	1E-4
		W, see Ir-182	-	4E+2	2E-7	6E-10	-	-
		Y, see Ir-182	-	2E+2	9E-8	3E-10	-	-
77	Iridium-194m	D, see Ir-182	6E+2	9E+1	4E-8	1E-10	9E-6	9E-5
		W, see Ir-182	-	2E+2	7E-8	2E-10	-	-
		Y, see Ir-182	-	1E+2	4E-8	1E-10	-	-
77	Iridium-194	D, see Ir-182	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		W, see Ir-182	-	2E+3	9E-7	3E-9	-	-
		Y, see Ir-182	-	2E+3	8E-7	3E-9	-	-
777	Iridium-195m	D, see Ir-182	8E+3	2E+4	1E-5	3E-8	1E-4	1E-3
		W, see Ir-182	-	3E+4	1E-5	4E-8	-	-
		Y, see Ir-182	-	2E+4	9E-6	3E-8	-	-
77	Iridium-195	D, see Ir-182	1E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see Ir-182	-	5E+4	2E-5	7E-8	-	-
		Y, see Ir-182	-	4E+4	2E-5	6E-8	-	-
78	Platinum-186	D, all compounds	1E+4	4E+4	2E-5	5E-8	2E-4	2E-3
78	Platinum-188	D, all compounds	2E+3	2E+3	7E-7	2E-9	2E-5	2E-4
78	Platinum-189	D, all compounds	1E+4	3E+4	1E-5	4E-8	1E-4	1E-3
78	Platinum-191	D, all compounds	4E+3	8E+3	4E-6	1E-8	5E-5	5E-4
78	Platinum-193m	D, all compounds	3E+3 LLI wall (3E+4)	6E+3 -	3E-6 -	8E-9 -	- 4E-5	- 4E-4
78	Platinum-193	D, all compounds	4E+4 LLI wall (5E+4)	2E+4 -	1E-5 -	3E-8 -	- 6E-4	- 6E-3
78	Platinum-195m	D, all compounds	2E+3 LLI wall (2E+3)	4E+3 -	2E-6 -	6E-9 -	- 3E-5	- 3E-4

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
78	Platinum-197m b/	D, all compounds	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
78	Platinum-197	D, all compounds	3E+3	1E+4	4E-6	1E-8	4E-5	4E-4
78	Platinum-199 b/	D, all compounds	5E+4	1E+5	6E-5	2E-7	7E-4	7E-3
78	Platinum-200	D, all compounds	1E+3	3E+3	1E-6	5E-9	2E-5	2E-4
79	Gold-193	D, all compounds except those given for W and Y	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
		W, halides and nitrates	-	2E+4	9E-6	3E-8	-	-
		Y, oxides and hydroxides	-	2E+4	8E-6	3E-8	-	-
79	Gold-194	D, see Au-193	3E+3	8E+3	3E-6	1E-8	4E-5	4E-4
		W, see Au-193	-	5E+3	2E-6	8E-9	-	-
		Y, see Au-193	-	5E+3	2E-6	7E-9	-	-
79	Gold-195	D, see Au-193	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
		W, see Au-193	-	1E+3	6E-7	2E-9	-	-
		Y, see Au-193	-	4E+2	2E-7	6E-10	-	-
79	Gold-198m	D, see Au-193	1E+3	3E+3	1E-6	4E-9	1E-5	1E-4
		W, see Au-193	-	1E+3	5E-7	2E-9	-	-
		Y, see Au-193	-	1E+3	5E-7	2E-9	-	-
79	Gold-198	D, see Au-193	1E+3	4E+3	2E-6	5E-9	2E-5	2E-4
		W, see Au-193	-	2E+3	8E-7	3E-9	-	-
		Y, see Au-193	-	2E+3	7E-7	2E-9	-	-
79	Gold-199	D, see Au-193	3E+3 LLI wall (3E+3)	9E+3 -	4E-6 -	1E-8 -	- 4E-5	- 4E-4
		W, see Au-193	-	4E+3	2E-6	6E-9	-	-
		Y, see Au-193	-	4E+3	2E-6	5E-9	-	-
79	Gold-200m	D, see Au-193	1E+3	4E+3	1E-6	5E-9	2E-5	2E-4
		W, see Au-193	-	3E+3	1E-6	4E-9	-	-
		Y, see Au-193	-	2E+4	1E-6	3E-9	-	-
79	Gold-200 b/	D, see Au-193	3E+4	6E+4	3E-5	9E-8	4E-4	4E-3
		W, see Au-193	-	8E+4	3E-5	1E-7	-	-
		Y, see Au-193	-	7E+4	3E-5	1E-7	-	-
79	Gold-201 b/	D, see Au-193	7E+4 St wall (9E+4)	2E+5 -	9E-5 -	3E-7 -	- 1E-3	- 1E-2
		W, see Au-193	-	2E+5	1E-4	3E-7	-	-
		Y, see Au-193	-	2E+5	9E-5	3E-7	-	-
80	Mercury-193m	Vapor	-	8E+3	4E-6	1E-8	-	-
		Organic D	4E+3	1E+4	5E-6	2E-8	6E-5	6E-4
		D, sulfates	3E+3	9E+3	4E-6	1E-8	4E-5	4E-4
		W, oxides, hydroxides, halides, nitrates, and sulfides	-	8E+3	3E-6	1E-8	-	-
80	Mercury-193	Vapor	-	3E+4	1E-5	4E-8	-	-
		Organic D	2E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		D, see Hg-193m	2E+4	4E+4	2E-5	6E-8	2E-4	2E-3
		W, see Hg-193m	-	4E+4	2E-5	6E-8	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
80	Mercury-194	Vapor	-	3E+1	1E-8	4E-11	-	-
		Organic D	2E+1	3E+1	1E-8	4E-11	2E-7	2E-6
		D, see Hg-193m	8E+2	4E+1	2E-8	6E-11	1E-5	1E-4
		W, see Hg-193m	-	1E+2	5E-8	2E-10	-	-
80	Mercury-195m	Vapor	-	4E+3	2E-6	6E-9	-	-
		Organic D	3E+3	6E+3	3E-6	8E-9	4E-5	4E-4
		D, see Hg-193m	2E+3	5E+3	2E-6	7E-9	3E-5	3E-4
		W, see Hg-193m	-	4E+3	2E-6	5E-9	-	-
80	Mercury-195	Vapor	-	3E+4	1E-5	4E-8	-	-
		Organic D	2E+4	5E+4	2E-5	6E-8	2E-4	2E-3
		D, see Hg-193m	1E+4	4E+4	1E-5	5E-8	2E-4	2E-3
		W, see Hg-193m	-	3E+4	1E-5	5E-8	-	-
80	Mercury-197m	Vapor	-	5E+3	2E-6	7E-9	-	-
		Organic D	4E+3	9E+3	4E-6	1E-8	5E-5	5E-4
		D, see Hg-193m	3E+3	7E+3	3E-6	1E-8	4E-5	4E-4
		W, see Hg-193m	-	5E+3	2E-6	7E-9	-	-
80	Mercury-197	Vapor	-	8E+3	4E-6	1E-8	-	-
		Organic D	7E+3	1E+4	6E-6	2E-8	9E-5	9E-4
		D, see Hg-193m	6E+3	1E+4	5E-6	2E-8	8E-5	8E-4
		W, see Hg-193m	-	9E+3	4E-6	1E-8	-	-
80	Mercury-199m b/	Vapor	-	8E+4	3E-5	1E-7	-	-
		Organic D	6E+4 St wall (1E+5)	2E+5 -	7E-5 -	2E-7 -	- 1E-3	- 1E-2
		D, see Hg-193m	6E+4	1E+5	6E-5	2E-7	8E-4	8E-3
		W, see Hg-193m	-	2E+5	7E-5	2E-7	-	-
80	Mercury-203	Vapor	-	8E+2	4E-7	1E-9	-	-
		Organic D	5E+2	8E+2	3E-7	1E-9	7E-6	7E-5
		D, see Hg-193m	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
		W, see Hg-193m	-	1E+3	5E-7	2E-9	-	-
81	Thallium-194m b/	D, all compounds	5E+4 St wall (7E+4)	2E+5 -	6E-5 -	2E-7 -	- 1E-3	- 1E-2
81	Thallium-194 b/	D, all compounds	3E+5 St wall (3E+5)	6E+5 -	2E-4 -	8E-7 -	- 4E-3	- 4E-2
81	Thallium-195 b/	D, all compounds	6E+4	1E+5	5E-5	2E-7	9E-4	9E-3
81	Thallium-197	D, all compounds	7E+4	1E+5	5E-5	2E-7	1E-3	1E-2
81	Thallium-198m b/	D, all compounds	3E+4	5E+4	2E-5	8E-8	4E-4	4E-3
81	Thallium-198	D, all compounds	2E+4	3E+4	1E-5	5E-8	3E-4	3E-3
81	Thallium-199	D, all compounds	6E+4	8E+4	4E-5	1E-7	9E-4	9E-3
81	Thallium-200	D, all compounds	8E+3	1E+4	5E-6	2E-8	1E-4	1E-3
81	Thallium-201	D, all compounds	2E+4	2E+4	9E-6	3E-8	2E-4	2E-3
81	Thallium-202	D, all compounds	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
81	Thallium-204	D, all compounds	2E+3	2E+3	9E-7	3E-9	2E-5	2E-4

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
82	Lead-195m b/	D, all compounds	6E+4	2E+5	8E-5	3E-7	8E-4	8E-3
82	Lead-198	D, all compounds	3E+4	6E+4	3E-5	9E-8	4E-4	4E-3
82	Lead-199 b/	D, all compounds	2E+4	7E+4	3E-5	1E-7	3E-4	3E-3
82	Lead-200	D, all compounds	3E+3	6E+3	3E-6	9E-9	4E-5	4E-4
82	Lead-201	D, all compounds	7E+3	2E+4	8E-6	3E-8	1E-4	1E-3
82	Lead-202m	D, all compounds	9E+3	3E+4	1E-5	4E-8	1E-4	1E-3
82	Lead-202	D, all compounds	1E+2	5E+1	2E-8	7E-11	2E-6	2E-5
82	Lead-203	D, all compounds	5E+3	9E+3	4E-6	1E-8	7E-5	7E-4
82	Lead-205	D, all compounds	4E+3	1E+3	6E-7	2E-9	5E-5	5E-4
82	Lead-209	D, all compounds	2E+4	6E+4	2E-5	8E-8	3E-4	3E-3
82	Lead-210	D, all compounds	6E-1 Bone surf (1E+0)	2E-1 Bone surf (4E-1)	1E-10 -	- 6E-13	- 1E-8	- 1E-7
82	Lead-211 b/	D, all compounds	1E+4	6E+2	3E-7	9E-10	2E-4	2E-3
82	Lead-212	D, all compounds	8E+1 Bone surf (1E+2)	3E+1 -	1E-8 -	5E-11 -	- 2E-6	- 2E-5
82	Lead-214 b/	D, all compounds	9E+3	8E+2	3E-7	1E-9	1E-4	1E-3
83	Bismuth-200 b/	D, nitrates W, all other compounds	3E+4 -	8E+4 1E+5	4E-5 4E-5	1E-7 1E-7	4E-4 -	4E-3 -
83	Bismuth-201 b/	D, see Bi-200 W, see Bi-200	1E+4 -	3E+4 4E+4	1E-5 2E-5	4E-8 5E-8	2E-4 -	2E-3 -
83	Bismuth-202 b/	D, see Bi-200 W, see Bi-200	1E+4 -	4E+4 8E+4	2E-5 3E-5	6E-8 1E-7	2E-4 -	2E-3 -
83	Bismuth-203	D, see Bi-200 W, see Bi-200	2E+3 -	7E+3 6E+3	3E-6 3E-6	9E-9 9E-9	3E-5 -	3E-4 -
83	Bismuth-205	D, see Bi-200 W, see Bi-200	1E+3 -	3E+3 1E+3	1E-6 5E-7	3E-9 2E-9	2E-5 -	2E-4 -
83	Bismuth-206	D, see Bi-200 W, see Bi-200	6E+2 -	1E+3 9E+2	6E-7 4E-7	2E-9 1E-9	9E-6 -	9E-5 -
83	Bismuth-207	D, see Bi-200 W, see Bi-200	1E+3 -	2E+3 4E+2	7E-7 1E-7	2E-9 5E-10	1E-5 -	1E-4 -
83	Bismuth-210m	D, see Bi-200 W, see Bi-200	4E+1 Kidneys (6E+1) -	5E+0 Kidneys (6E+0) 7E-1	2E-9 - 3E-10	- 9E-12 9E-13	- 8E-7 -	- 8E-6 -
83	Bismuth-210	D, see Bi-200 W, see Bi-200	8E+2 - -	2E+2 Kidneys (4E+2) 3E+1	1E-7 - 1E-8	- 5E-10 4E-11	1E-5 - -	1E-4 - -
83	Bismuth-212 b/	D, see Bi-200 W, see Bi-200	5E+3 -	2E+2 3E+2	1E-7 1E-7	3E-10 4E-10	7E-5 -	7E-4 -
83	Bismuth-213 b/	D, see Bi-200 W, see Bi-200	7E+3 -	3E+2 4E+2	1E-7 1E-7	4E-10 5E-10	1E-4 -	1E-3 -
8388	Bismuth-214 b/	D, see Bi-200 W, see Bi-200	2E+4 St wall (2E+4) -	8E+2 - 9E-2	3E-7 - 4E-7	1E-9 - 1E-9	- 3E-4 -	- 3E-3 -

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
84	Polonium-203 b/	D, all compounds except those given for W	3E+4	6E+4	3E-5	9E-8	3E-4	3E-3
		W, oxides, hydroxides, and nitrates	-	9E+4	4E-5	1E-7	-	-
84	Polonium-205 b/	D, see Po-203	2E+4	4E+4	2E-5	5E-8	3E-4	3E-3
		W, see Po-203	-	7E+4	3E-5	1E-7	-	-
84	Polonium-207	D, see Po-203	8E+3	3E+4	1E-5	3E-8	1E-4	1E-3
		W, see Po-203	-	3E+4	1E-5	4E-8	-	-
84	Polonium-210	D, see Po-203	3E+0	6E-1	3E-10	9E-13	4E-8	4E-7
		W, see Po-203	-	6E-1	3E-10	9E-13	-	-
85	Astatine-207 b/	D, halides	6E+3	3E+3	1E-6	4E-9	8E-5	8E-4
		W	-	2E+3	9E-7	3E-9	-	-
85	Astatine-211	D, halides	1E+2	8E+1	3E-8	1E-10	2E-6	2E-5
		W	-	5E+1	2E-8	8E-11	-	-
86	Radon-220	With daughters removed	-	2E+4	7E-6	2E-8	-	-
		With daughters present	-	2E+1 (or 12 WLM)	9E-9 (or 1.0 WL)	3E-11	-	-
86	Radon-222	With daughters removed	-	1E+4	4E-6	1E-8	-	-
		With daughters present	-	1E+2 (or 4 WLM)	3E-8 (or 0.33 WL)	1E-10	-	-
87	Francium-222 b/	D, all compounds	2E+3	5E+2	2E-7	6E-10	3E-5	3E-4
87	Francium-223 b/	D, all compounds	6E+2	8E+2	3E-7	1E-9	8E-6	8E-5
88	Radium-223	W, all compounds	5E+0 Bone surf (9E+0)	7E-1 -	3E-10 -	9E-13 -	- 1E-7	- 1E-6
88	Radium-224	W, all compounds	8E+0 Bone surf (2E+1)	2E+0 -	7E-10 -	2E-12 -	- 2E-7	- 2E-6
88	Radium-225	W, all compounds	8E+0 Bone surf (2E+1)	7E-1 -	3E-10 -	9E-13 -	- 2E-7	- 2E-6
88	Radium-226	W, all compounds	2E+0 Bone surf (5E+0)	6E-1 -	3E-10 -	9E-13 -	- 6E-8	- 6E-7
88	Radium-227 b/	W, all compounds	2E+4 Bone surf (2E+4)	1E+4 Bone surf (2E+4)	6E-6 -	- 3E-8	- 3E-4	- 3E-3
88	Radium-228	W, all compounds	2E+0 Bone surf (4E+0)	1E+0 -	5E-10 -	2E-12 -	- 6E-8	- 6E-7
89	Actinium-224	D, all compounds except those given for W and Y	2E+3 LLI wall (2E+3)	3E+1 Bone surf (4E+1)	1E-8 -	- 5E-11	- 3E-5	- 3E-4
		W, halides and nitrates	-	5E+1	2E-8	7E-11	-	-
		Y, oxides and hydroxides	-	5E+1	2E-8	6E-11	-	-
89	Actinium-225	D, see Ac-224	5E+1 LLI wall (5E+1)	3E-1 Bone surf (5E-1)	1E-10 -	- 7E-13	- 7E-7	- 7E-6
		W, see Ac-224	-	6E-1	3E-10	9E-13	-	-
		Y, see Ac-224	-	6E-1	3E-10	9E-13	-	-
89	Actinium-226	D, see Ac-224	1E+2 LLI wall (1E+2)	3E+0 Bone surf (4E+0)	1E-9 -	- 5E-12	- 2E-6	- 2E-5
		W, see Ac-224	-	5E+0	2E-9	7E-12	-	-
		Y, see Ac-224	-	5E+0	2E-9	6E-12	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
89	Actinium-227	D, see Ac-224	2E-1 Bone surf (4E-1)	4E-4 Bone surf (8E-4)	2E-13 -	- 1E-15	- 5E-9	- 5E-8
		W, see Ac-224	- -	2E-3 Bone surf (3E-3)	7E-13 -	- 4E-15	- -	- -
		Y, see Ac-224	-	4E-3	2E-12	6E-15	-	-
89	Actinium-228	D, see Ac-224	2E+3 -	9E+0 Bone surf (2E+1)	4E-9 -	- 2E-11	3E-5 -	3E-4 -
		W, see Ac-224	- -	4E+1 Bone surf (6E+1)	2E-8 -	- 8E-11	- -	- -
		Y, see Ac-224	-	4E+1	2E-8	6E-11	-	-
90	Thorium-226 b/	W, all compounds except those given for Y	5E+3 St wall (5E+3)	2E+2 -	6E-8 -	2E-10 -	- 7E-5	- 7E-4
		Y, oxides and hydroxides	-	1E+2	6E-8	2E-10	-	-
90	Thorium-227	W, see Th-226	1E+2	3E-1	1E-10	5E-13	2E-6	2E-5
		Y, see Th-226	-	3E-1	1E-10	5E-13	-	-
90	Thorium-228	W, see Th-226	6E+0 Bone surf (1E+1)	1E-2 Bone surf (2E-2)	4E-12 -	- 3E-14	- 2E-7	- 2E-6
		Y, see Th-226	-	2E-2	7E-12	2E-14	-	-
90	Thorium-229	W, see Th-226	6E-1 Bone surf (1E+0)	9E-4 Bone surf (2E-3)	4E-13 -	- 3E-15	- 2E-8	- 2E-7
		Y, see Th-226	- -	2E-3 Bone surf (3E-3)	1E-12 -	- 4E-15	- -	- -
90	Thorium-230	W, see Th-226	4E+0 Bone surf (9E+0)	6E-3 Bone surf (2E-2)	3E-12 -	- 2E-14	- 1E-7	- 1E-6
		Y, see Th-226	- -	2E-2 Bone surf (2E-2)	6E-12 -	- 3E-14	- -	- -
90	Thorium-231	W, see Th-226	4E+3	6E+3	3E-6	9E-9	5E-5	5E-4
		Y, see Th-226	-	6E+3	3E-6	9E-9	-	-
90	Thorium-232	W, see Th-226	7E-1 Bone surf (2E+0)	1E-3 Bone surf (3E-3)	5E-13 -	- 4E-15	- 3E-8	- 3E-7
		Y, see Th-226	- -	3E-3 Bone surf (4E-3)	1E-12 -	- 6E-15	- -	- -
90	Thorium-234	W, see Th-226	3E+2 LLI wall (4E+2)	2E+2 -	8E-8 -	3E-10 -	- 5E-6	- 5E-5
		Y, see Th-226	-	2E+2	6E-8	2E-10	-	-
91	Protactinium-227 b/	W, all compounds except those given for Y	4E+3	1E+2	5E-8	2E-10	5E-5	5E-4
		Y, oxides and hydroxides	-	1E+2	4E-8	1E-10	-	-
91	Protactinium-228	W, see Pa-227	1E+3 -	1E+1 Bone surf (2E+1)	5E-9 -	- 3E-11	2E-5 -	2E-4 -
		Y, see Pa-227	-	1E+1	5E-9	2E-11	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
91	Protactinium-230	W, see Pa-227	6E+2 Bone surf (9E+2)	5E+0 -	2E-9 -	7E-12 -	- 1E-5	- 1E-4
		Y, see Pa-227	-	4E+0	1E-9	5E-12	-	-
91	Protactinium-231	W, see Pa-227	2E-1 Bone surf (5E-1)	2E-3 Bone surf (4E-3)	6E-13 -	- 6E-15	- 6E-9	- 6E-8
		Y, see Pa-227	- -	4E-3 Bone surf (6E-3)	2E-12 -	- 8E-15	- -	- -
91	Protactinium-232	W, see Pa-227	1E+3 -	2E+1 Bone surf (6E+1)	9E-9 -	- 8E-11	2E-5 -	2E-4 -
		Y, see Pa-227	- -	6E+1 Bone surf (7E+1)	2E-8 -	- 1E-10	- -	- -
91	Protactinium-233	W, see Pa-227	1E+3 LLI wall (2E+3)	7E+2 -	3E-7 -	1E-9 -	- 2E-5	- 2E-4
		Y, see Pa-227	-	6E+2	2E-7	8E-10	-	-
91	Protactinium-234	W, see Pa-227	2E+3	8E+3	3E-6	1E-8	3E-5	3E-4
		Y, see Pa-227	-	7E+3	3E-6	9E-9	-	-
92	Uranium-230	D, UF_6, UO_2F_2, $UO_2(NO_3)_2$	4E+0 Bone surf (6E+0)	4E-1 Bone surf (6E-1)	2E-10 -	- 8E-13	- 8E-8	- 8E-7
		W, UO_3, UF_4, UCl_4	- -	4E-1	1E-10	5E-13	-	-
		Y, UO_2, U_3O_8	-	3E-1	1E-10	4E-13	-	-
92	Uranium-231	D, see U-230	5E+3 LLI wall (4E+3)	8E+3 -	3E-6 -	1E-8 -	- 6E-5	- 6E-4
		W, see U-230	-	6E+3	2E-6	8E-9	-	-
		Y, see U-230	-	5E+3	2E-6	6E-9	-	-
92	Uranium-232	D, see U-230	2E+0 Bone surf (4E+0)	2E-1 Bone surf (4E-1)	9E-11 -	- 6E-13	- 6E-8	- 6E-7
		W, see U-230	-	4E-1	2E-10	5E-13	-	-
		Y, see U-230	-	8E-3	3E-12	1E-14	-	-
92	Uranium-233	D, see U-230	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	5E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see U-230	-	7E-1	3E-10	1E-12	-	-
		Y, see U-230	-	4E-2	2E-11	5E-14	-	-
92	Uranium-234c/	D, see U-230	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	5E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see U-230	-	7E-1	3E-10	1E-12	-	-
		Y, see U-230	-	4E-2	2E-11	5E-14	-	-
92	Uranium-235c/	D, see U-230	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	6E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see U-230	-	8E-1	3E-10	1E-12	-	-
		Y, see U-230	-	4E-2	2E-11	6E-14	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
92	Uranium-236	D, see U-230	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	5E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see U-230	-	8E-1	3E-10	1E-12	-	-
		Y, see U-230	-	4E-2	2E-11	6E-14	-	-
92	Uranium-237	D, see U-230	2E+3 LLI wall (2E+3)	3E+3 -	1E-6 -	4E-9 -	- 3E-5	- 3E-4
		W, see U-230	-	2E+3	7E-7	2E-9	-	-
		Y, see U-230	-	2E+3	6E-7	2E-9	-	-
92	Uranium-238c/	D, see U-230	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	6E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see U-230	-	8E-1	3E-10	1E-12	-	-
		Y, see U-230	-	4E-2	2E-11	6E-14	-	-
92	Uranium-239 b/	D, see U-230	7E+4	2E+5	8E-5	3E-7	9E-4	9E-3
		W, see U-230	-	2E+5	7E-5	2E-7	-	-
		Y, see U-230	-	2E+5	6E-5	2E-7	-	-
92	Uranium-240	D, see U-230	1E+3	4E+3	2E-6	5E-9	2E-5	2E-4
		W, see U-230	-	3E+3	1E-6	4E-9	-	-
		Y, see U-230	-	2E+3	1E-6	3E-9	-	-
92	Uranium natural c/	D, see U-230	1E+1 Bone surf (2E+1)	1E+0 Bone surf (2E+0)	5E-10 -	- 3E-12	- 3E-7	- 3E-6
		W, see U-230	-	8E-1	3E-10	9E-13	-	-
		Y, see U-230	-	5E-2	2E-11	9E-14	-	-
93	Neptunium-232 b/	W, all compounds	1E+5 -	2E+3 Bone surf (5E+2)	7E-7 -	- 6E-9	2E-3 -	2E-2 -
93	Neptunium-233 b/	W, all compounds	8E+5	3E+6	1E-3	4E-6	1E-2	1E-1
93	Neptunium-234	W, all compounds	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
93	Neptunium-235	W, all compounds	2E+4 LLI wall (2E+4)	8E+2 Bone surf (1E+3)	3E-7 -	- 2E-9	- 3E-4	- 3E-3
93	Neptunium-236 (1.15E+5y)	W, all compounds	3E+0 Bone surf (6E+0)	2E-2 Bone surf (5E-2)	9E-12 -	- 8E-14	- 9E-8	- 9E-7
93	Neptunium-236 (22.5 h)	W, all compounds	3E+3 Bone surf (4E+3)	3E+1 Bone surf (7E+1)	1E-8 -	- 1E-10	- 5E-5	- 5E-4
93	Neptunium-237	W, all compounds	5E-1 Bone surf (1E+0)	4E-3 Bone surf (1E-2)	2E-12 -	- 1E-14	- 2E-8	- 2E-7
93	Neptunium-238	W, all compounds	1E+3 -	6E+1 Bone surf (2E+2)	3E-8 -	- 2E-10	2E-5 -	2E-4 -
93	Neptunium-239	W, all compounds	2E+3 LLI wall (2E+3)	2E+3 -	9E-7 -	3E-9 -	- 2E-5	- 2E-4
93	Neptunium-240 b/	W, all compounds	2E+4	8E+4	3E-5	1E-7	3E-4	3E-3
94	Plutonium-234	W, all compounds except PuO_2	8E+3 -	2E+2 2E+2	9E-8 8E-8	3E-10 3E-10	1E-4 -	1E-3 -
		Y, PuO_2						
94	Plutonium-235 b/	W, see Pu-234	9E+5	3E+6	1E-3	4E-6	1E-2	1E-1
		Y, see Pu-234	-	3E+6	1E-3	3E-6	-	-

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
94	Plutonium-236	W, see Pu-234	2E+0 Bone surf (4E+0)	2E-2 Bone surf (4E-2)	8E-12 -	- 5E-14	- 6E-8	- 6E-7
		Y, see Pu-234	-	4E-2	2E-11	6E-14	-	-
94	Plutonium-237	W, see Pu-234	1E+4	3E+3	1E-6	5E-9	2E-4	2E-3
		Y, see Pu-234	-	3E+3	1E-6	4E-9	-	-
94	Plutonium-238	W, see Pu-234	9E-1 Bone surf (2E+0)	7E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
		Y, see Pu-234	-	2E-2	8E-12	2E-14	-	-
94	Plutonium-239	W, see Pu-234	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
		Y, see Pu-234	- -	2E-2 Bone surf (2E-2)	7E-12 -	- 2E-14	- -	- -
94	Plutonium-240	W, see Pu-234	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
		Y, see Pu-234	- -	2E-2 Bone surf (2E-2)	7E-12 -	- 2E-14	- -	- -
94	Plutonium-241	W, see Pu-234	4E+1 Bone surf (7E+1)	3E-1 Bone surf (6E-1)	1E-10 -	- 8E-13	- 1E-6	- 1E-5
		Y, see Pu-234	- -	8E-1 Bone surf (1E+0)	3E-10 -	- 1E-12	- -	- -
94	Plutonium-242	W, see Pu-234	8E-1 Bone surf (1E+0)	7E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
		Y, see Pu-234	- -	2E-2 Bone surf (2E-2)	7E-12 -	- 2E-14	- -	- -
94	Plutonium-243	W, see Pu-234	2E+4	4E+4	2E-5	5E-8	2E-4	2E-3
		Y, see Pu-234	-	4E+4	2E-5	5E-8	-	-
94	Plutonium-244	W, see Pu-234	8E-1 Bone surf (2E+0)	7E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
		Y, see Pu-234	- -	2E-2 Bone surf (2E-2)	7E-12 -	- 2E-14	- -	- -
94	Plutonium-245	W, see Pu-234	2E+3	5E+3	2E-6	6E-9	3E-5	3E-4
		Y, see Pu-234	-	4E+3	2E-6	6E-9	-	-
94	Plutonium-246	W, see Pu-234	4E+2 LLI wall (4E+2)	3E+2 -	1E-7 -	4E-10 -	- 6E-6	- 6E-5
		Y, see Pu-234	-	3E+2	1E-7	4E-10	-	-
95	Americium-237 b/	W, all compounds	8E+4	3E+5	1E-4	4E-7	1E-3	1E-2
95	Americium-238 b/	W, all compounds	4E+4 -	3E+3 Bone surf (6E+3)	1E-6 -	- 9E-9	5E-4 -	5E-3 -
95	Americium-239	W, all compounds	5E+3	1E+4	5E-6	2E-8	7E-5	7E-4
95	Americium-240	W, all compounds	2E+3	3E+3	1E-6	4E-9	3E-5	3E-4
95	Americium-241	W, all compounds	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
95	Americium-242m	W, all compounds	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
95	Americium-242	W, all compounds	4E+3 -	8E+1 Bone surf (9E+1)	4E-8 -	- 1E-10	5E-5 -	5E-4 -
95	Americium-243	W, all compounds	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
95	Americium-244m b/	W, all compounds	6E+4 St wall (8E+4)	4E+3 Bone surf (7E+3)	2E-6 -	- 1E-8	- 1E-3	- 1E-2
95	Americium-244	W, all compounds	3E+3 -	2E+2 Bone surf (3E+2)	8E-8 -	- 4E-10	4E-5 -	4E-4 -
95	Americium-245	W, all compounds	3E+4	8E+4	3E-5	1E-7	4E-4	4E-3
95	Americium-246m b/	W, all compounds	5E+4 St wall (6E+4)	2E+5 -	8E-5 -	3E-7 -	- 8E-4	- 8E-3
95	Americium-246 b/	W, all compounds	3E+4	1E+5	4E-5	1E-7	4E-4	4E-3
96	Curium-238	W, all compounds	2E+4	1E+3	5E-7	2E-9	2E-4	2E-3
96	Curium-240	W, all compounds	6E+1 Bone surf (8E+1)	6E-1 Bone surf (6E-1)	2E-10 -	- 9E-13	- 1E-6	- 1E-5
96	Curium-241	W, all compounds	1E+3 -	3E+1 Bone surf (4E+1)	1E-8 -	- 5E-11	2E-5 -	2E-4 -
96	Curium-242	W, all compounds	3E+1 Bone surf (5E+1)	3E-1 Bone surf (3E-1)	1E-10 -	- 4E-13	- 7E-7	- 7E-6
69	Curium-243	W, all compounds	1E+0 Bone surf (2E+0)	9E-3 Bone surf (2E-2)	4E-12 -	- 2E-14	- 3E-8	- 3E-7
96	Curium-244	W, all compounds	1E+0 Bone surf (3E+0)	1E-2 Bone surf (2E-2)	5E-12 -	- 3E-14	- 3E-8	- 3E-7
96	Curium-245	W, all compounds	7E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
96	Curium-246	W, all compounds	7E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
96	Curium-247	W, all compounds	8E-1 Bone surf (1E+0)	6E-3 Bone surf (1E-2)	3E-12 -	- 2E-14	- 2E-8	- 2E-7
96	Curium-248	W, all compounds	2E-1 Bone surf (4E-1)	2E-3 Bone surf (3E-3)	7E-13 -	- 4E-15	- 5E-9	- 5E-8
96	Curium-249 b/	W, all compounds	5E+4 -	2E+4 Bone surf (3E+4)	7E-6 -	- 4E-8	7E-4 -	7E-3 -
96	Curium-250	W, all compounds	4E-2 Bone surf (6E-2)	3E-4 Bone surf (5E-4)	1E-13 -	- 8E-16	- 9E-10	- 9E-9
97	Berkelium-245	W, all compounds	2E+3	1E+3	5E-7	2E-9	3E-5	3E-4
97	Berkelium-246	W, all compounds	3E+3	3E+3	1E-6	4E-9	4E-5	4E-4
97	Berkelium-247	W, all compounds	5E-1 Bone surf (1E+0)	4E-3 Bone surf (9E-3)	2E-12 -	- 1E-14	- 2E-8	- 2E-7
97	Berkelium-249	W, all compounds	2E+2 Bone surf (5E+2)	2E+0 Bone surf (4E+0)	7E-10 -	- 5E-12	- 6E-6	- 6E-5
97	Berkelium-250	W, all compounds	9E+3 -	3E+2 Bone surf (7E+2)	1E-7 -	- 1E-9	1E-4 -	1E-3 -
98	Californium-244 b/	W, all compounds except those given for Y Y, oxides and hydroxides	3E+4 St wall (3E+4) -	6E+2 - 6E+2	2E-7 - 2E-7	8E-10 - 8E-10	- 4E-4 -	- 4E-3 -

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
98	Californium-246	W, see Cf-244	4E+2	9E+0	4E-9	1E-11	5E-6	5E-5
		Y, see Cf-244	-	9E+0	4E-9	1E-11	-	-
98	Californium-248	W, see Cf-244	8E+0 Bone surf (2E+1)	6E-2 Bone surf (1E-1)	3E-11	-	-	-
		Y, see Cf-244	-	1E-1	4E-11	1E-13	-	-
98	Californium-249	W, see Cf-244	5E-1 Bone surf (1E+0)	4E-3 Bone surf (9E-3)	2E-12	-	-	-
		Y, see Cf-244	-	1E-2 Bone surf (1E-2)	4E-12	-	-	-
98	Californium-250	W, see Cf-244	1E+0 Bone surf (2E+0)	9E-3 Bone surf (2E-2)	4E-12	-	-	-
		Y, see Cf-244	-	3E-2	1E-11	4E-14	-	-
98	Californium-251	W, see Cf-244	5E-1 Bone surf (1E+0)	4E-3 Bone surf (9E-3)	2E-12	-	-	-
		Y, see Cf-244	-	1E-2 Bone surf (1E-2)	4E-12	-	-	-
98	Californium-252	W, see Cf-244	2E+0 Bone surf (5E+0)	2E-2 Bone surf (4E-2)	8E-12	-	-	-
		Y, see Cf-244	-	3E-2	1E-11	5E-14	-	-
98	Californium-253	W, see Cf-244	2E+2 Bone surf (4E+2)	2E+0	8E-10	3E-12	-	-
		Y, see Cf-244	-	2E+0	7E-10	2E-12	-	-
98	Californium-254	W, see Cf-244	2E+0	2E-2	9E-12	3E-14	3E-8	3E-7
		Y, see Cf-244	-	2E-2	7E-12	2E-14	-	-
	Einsteinium-250	W, all compounds	4E+4	5E+2 Bone surf (1E+3)	2E-7	-	6E-4	6E-3
			-		-	2E-9	-	-
99	Einsteinium-251	W, all compounds	7E+3	9E+2 Bone surf (1E+3)	4E-7	-	1E-4	1E-3
			-		-	2E-9	-	-
99	Einsteinium-253	W, all compounds	2E+2	1E+0	6E-10	2E-12	2E-6	2E-5
99	Einsteinium-254m	W, all compounds	3E+2 LLI wall (3E+2)	1E+1	4E-9	1E-11	-	-
				-	-	-	4E-6	4E-5
99	Einsteinium-254	W, all compounds	8E+0 Bone surf (2E+1)	7E-2 Bone surf (1E-1)	3E-11	-	-	-
					-	2E-13	2E-7	2E-6
100	Fermium-252	W, all compounds	5E+2	1E+1	5E-9	2E-11	6E-6	6E-5
100	Fermium-253	W, all compounds	1E+3	1E+1	4E-9	1E-11	1E-5	1E-4
100	Fermium-254	W, all compounds	3E+3	9E+1	4E-8	1E-10	4E-5	4E-4
100	Fermium-255	W, all compounds	5E+2	2E+1	9E-9	3E-11	7E-6	7E-5
100	Fermium-257	W, all compounds	2E+1 Bone surf (4E+1)	2E-1 Bone surf (2E-1)	7E-11	-	-	-
					-	3E-13	5E-7	5E-6
101	Mendelevium-257	W, all compounds	7E+3	8E+1 Bone surf (9E+1)	4E-8	-	1E-4	1E-3
			-		-	1E-10	-	-
101	Mendelevium-258	W, all compounds	3E+1 Bone surf (5E+1)	2E-1 Bone surf (3E-1)	1E-10	-	-	-
					-	5E-13	6E-7	6E-6

Atomic No.	Nuclide	Class	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
			Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive half- life less than 2 hours		Submersion a/	-	2E+2	1E-7	1E-9	-	-
Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive half- life greater than 2 hours			-	2E-1	1E-10	1E-12	1E-8	1E-7
Any single radionuclide not listed above that decays by alpha emission or spontaneous fission, or any mixture for which either the identity or the concentration of any radionuclide in the mixture is not known			-	4E-4	2E-13	1E-15	2E-9	2E-8

Footnotes:

a/ *"Submersion" means that values given are for submersion in a hemispherical semi-infinite cloud of airborne material.*

b/ *These radionuclides have radiological half-lives of less than 2 hours. The total effective dose equivalent received during operations with these radionuclides might include a significant contribution from external exposure. The DAC values for all radionuclides, other than those designated Class "Submersion," are based upon the committed effective dose equivalent due to the intake of the radionuclide into the body and do NOT include potentially significant contributions to dose equivalent from external exposures. The licensee may substitute 1E-7 mCi/ml for the listed DAC to account for the submersion dose prospectively, but should use individual monitoring devices or other radiation measuring instruments that measure external exposure to demonstrate compliance with the limits. (See 3701:1-38-12(C).)*

c/ *For soluble mixtures of U-238, U-234, and U-235 in air, chemical toxicity may be the limiting factor (see D.201e.). If the percent by weight (enrichment) of U-235 is not greater than 5, the concentration value for a 40-hour workweek is 0.2 milligrams uranium per cubic meter of air average. For any enrichment, the product of the average concentration and time of exposure during a 40-hour workweek shall not exceed 8E-3 (SA) mCi-hr/ml, where SA is the specific activity of the uranium inhaled. The specific activity for natural uranium is 6.77E-7 curies per gram U. The specific activity for other mixtures of U-238, U-235, and U-234, if not known, shall be:*

$SA = 3.6 \times 10^{-7}$ *curies/gram U* - *for U-depleted*

$SA = [0.4 + 0.38\ (enrichment) + 0.0034\ (enrichment)^2] \times 10^{-6}$ - *for enrichment > 0.72*

where enrichment is the percentage by weight of U-235, expressed as percent.

NOTE 1 *If the identity of each radionuclide in a mixture is known but the concentration of one or more of the radionuclides in the mixture is not known, the DAC for the mixture shall be the most restrictive DAC of any radionuclide in the mixture.*

NOTE 2 *If the identity of each radionuclide in the mixture is not known, but it is known that certain radionuclides specified in this appendix are not present in the mixture, the inhalation ALI, DAC, and effluent and sewage concentrations for the mixture are the lowest values specified in this appendix for any radionuclide that is not known to be absent from the mixture; or*

Radionuclide	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
	Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
If it is known that Ac-227-D and Cm-250-W are not present	-	7E-4	3E-13	-	-	-
If, in addition, it is known that Ac-227-W,Y, Th-229-W,Y, Th-230-W, Th-232-W,Y, Pa-231-W,Y, Np-237-W, Pu-239-W, Pu-240-W, Pu-242-W, Am-241-W, Am-242m-W, Am-243-W, Cm-245-W, Cm-246-W, Cm-247-W, Cm-248-W, Bk-247-W, Cf-249-W, and Cf-251-W are not present	-	7E-3	3E-12	-	-	-
If, in addition, it is known that Sm-146-W, Sm-147-W, Gd-148-D,W, Gd-152-D,W, Th-228-W,Y, Th-230-Y, U-232-Y, U-233-Y, U-234-Y, U-235-Y, U-236-Y, U-238-Y, Np-236-W, Pu-236-W,Y, Pu-238-W,Y, Pu-239-Y, Pu-240-Y, Pu-242-Y, Pu-244-W,Y, Cm-243-W, Cm-244-W, Cf-248-W, Cf-249-Y, Cf-250-W,Y, Cf-251-Y, Cf-252-W,Y, and Cf-254-W,Y are not present	-	7E-2	3E-11	-	-	-

Radionuclide	Table I. Occupational Values			Table II. Effluent Concentrations		Table III. Releases to Sewers
	Oral Ingestion ALI (µCi)	Inhalation ALI (µCi)	DAC (µCi/mL)	Air (µCi/mL)	Water (µCi/mL)	Monthly Average Conc. (µCi/mL)
If, in addition, it is known that Pb-210-D, Bi-210m-W, Po-210-D,W, Ra-223-W, Ra-225-W, Ra-226-W, Ac-225-D,W,Y, Th-227-W, Y, U-230-D,W,Y, U-232-D,W, Pu-241-W, Cm-240-W, Cm-242-W, Cf-248-Y, Es-254-W, Fm-257-W, and Md-258-W are not present	-	7E-1	3E-10	-	-	-
If, in addition, it is known that Si-32-Y, Ti-44-Y, Fe-60-D, Sr-90-Y, Zr-93-D, Cd-113m-D, Cd-113-D, In-115-D,W, La-138-D, Lu-176-W, Hf-178m-D,W, Hf-182-D,W, Bi-210m-D, Ra-224-W, Ra-228-W, Ac-226-D,W,Y, Pa-230-W,Y, U-233-D,W, U-234-D,W, U-235-D,W, U-236-D,W, U-238-D,W, Pu-241-Y, Bk-249-W, Cf-253-W,Y, and Es-253-W are not present	-	7E+0	3E-9	-	-	-
If it is known that Ac-227-D,W,Y, Th-229-W,Y, Th-232-W,Y, Pa-231-W,Y, Cm-248-W, and Cm-250-W are not present	-	-	-	1E-14	-	-
If, in addition, it is known that Sm-146-W, Gd-148-D,W, Gd-152-D, Th-228-W,Y, Th-230-W,Y, U-232-Y, U-233-Y, U-234-Y, U-235-Y, U-236-Y, U-238-Y, U-Nat-Y, Np-236-W, Np-237-W, Pu-236-W,Y, Pu-238-W,Y, Pu-239-W,Y, Pu-240-W,Y, Pu-242-W,Y, Pu-244-W,Y, Am-241-W, Am-242m-W, Am-243-W, Cm-243-W, Cm-244-W, Cm-245-W, Cm-246-W, Cm-247-W, Bk-247-W, Cf-249-W,Y, Cf-250-W,Y, Cf-251-W,Y, Cf-252-W,Y, and Cf-254-W,Y are not present	-	-	-	1E-13	-	-
If, in addition, it is known that Sm-147-W, Gd-152-W, Pb-210-D, Bi-210m-W, Po-210-D,W, Ra-223-W, Ra-225-W, Ra-226-W, Ac-225-D,W,Y, Th-227-W,Y, U-230-D,W,Y, U-232-D,W, U-Nat-W, Pu-241-W, Cm-240-W, Cm-242-W, Cf-248-W,Y, Es-254-W, Fm-257-W, and Md-258-W are not present	-	-	-	1E-12	-	-
If, in addition it is known that Fe-60, Sr-90, Cd-113m, Cd-113, In-115, I-129, Cs-134, Sm-145, Sm-147, Gd-148, Gd-152, Hg-194 (organic), Bi-210m, Ra-223, Ra-224, Ra-225, Ac-225, Th-228, Th-230, U-233, U-234, U-235, U-236, U-238, UNat, Cm-242, Cf-248, Es-254, Fm-257, and Md-258 are not present	-	-	-	-	1E-6	1E-5

NOTE 3 *If a mixture of radionuclides consists of uranium and its daughters in ore dust (10 µm AMAD particle distribution assumed) prior to chemical separation of the uranium from the ore, the following values may be used for the DAC of the mixture : 6E-11 µCi of gross alpha activity from uranium-238, uranium-234, thorium-230, and radium-226 per milliliter of air; 3E-11 µCi of natural uranium per milliliter of air; or 45 micrograms of natural uranium per cubic meter of air.*

NOTE 4 *If the identity and concentration of each radionuclide in a mixture are known, the limiting values should be derived as follows : determine, for each radionuclide in the mixture, the ratio between the concentration present in the mixture and the concentration otherwise established in this appendix for the specific radionuclide when not in a mixture. The sum of such ratios for all of the radionuclides in the mixture may not exceed "1" (i.e., "unity").*

Example: If radionuclides "A," "B," and "C" are present in concentrations C A, C B, and C C, and if the applicable DACs are DAC A, DAC B, and DAC C, respectively, then the concentrations shall be limited so that the following relationship exists:

$$\frac{C_A}{DAC_A} + \frac{C_B}{DAC_B} + \frac{C_C}{DAC_C} < 1$$