| Atomic No. | Radionuclide | Class | Table 1 Occupational Values: Col. 1 Oral Ingestion ALI (μCi) | Table 1 Occupational Values: Col. 2 Inhalation ALI (μCi) | Table 1 Occupational Values: Col. 3 Inhalation DAC (μCi/ml) | Table 2 Effluent Concentrations: Col. 1 Air (μCi/ml) | Table 2 Effluent Concentrations: Col. 2 Water (μCi/ml) | Table 3 Releases to Sewers: Monthly Average Concentration (μCi/ml) |
|---|---|---|---|---|---|---|---|---|
| 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 | - | - |
| 40 | Zirconium-88 | D, see $^{86}Zr$ | 4E+3 | 2E+2 | 9E-8 | 3E-10 | 5E-5 | 5E-4 |
| | | W, see $^{86}Zr$ | - | 5E+2 | 2E-7 | 7E-10 | - | - |
| | | Y, see $^{86}Zr$ | - | 3E+2 | 1E-7 | 4E-10 | - | - |
| 40 | Zirconium-89 | D, see $^{86}Zr$ | 2E+3 | 4E+3 | 1E-6 | 5E-9 | 2E-5 | 2E-4 |
| | | W, see $^{86}Zr$ | - | 2E+3 | 1E-6 | 3E-9 | - | - |
| | | Y, see $^{86}Zr$ | - | 2E+3 | 1E-6 | 3E-9 | - | - |
| 40 | Zirconium-93 | D, see $^{86}Zr$ | 1E+3 | 6E+0 | 3E-9 | - | - | - |
| | | | Bone surf (3E+3) | Bone surf (2E+1) | - | 2E-11 | 4E-5 | 4E-4 |
| | | W, see $^{86}Zr$ | - | 2E+1 | 1E-8 | - | - | - |
| | | | - | Bone surf (6E+1) | - | 9E-11 | - | - |
| | | Y, see $^{86}Zr$ | - | 6E+1 | 2E-8 | - | - | - |
| | | | - | Bone surf (7E+1) | - | 9E-11 | - | - |
| 40 | Zirconium-95 | D, see $^{86}Zr$ | 1E+3 | 1E+2 | 5E-8 | - | 2E-5 | 2E-4 |
| | | | - | Bone surf (3E+2) | - | 4E-10 | - | - |
| | | W, see $^{86}Zr$ | - | 4E+2 | 2E-7 | 5E-10 | - | - |
| | | Y, see $^{86}Zr$ | - | 3E+2 | 1E-7 | 4E-10 | - | - |
| 40 | Zirconium-97 | D, see $^{86}Zr$ | 6E+2 | 2E+3 | 8E-7 | 3E-9 | 9E-6 | 9E-5 |
| | | W, see $^{86}Zr$ | - | 1E+3 | 6E-7 | 2E-9 | - | - |
| | | Y, see $^{86}Zr$ | - | 1E+3 | 5E-7 | 2E-9 | - | - |
| 41 | Niobium-88[2] | W, all compounds except those given for Y | 5E+4 | 2E+5 | 9E-5 | 3E-7 | - | - |
| | | | St. wall (7E+4) | - | - | - | 1E-3 | 1E-2 |
| | | Y, oxides and hydroxides | - | 2E+5 | 9E-5 | 3E-7 | - | - |
| 41 | Niobium-89m[2] (66 min) | W, see $^{88}Nb$ | 1E+4 | 4E+4 | 2E-5 | 6E-8 | 1E-4 | 1E-3 |
| | | Y, see $^{88}Nb$ | - | 4E+4 | 2E-5 | 5E-8 | - | - |
| 41 | Niobium-89 (122 min) | W, see $^{88}Nb$ | 5E+3 | 2E+4 | 8E-6 | 3E-8 | 7E-5 | 7E-4 |
| | | Y, see $^{88}Nb$ | - | 2E+4 | 6E-6 | 2E-8 | - | - |
| 41 | Niobium-90 | W, see $^{88}Nb$ | 1E+3 | 3E+3 | 1E-6 | 4E-9 | 1E-5 | 1E-4 |
| | | Y, see $^{88}Nb$ | - | 2E+3 | 1E-6 | 3E-9 | - | - |
| 41 | Niobium-93m | W, see $^{88}Nb$ | 9E+3 | 2E+3 | 8E-7 | 3E-9 | - | - |
| | | | LLI wall (1E+4) | - | - | - | 2E-4 | 2E-3 |
| | | Y, see $^{88}Nb$ | - | 2E+2 | 7E-8 | 2E-10 | - | - |
| 41 | Niobium-94 | W, see $^{88}Nb$ | 9E+2 | 2E+2 | 8E-8 | 3E-10 | 1E-5 | 1E-4 |
| | | Y, see $^{88}Nb$ | - | 2E+1 | 6E-9 | 2E-11 | - | - |
| 41 | Niobium-95m | W, see $^{88}Nb$ | 2E+3 | 3E+3 | 1E-6 | 4E-9 | - | - |
| | | | LLI wall (2E+3) | - | - | - | 3E-5 | 3E-4 |
| | | Y, see $^{88}Nb$ | - | 2E+3 | 9E-7 | 3E-9 | - | - |