



Table 4-1. Summary of average radioactive properties for PGDP nickel ingots and ETTP shredded nickel.

PGDP nickel ingots ETTP shredded nickel

Radionuclide

Activity

(pCi/g_a)

Relative

contribution

Activity

(pCi/g_a)

Relative

contribution

Technetium-99 2.59×10^4 (b) 1.00 3.99×10^3 1.00

Cesium-137 4.21×10^{-3} (b) 1.63×10^{-7} 1.31×10^{-3} 3.28×10^{-7}

Thorium-230 6.66×10^{-4} 2.57×10^{-8} 2.07×10^{-4} 5.19×10^{-8}

Uranium-234 9.87×10^{-1} 3.81×10^{-5} 3.68×10^{-1} 9.22×10^{-5}

Uranium-235 4.55×10^{-2} 1.76×10^{-6} 2.49×10^{-2} 6.24×10^{-6}

Uranium-238 1.05 4.05×10^{-5} 2.55×10^{-1} 6.39×10^{-5}

Neptunium-237 5.36×10^{-1} 2.07×10^{-5} 5.06×10^{-4} 1.27×10^{-7}

Plutonium-238 1.84×10^{-2} 7.10×10^{-7} 1.88×10^{-5} 4.71×10^{-9}

Plutonium-239 4.11×10^{-2} 1.59×10^{-6} 3.13×10^{-5} 7.84×10^{-9}

Americium-241 1.84×10^{-2} 7.10×10^{-7} 1.31×10^{-5} 3.28×10^{-9}

Total 2.59×10^4 1.00 3.99×10^3 1.00

a. pCi/g = picocuries per gram; divide by 27 to convert to becquerels per gram.

b. Where 2.59×10^4 equals 25,900 and 4.21×10^{-3} equals 0.00421.

Although it is highly likely that the nickel would be used to make alloys, fo