Tellurium (Te)
Element classification: Metalloid
No. of isotopes: 38 (8 natural; 5 stable)
Typical elemental concentrations:
  Soil (natural): ~1µg/kg

Behaviour in the Environment
♦ Very low natural abundance
♦ Natural radioisotope abundance exceeds that of stable isotopes
♦ $^{128}$Te has the longest half-life of any known radioisotope ($2.2 \times 10^{24}$ y)
♦ Chemical behavior similar to sulphur and selenium
♦ Immobile in soil
♦ Mild chemical toxicity

Tellurium

Key sources
♦ Nuclear fuel reprocessing
♦ Atmospheric nuclear weapons tests
♦ Accidental release from nuclear reactors: Chernobyl, Fukushima

Why is it of interest?
♦ $^{132}$Te decays to $^{132}$I—a high energy β emitter
♦ Major contributor (with $^{132}$I) to exposures in the first few days following release from a damaged nuclear reactor
♦ Distributed worldwide in air
♦ $^{129m}$Te and $^{132}$Te have very short half-lives

www.radioecology-exchange.org