

http://www.epa.gov/radiation/tenorm/sources_table.htm

Note: The following article is included from the EPA web site with EPA permission.

TENORM Sources: Summary Table

The summary table below provides a range of reported concentrations, and average concentration measurements of TENORM in various wastes and materials. This is not a comprehensive list, as TENORM radiation is known to occur in many other materials, but should provide a general sense of the hazards posed by this class of radioactive substances.

Note:

Unless otherwise noted, the radiation level of each waste is shown in the units [pCi/gram](#). For comparison purposes, the average level of radium in soil ranges from less than 1 to slightly more than 4 pCi/gram. "NA" indicates data is not available.

Product or Byproduct:	Radiation Level [pCi/g]		
	low	average	high
Soils of the United States	0.2	NA	4.2
Geothermal Energy Waste Scales	10	132	254
Petroleum (oil and gas)			
Produced Water [pCi/l]	0.1	NA	9,000
Pipe/Tank Scale	<0.25	<200	>100,000
Water Treatment			
Treatment Sludge [pCi/l]	1.3	11	11,686
Treatment Plant Filters	NA	40,000	NA
Aluminum			
Ore (Bauxite)	4.4	NA	7.4
Product		0.23	
Production Wastes	NA	3.9-5.6	NA
Coal and Coal Ash			
Bottom Ash	1.6	3.5-4.6	7.7

Fly Ash	2	5.8	9.7
Copper Waste Rock	0.7	12	82.6
Fertilizers (Phosphate & Potassium) Phosphate			
Ore (Florida)	7	17.3-39.5	6.2-53.5
Phosphogypsum	7.3	11.7-24.5	36.7
Phosphate Fertilizer	0.5	5.7	21
Gold and Silver			
Rare Earths			
(Monazite, Xenotime, Bastnasite)	5.7	NA	3224
Titanium Ores			
Rutile		19.7	NA
Ilmenite	NA	5.7	
Wastes	3.9	12	45
Uranium			
Uranium Mining Overburden			low hundreds
Uranium In-Situ Leachate Evaporation Pond	3	30	3000
Solids	300		
Zircon			
Wastes	87	68	1300