Attachment 4; Table 2 - Sources, Quantities, and Concentrations of TENORM [Att. 2,3]				
Source Waste Stream	Quantity/Yr (kg)	U Concentration (Bq/kg)	Th Concentration (Bq/kg)	Ra Concentration (Bq/kg)
Uranium overburden	3.8×10^{10}	1.8×10^{3}	990	920
Phosphate:	5.0×10^{10}	bkgd - 3.0×10^{3}	bkgd - 1.8×10^{3}	400 - 3.7×10^{6}
Phosphogypsum	4.8×10^{10}	bkgd - 500	bkgd - 500	900 - 1.7×10^{3}
Slag	1.5×10^{9}	800 - 3.0×10^{3}	700 - 1.8×10^{3}	400 - 2.1×10^{3}
Scale	4.5×10^{6}	❇	❇	1.1×10^{3} - 3.7×10^{6}
Phosphate fertilizers	4.8×10^{9}	740 - 2.2×10^{3}	37 - 180	180 - 740
Coal Ash:	6.1×10^{10}	100 - 600	30 - 300	100 - 1.2×10^{3}
Fly Ash	4.4×10^{10}	❇	❇	❇
Bottom Ash	1.7×10^{10}	❇	❇	❇
Petroleum Production:	2.6×10^{8}	❇	❇	bkgd - 3.7×10^{6}
Scale	2.5×10^{7}	❇	❇	bkgd - 3.7×10^{6}
Sludge	2.3×10^{8}	❇	❇	bkgd - 3.7×10^{3}
Petroleum Processing:	❇	❇	❇	Pb-210 & Po-210
Refineries	❇	❇	❇	$>4.0 \times 10^{3}$
Petrochemicals	❇	❇	❇	$> 4.0 \times 10^{3}$
Gas Plants	❇	❇	❇	Pb-210 & Po-210
Water Treatment:	3.0×10^{8}	❇	❇	100 - 1.5×10^{6}
Sludge	2.6×10^{8}	❇	❇	100 - 1.2×10^{3}
Resins	4.0×10^{7}	❇	❇	300 - 1.5×10^{6}
Mineral Processing:	1.0×10^{12}	6 - 1.3×10^{5}	8 - 9.0×10^{5}	< 200 - 1.3×10^{5}
Rare Earths	2.1×10^{7}	2.6×10^{4}-1.3×10^{5}	9.0×10^{3} - 9.0×10^{5}	1.3×10^{4} - 1.3×10^{5}
Zr, Hf, Ti, Sn	4.7×10^{8}	6 - 3.2×10^{3}	8 - 6.6×10^{5}	300 - 1.8×10^{4}
Alumina	2.8×10^{9}	400 - 600	500 - 1.2×10^{3}	300 - 500
Cu & Fe	1.0×10^{12}	< 400	< 400	< 200
Geothermal Waste	5.4×10^{7}	❇	❇	400 - 1.6×10^{4}
Paper Mills	❇	❇	❇	$> 3.7 \times 10^{3}$

❇ means data are not available

1 Bq = 27 pCi; 1 kBq = 27 nCi; 1 Mbq = 27 μCi; 1 μCi = 37 kBq; 1 mCi = 37 Mbq; 1 Ci = 37 GBq