

### Financial Assurance Calculation Summary

License No. 45-23722-02

10 CFR 30.35, byproduct material (BPM), unsealed materials

Radionuclide authorized in unsealed form	Quantity authorized	Quantity requiring FA	Fraction
Any BPM 3-83	100 mCi	0.01 mCi (Most restrictive radionuclide from 10 CFR 30, App B)	10,000
Any BPM > 83		0.01 mCi (Most restrictive radionuclide from 10 CFR 30, App B)	
hydrogen 3		1000 mCi	
carbon 14		100 mCi	
cobalt 60	5 mCi	1 mCi	5
Strontium 90	1 mCi	0.100 mCi	10
Technetium 99	100 mCi	100 mCi	1
Barium 133	1 mCi	10 mCi	0.1
cesium 137	10 mCi	10 mCi	1
Americium 241	1 mCi	0.01 mCi	100
Californium 252	550 microcuries (0.550 mCi)	0.01 mCi	55
lead 210		0.01 mCi	
polonium 210		0.01 mCi	
radium 226		0.01 mCi	
If sum of fractions is $\leq 1$ , no FA is required. $> 1$ but $\leq 10$ , \$225,000 certification amount is required. $> 10$ but $\leq 100$ , \$1,125,000 certification amount is required. $> 100$ , a DFP is required.			172.1 w/o "any" 10,172.1 w/ "any"  DFP is required

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License No. 45-23733-02

10 CFR 40.36, source material in readily dispersible form

Radionuclide Authorized	Quantity Authorized	Quantity requiring FA	Fraction
uranium - natural	1 mCi	10 mCi	0.1
uranium - depleted		10 mCi	
thorium - natural		10 mCi	
thorium 230		10 mCi	
thorium 232		10 mCi	
thorium 230 (from BPM license)		10 mCi	
If sum of fractions is $\leq 1$ , no FA is required. $> 1$ but $\leq 10$ , \$225,000 certification amount is required. $> 10$ , a DFP is required.			0.1 FA is not required

License No. 45-23722-02  
 10 CFR 70.25, special nuclear material, unsealed

Radionuclide Authorized	Quantity Authorized	Quantity requiring FA	Fraction
Uranium 235	1 mCi	0.01	100
uranium - enriched 2%		0.01 mCi	
uranium - enriched 1%		0.01 mCi	
** Specific Activity = $[0.4 + 0.38(\text{enrichment}) + 0.0034(\text{enrichment})^2]$ E-6 curies per gram			
plutonium 238		0.01 mCi	
plutonium 239	1 mci	0.01 mCi	100
plutonium 240		0.01 mCi	
plutonium 241		0.01 mCi	
plutonium 242		0.01 mCi	
plutonium 244		0.01 mCi	
If sum of fractions is $\leq 1$ , no FA is required. $> 1$ but $\leq 10$ , \$225,000 certification amount is required. $> 10$ but $\leq 100$ , \$1,125,000 certification amount is required. $> 100$ , a DFP is required.			200  DFP is required