



Assessing Spills: Hazards of Radioactive Materials*

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Group 1. Low Hazard. Above 1 mCi, treat as a major spill.

^3H , ^7Be , ^{14}C , ^{18}F , ^{59}Ni , ^{69}Zn , ^{71}Ge , ^{238}U , natural thorium, natural uranium and noble gases.

Group 2. Medium Hazard. Above 100 uCi treat as a major spill.

^{24}Na , ^{31}Si , ^{32}P , ^{35}S , ^{36}Cl , ^{42}K , ^{47}Sc , ^{48}V , ^{51}Cr , ^{54}Mn , ^{56}Mn , ^{55}Fe , ^{59}Fe , ^{64}Cu , ^{65}Zn , ^{72}Ga , ^{76}As , ^{86}Rb , ^{89}Rb , ^{90}Y , ^{91}Y , ^{95}Nb , ^{99}Mo , ^{103}Ru , ^{105}Rh , ^{103}Pd , ^{105}Ag , ^{111}Ag , ^{109}Cd , ^{113}Sn , ^{127}Te , $^{129\text{m}}\text{Te}$, ^{140}Ba , ^{140}La , ^{143}Pr , ^{147}Pm , ^{151}Sm , ^{166}Ho , ^{170}Tm , ^{177}Lu , ^{183}Re , ^{190}Ir , ^{191}Pt , ^{193}Pt , ^{196}Au , ^{198}Au , ^{199}Au , ^{200}Tl , ^{201}Tl , ^{202}Tl , ^{204}Tl , ^{203}Pb , ^{220}Rn , ^{222}Rn , ^{235}U

Group 3. High Hazard. Above 10 uCi, treat as a major spill.

^{22}Na , ^{45}Ca , ^{46}Sc , ^{60}Co , ^{85}Sr , ^{90}Sr , ^{106}Ru , ^{125}I , ^{129}I , ^{131}I , ^{137}Cs , ^{141}Ce , ^{154}Eu , ^{182}Ta , ^{210}Bi , ^{211}At , ^{224}Ra , ^{233}U

Group 4. Very High Hazard. Above 1 uCi, treat as a major spill.

^{210}Pb , ^{210}Po , ^{226}Ra , ^{227}Ac , ^{228}Th , ^{237}Np , ^{228}Ra , ^{238}Pu , ^{239}Pu , ^{240}Pu , ^{242}Pu , ^{241}Am , ^{242}Cm

*Emits gamma radiation in significant amounts.