Survival Probabilities in hot fusion reactions WALTER LOVELAND, DONALD PETERSON, Oregon State University — The reported cross sections for the formation of superheavy elements in hot fusion reactions of $^{48}$Ca with actinide target nuclei decrease modestly in going from element 113 to element 118. This robust behavior is attributed to increasing survival probabilities of the product nuclei as one gets closer to $Z=114$ or $N=184$. The real situation is complicated with the fused systems starting at excitation energies of 30-50 MeV where shell effects on $\Gamma_n/\Gamma_f$ are not important but where dissipative effects may retard fission and ending at excitation energies where shell effects are very important. We demonstrate how these effects occur in the de-excitation of $^{258}$No excited to $E^*=61$ MeV by combining measurements of the neutrons emitted in this reaction with evaporation residue measurements.