Potential Energy Surfaces and Derivative Coupling Terms for $M + Ng$, $M = K, Rb, Cs$, and $Ng = He, Ne, Ar$ — Potential energy surfaces and derivative coupling terms are computed for $M + Ng$, $(M = K, Rb, Cs$ and $Ng = He, Ne, Ar)$. These surfaces will be used to study pressure broadening of the D1 and D2 atomic lines. They will also be used in wave packet studies to investigate non-radiative fine structure transition rates. Both pressure broadening and the fine structure transition rates play an important role in the operation of optically pumped alkali lasers.