Bimetallic interfaces become increasingly important as technological devices shrink down to the nanoscale. The smaller a device is, the larger the ratio of surface area to volume, making surface effects more prevalent. It is important to study surface influenced properties – such as heat transport – to understand these systems. We have used the Embedded Atom Method (EAM) to develop models for tungsten, molybdenum (moly), and the alkali metals. We’ve used these EAM models to examine the thermodynamic properties of slabs of tungsten and moly with alkali-metal layers adsorbed on the surface. Initial results examining the vibrational frequencies and adsorbed layer heights will be discussed, followed by ideas to improve the models.