We present a multiscale algorithm that couples coarse grained molecular dynamics (CGMD) with continuum solver. The coupling requires the imposition of non-periodic boundary conditions on the coarse grained Molecular Dynamics which, when not properly enforced, may result in spurious fluctuations of the material properties of the system represented by CGMD. In this paper we extend a control algorithm originally developed for atomistic simulations [3], to conduct simulations involving coarse grained water molecules without periodic boundary conditions. We demonstrate the applicability of our method in simulating more complex systems by performing a non-periodic Molecular Dynamics simulation of a DPPC lipid in liquid coarse grained water.