The reaction of $Cp^*_2UCl_2$ with $LiNSPh_2$ in 1:1 ratio, produces $Cp^*_2UCl(NSPh_2)$ in high yield. $[NSPh_2]^-$ ligand replaces the phosphoylide ligand $[CHP(Me)Ph_2]^-$ from $Cp^*_2Ucl(CH_2)_2PPh_2$ when treated with $HNSPh_2$ in 1:1 ratio forming $Cp^*_2UCl(NSPh_2)$. $Cp^*_2UCl(NSPh_2)$ has been characterized by usual chemical and physical methods and by single crystal X-ray diffraction. $Cp^*_2UCl(NSPh_2)$ is the first structurally characterized f-element sulfilimide complex. (Cp*=pentamethylcyclopentadienyl, Ph = phenyl)