Improvement of Loam Soil With High Permeability to Appropriate Strength and Permeability for Earth Dam Construction

Abstract: Lome Soil for this study is come from borrow of Udornthanee and Maehongsorn province. Experiment in laboratory of gradation and plasticity show that lome soil from these source are sity sand which have important properties are non - plastic material and permeability vary from density condition which high value when being in loose state and low value when being in dense state. The nature of loam soil is easy for erosion because of it doesn’t have cohesion and strength is come from angle of internal friction. For bentonite which has fine grain and high plasticity is blended with loam soil from quantity of 2%, 4%, 6% to 8% and so finally it can increase a plasticity of soil but decrease a permeability in the same time and strength parameter is increased in cohesion but decreased in internal friction.
A quantity of bentonite equal to 4% blended with loam soil have a permeability lower than $10^{-6}$ centimeter per second, which is an appropriate quantity to change loam soil properties for impervious material.