PT. Terminal Petikemas Surabaya have a company which have competence in the area of services. That giving transportation and loading and unloading commodity (petikemas) services. In PT. Terminal Petikemas Surabaya they stored commodity and chemistry material on container freight station (CFS) store house in the same room, so it can make hazardous potential. There are not emergency response procedure, stored house that don’t have ventilation system and installation of thunderclap so in the research we will design room to keep chemistry materials. Installation of thunderclap and emergency response procedure as effort of controlling hazardous potential that there is on PT. Terminal Petikemas Surabaya.

For the first step of this research we will take sample chemistry material for two years with sturgess ad rating scale method and for the calculation result will be reference to do this research.

From research result we will giving recommendation for chemistry material is based on characteristic chemistry material is giving partition between chemistry material that incompatible, giving ventilation system, design installation of thunderclap and make emergency response procedure. Storage of chemistry material designed based on amount and stay age and how often chemistry material entered to storage, compatibility chemistry material and based on the rules. PT. Terminal Petikemas Surabaya need five room in order that air calculation in this room will be good PT. Terminal Petikemas Surabaya need exhaust fan 60.000 cfm 55 for all of room. Installation of thunderclap needed 64 air terminal, 2 down conductor and 2 electrode.

Key words: Storage, emergency response procedure, ventilation, installation of thunderclap, housekeeping.