



CHAPTER I

INTRODUCTION

In Thailand, sanitary sewerage system is used in small scale and limited to some areas. Populations in both rural and urban of the whole country, rely on septic tank soil adsorption system, as the principle onsite disposer of domestic waste material. It has been known that the efficiency of the latter system is depended upon the properties of soil and characteristics of wastewater. There are a lot of informations related to the use of septic tank soil adsorption system (Bouma et al., 1975, Bouma et al., 1972, McGauhey and Winneberger, 1964, Reneau and Pettry, 1975, Soil Conservation Service, 1971) in the western world. However, less information can be obtained from the area in the tropic like Thailand. Therefore, this study is carried out with the following objectives :

1. To monitor the characteristics of domestic wastewater before and after passing through soil columns. In doing so, the pH, COD, the content of $\text{NH}_4\text{-N}$, $\text{NO}_3\text{-N}$, orthophosphate, total bacteria and fecal coliform were determined.
2. To compare the efficiency of soil on the upper 0-50 cm and lower soils between 50-100 cm depth of the same soil series as a medium for wastewater disposal.
3. To compare the efficiency of different soil series as a medium for wastewater disposal.