

CHAPTER 1INTRODUCTIONIndustrial waste in Thailand

Industrial waste treatment has been encouraged, and promoted, by The Government on the premise that industrial wastes are similar to municipal wastes and constitute a public health menace. It has long been recognized, but never openly, that the public health hazard of industrial waste is unlike that of municipal wastes and is often nonexistent. However, there are benefits from waste treatment which exist but are difficult to describe in quantifiable terms. Since both the polluter and the public are aware that industrial waste treatment to prevent stream pollution is " a good thing " few have questioned the true reasons why their wastes should be treated.

As the number of industries in Thailand as well as their diversities increases, there is a corresponding increase in the discharge of wastes, i.e. water contaminated with acids, alkali, putrescible organic matter and other chemicals. The discharge of low concentration of non - toxic industrial wastes can cause little damage to the rivers while the highly concentrated ones will cause heavy pollution so the water is offensive, unsuitable for fish, other aquatic lives and unsafe for public use.

There is no doubt that at the present time, the pollution of some canals in Bangkok are very serious and others are becoming more offensive and dangerous to public health.

The improvement of the water pollution situation in Bangkok can be made by installation of waste collection and treatment facilities. Standard for the discharge of effluents into canals and rivers, as well as the rules and regulations governing the sanitation of each industries must be specified. The establishment and enforcement of these status for the solution of water pollution problems depend on Co - operations between government and industries.

The slaughterhouses is one of those factories which discharge the waste into the river in a comparatively raw state. The results of this study will be more or less useful for sanitary engineers and government officials concerned.

#### Purposes and Scope of the research.

1. To study the properties of waste especially in physical, chemical and biological as to determine the relationship between BOD<sub>5</sub> and COD, also to find the organic removal, the value of volatile solid, suspended and dissolved solid.

2. To determine the value of COD, BOD<sub>5</sub> removal in relation with time and the value of organic removal rate. During the experiment the volatile and suspended solids were measured as to study the relation with the rate of COD removal. The amount of Nitrogen requirement for bacteria also has to be known in order to find COD removal. The value of DO and pH was recorded during the experiment.

3. The data collected are necessary for the purpose of plant design.