Chapter VI

CONCLUSION

the results of the study of hospiatl waste treatment by oxidation ditch system can be conluded as follow:-

1. The characteristics of hospital wastewater

The results of the study of the characteristics of hospital sewage is that, the BOD of the laundry house is higher than that others sources. The BOD : COD = 1 : 1.8

2. Waste water flow

The waste water flow from the 250 beds hospital complex is about 49.45 m^3/ day or about 50 m^3/day, the maximum flow is about 60.45 m^3/day and minimum flow is about 39.59 m^3/day. The BOD loading is 30 gm per bed per day , the waste flow 200 litr per bed per day.

3. The efficiency of the oxidation ditch

From the determination of effluen quality of Tak Hospital , the average BOD reduction is 90 % and COD reduction is 82 %.

4. Flow velocity

In the oxidation ditch the flow velocity is varies with the immersion depth. If the immersion depth of cage rotor is low, the flow velocity is low and if the immersion is high ,the velocity is high too. The immersion depth of 9 cm would yield the velocity of about 1 fps at the centre of the ditch. If the immersion lower than 9 cm ,the velocity is not 1 fps and suspended solid will be settled in the aeration basin.

5. Residual DO

The residual DO of the effluent at the pilot plant is about 3 mg/l. It was optimum for the oxidation ditch system, in the activated sludge system will be control the residual DO in the aeration tank not less than 0.5 mg/l. On this suggested because if the residual DO is less than 0.5 mg/l, the anaerobic condition will be occured.

6. Microorganism

Microorganism in domestic sewage was many of spacies and many number. From the study of microorganism of hospital waste from the Environmental Health laboratory, the microorganism will be treated by the chlorination in the final treatment process. The final of treatment is neccessary for controling communicable diseases.