

ORAWAN TUNSIRIJAREANKUN : A HEURISTIC APPROACH FOR SOLVING THE
VEHICLE-ROUTING PROBLEM IN SOLID WASTE COLLECTION IN BANG KHEN AREA.
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The purpose of this study was to find a better clustering of garbage pick-up area and a better sequence of collection waste from the garbage pick-up point. In this study, we decided to study in Bang Khean District. A heuristic approach was introduced to solved the problem. The objective in solving the problem was to design a route that minimize the total travel distance and satisfy all capacity of vehicle and amount of trip constraints. The procedure had three step. First, we used a traveling of salesman problem to routing a giant tour. Second, a solid waste collection area was districted. Third, we designed an optimal route of vehicles.

Finally we find that the total travel distance decrease 15.75% and four vehicle increase frequency of waste collection from 1 service/3 days to 1 service/2 days and another one increases from 1 service/3 days to 1 service/1 day. This result indicate that the scheduling and routing of vehicle by the heuristic approach increase efficiency of system.