ABSTRACT

In the event of the highest volume spike in waste volume, the services provided by PD Kebersihan the City of Bandung in the operating area of South Bandung to the community are not optimal, to transport waste from the Tempat Pembuangan Sementara (TPS) to Tempat Pembuangan Akhir (TPA), where the factors that cause service are not optimal are because the volume of waste exceeds the maximum potential for transportation, resulting in the problem of unserved waste at several TPS. So that to serve unserved waste, a new vehicle assignment route is needed to improve waste transportation services, but this certainly causes additional distance because additional services are needed by vehicles to serve the remaining waste at the TPS. On this basis, this study aims to design a vehicle assignment for waste collection from TPS to TPA to improve waste transportation services, but with a minimum distance.

Based on this, a method is proposed to minimize the distance in assigning PD cleaning vehicles for the City of Bandung for the South Bandung area, but also ensuring that every waste at the TPS is served. The problems can be solved using the WCVRPIF model. In this study, the WCVRPIF model was solved using the greedy algorithm with local search.

The results of the application of this method resulted in a more minimum distance after optimization, namely the total difference of 1042.72 Km, and improving TPS services by 2.33%.

Keyword: TPS, TPA, WCVRPIF, algoritma *greedy, local search*