The objective of this research is to determine the NGV transportation by developing the model to assign the daughter stations to mother stations. This research consider the distance between mother and daughter stations, types of transport trucks, NGV requirement of each daughter station, and production capacity or availability of NGV in mother stations. The model's objective function was to achieve the shortest total distance. The station partitioning program was developed for finding the solution. This program was used in this research including Microsoft Excel as a user interface, Visual Basic for Applications (VBA) language developed and the MATLAB program.

The gas station partitions from PTT Public Company Limited (PTT PLC) and the station partitioning program were compared using 9 mother stations and 141 daughter stations. The total Euclidean distance from the partition by PTT PLC was 11,068.62 kilometers whereas the distance by the program was only 10,062.66 kilometers. Therefore, the program could provide the distance less than partitioning by PTT PLC or 10.00 % decreasing and the distance became 1005.96 kilometers.

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Student's signature	Thesis Advisor's signature	