Siralai Bubpatano 2013: Evaluation of Pollutants from Motorcycles Fuel Injection at Different Acceleration. Master of Science (Environmental Technology and Management), Major Field: Environmental Technology and Management, Department of Environmental Technology and Management. Thesis Advisor: Assistant Professor Thitima Rungratanaubon, Ph.D. 130 pages.

The aim of this research was to study the Emission Factor (EF) of 4- stroke manual and automatic injection system motorcycles. The both of motorcycle samples were tested the exhaust sample was collected directly from tailpipe using Constant Volume Sampling (CVS) while running on the Chassis Dynamometer with the different acceleration rate varies. The acceleration driving in urban divided into 3 phase 1) 0-15, 15 , 15-10 km/h^2 and acceleration driving in countryside divided into 3 phase 2) 0-70, 70, 70-50 km/h^2 in following the driving pattern were divided second cycle which using fuel were gasoline 91 and gasohol 91 and 95.

The experiment of 4-stroke manual and automatic motorcycles to used different fuel (gasoline 91, gasohol 91 and 95) of the both in urban and countryside driving cycle. The acceleration were separated in 3 groups; 0-15, 15, 15-10 and 0-70, 70, 70-50 km/hr^2. As a result of automatic motorcycle with gasoline 91 in countryside cycle was the highest average amount of CO_2 emission and also reveals the emission of HC, CO and CO_2 were higher than in the urban cycle were 35.325, 37.294, 60.70 and 50.486, 52.816, 63.208 g./km. The results revealed the automatic motorcycle used gasoline 91 of urban cycle have the emission factor of HC, CO and CO_2 were higher than countryside cycle were 35.325, 37.294, 60.70 and 50.486, 52.816, 63.208 g./km. While the emission factor of NO_x in countryside cycle of manual motorcycles were lower than urban cycle were 0.026, 0.051, 0.074 and 0.136, 0.188, 0.106 g./km., respectively.

_____ _____ ___ / ___ / ___

Student's signature Thesis Advisor's signature