Sirima Chiwsom 2012: Carbon Footprint for Organization and Engineering Mitigation of Greenhouse Gas Emission for Pollution Control Department. Master of Engineering (Environmental Engineering), Major Field: Environmental Engineering, Department of Environmental Engineering. Thesis Advisor: Assistant Professor Cheema Soralump, Ph.D. 175 pages.

This study was to investigate the amount of greenhouse gases (GHGs) emission and allocate amount of GHGs on agencies of Pollution Control Department under the ministry of Natural Resources and Environment. The study conducted in accordance with ISO 14064-1, ISO/PDTR 14069, Greenhouse Gas Protocol by World Resources Institute and Guideline for carbon footprint of organization by Thailand greenhouse gas management organization. Greenhouse gas emission activity of pollution control department is divided 3 categories scope 1 direct GHGs emission, scope 2 energy indirect GHGs emission and scope 3 other indirect GHGs emission which as an alternative study of the organization. The results show amount of GHGs at pollution control department at 3,646.74 ton CO_2 equivalents in the year 2010. For organization of scope 1 and 2, the use of electricity caused more than 80% emission while 9% was from maintenance of air conditioning systems and the use of PCD-owned vehicles are 10%. For scope 3, the employees commuting to and from work caused 83% of GHGs while waste management of organization was 8%. When considered allocation among the PCD's agencies, the PCD administration emitted 47.73%, while 26.70% was from monitoring stations, while 8.11% was from air quality and noise management bureau and 5% was from other agencies. For scope 3, 19.83% was from the air quality and noise management bureau, 18.30% was from water quality management bureau, 16.19% was waste and hazardous substance management bureau, 10.23% was enforcement division and GHGs emission of other agencies less than 10%

_____ _____ ___ / ___ / ___

Student's signature Thesis Advisor's signature