

Katecharin Hapong 2012: Factors Affecting Traffic Accident Occurrences for Aircraft Refueling Vehicles in an Airport. Master of Engineering (Safety Engineering), Major Field: Safety Engineering, Faculty of Engineering. Thesis Advisor: Assistant Professor Nanthiya Hansupalak, Ph.D. 109 pages.

This research is divided into two parts. Part 1 studied data from accidents occurring during aviation refueling operations conducted by Bangkok Aviation Fuel Services Public Company Limited at Suvarnabhumi Airport, and Don Mueang Airport during the period from January 2005 to December 2011. The relationships between these accidents and the following five factors: human factors, behavioral factors, safety management factors, aviation refueling vehicle maintenance factors, and work environment factors specific to employees driving aviation refueling vehicles, at both airports were also investigated. The analysis revealed a greater number of flights at Suvarnabhumi Airport compared to Don Mueang Airport, which coincided with the finding that the frequency of aviation refueling vehicle accidents, the level of severity and the amount of financial losses incurred was greater at Suvarnabhumi Airport. This prompted the researcher to focus specifically on Suvarnabhumi Airport for further study in Part 2, which was conducted using primary data obtained from self-administered questionnaires distributed to 120 aviation refueling personnel operating at Suvarnabhumi Airport. The sample was classified into two distinct groups, namely those with no prior accident history, and those with a prior accident history. The results of Chi-square analysis indicated that the following four factors had an effect on aviation refueling accidents at the 0.05 significance level, human factor, behavioral factors, aviation refueling vehicle maintenance factors, and work environment factors specific to employees driving aviation refueling vehicles.

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Thesis Advisor's signature