

Phanthipa Sawatee 2009: Efficiently Enhanced Environmental Management System (ISO14001) by Pollution Prevention in Thailand. Master of Engineering (Environmental Engineering), Major Field: Environmental Engineering, Department of Environmental Engineering. Thesis Advisor: Assistant Professor Cheema Soralum, Ph.D. 120 pages.

The purpose of this study was to investigate the relationship of implementing pollution prevention (P2) and ISO14001 in organizations that have been receiving the ISO14001 certification in Thailand and also how P2 affects the environmental management system (EMS). The research was conducted by questionnaires and semi-interviews, among 315 questionnaire sent 46% returned and 3 enterprises with different business background were interviewed. Results showed that the returned questionnaire were from 70.3%, 24.8% and 4.8% of large, medium and small organization respectively. All of them 94.4% have been continuously implementing ISO14001. Results also found that 25% of the organizations agree that P2 tools such as 3Rs can be conducted well with environmental management system. To study the efficiency of the organization's environmental performance, questions related to ISO14031 (Environmental Performance Evaluation) were asked in the content of management and operation performance indicators (MPI and OPI) and environmental condition indicators (ECI). The result was statistically analyzed by comparing means with one-sample t test at 95% confidence interval was reported P value = 0.000 (1-tailed), $\alpha = 0.005$. It was found that P2 operated together with ISO14001 could efficiently enhanced ISO14001.

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Thesis Advisor's signature

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