

Noparat Sriwongpan, Acting Sub Lt. 2014: The Influential Factors to Reducing of Occurrence of Severe Accidents by Enforcement of the Nine Safety Rules for Operation and Maintenance in Bang Bo Combined Cycle Power Plant. Master of Engineering (Safety Engineering), Major Field: Safety Engineering, Faculty of Engineering. Thesis Advisor: Mr. Sanchai Dechanupaprittha, D.Eng. 198 pages.

In several years ago, the statistics showed that the incidences of accident in high risk work occur continuously which affect the lives of operators' family and budget loss of enterprises as well as government to remedy the victims of accidents arising from the work of personnel. Therefore, the reduction of severe accidents focusing on factors that influence and behavior of safety at workplace of the operators in Bang Bo power plant were studied. This study covered 200 operators who worked in this combined energy power plant and who are Thai only.

In this study, only 133 questionnaire samples were selected by focusing on the operators who worked in operation and maintenance sections in Bang Bo combined cycle power plant. It was found that those who worked in this power plant majority were male, as maintenance operators, had already passed 1-3 safety training courses, mostly never had accident at work accounted for 96.2 percent. The organization has notified the operators about the regulations as well as safe working practices for recognition via the communication at all times. Moreover, the organization also had the occupational health and safety system management in which the safety at workplace recognition was ranked in very good level. As samples were maintenance operators, the recognition related to equipment and machines were in good extent which complied with the safe work behavior ranked in very good level as well. Analysis of the results using Pearson coefficient correlation, including the factors affecting the success in reducing accidents and severity by enforcing the 9 items of work safety rules indicated that recognition behaviors and safety behaviors in workplace had positive significant relationship with a correlation coefficient of 0.402

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Thesis Advisor's signature