Thesis Title The Development of Environmental Education Training . Curriculum on Safety in Working with Chemical Substances for Employee in a Petrochemical Plant.

Name Oraphin Krissanakriangkrai

Degree Master of Education (Environmental Education)

Thesis Supervisory Committee

Chalong Boonyananta , Ph.D.

Suphachai Sukornwan , M.A.

Sakda Supapongpichate , Ph.D.

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ABSTRACT

The purpose of this research was to develop an environmental education training curriculum on safety in working with chemical substances for employee in a petrochemical plant, taken as a case study in Apex Petrochemical Company Limited Tambon Mabtaphut, Amphoe Muang, Changwat Rayong. The research approches included three stages : 1) collection of data to prepare for a curriculum, 2) curriculum formulation, 3) training and evaluation. The samples of this study were the employees who worked and contacted with the chemical substances in the Petrochemical Plant. The samples consisted of two groups ; a group of 46 persons used for providing background information for training, and another group of 30 persons used for the training experiment. The tools of this study were an interview schedule and a training curriculum package consisting of test items, lesson plan, teaching materials, and evaluation form.

After two days of training process, analysis of data revealed that the post-test scores were significantly higher than the pre-test scores at 0.05 level. Data showed that all of the trainees passed with a score greater than 50 percent , and furthermore, 96.7 percent of them passed with a score of 70 percent or greater.

The analyses of each test item showed that the pre-test performance on 12 of the test items were significantly different. Others showed no significant differences. Data also showed that, at the start of the training, the samples had relatively high scores on the pre-test. This indicated that the trainee had some background knowledge before the training. The trainee with bachelor's degrees possessed rather good background knowledge. The group of trainees working with the production section was found to have a large difference of score between the pre-test and the post-test. This indicated that the curriculum was quite suitable for training of the trainees working in the production section.

Analysis of training evaluation data showed that the majority of the subjects were satisfied with the training curriculum and process. The study, therefore, confirmed that this curriculum was appropriate for training on safety in working with chemical substances for employee in a petrochemical plant.