

Uten Chinasathung 2010: Fire Protection Management System of Ratchaburi Power Plant. Master of Engineering (Fire Protection Engineer), Major Field: Fire Protection Engineer, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Surachai Radagan, Ph.D. 291 pages.

The purpose of this study is to estimate the substandard condition and substandard act of fire protection system of Ratchaburi power plant. This idea is derived from Modern Safety Management (MSM), principal with 5 practical instructions as followings: 1. Identify all of loss, 2. evaluate system, 3. develop plan, 4. Implementation, 5. Monitoring. After the examination to figure out the substandard condition, which is being considered by the substandard condition of fire protection system. And after condition of fire protection system compared with NFPA, the following items are found unconformed to NFPA, 6 systems: there are 18 items of fire pump system is under standard of NFPA 20, 13 items of sprinkler system based on NFPA 13, 5 items of Inergen system based on NFPA 2001, 7 items of carbondioxide extinguishing system based on NFPA 12, 9 items of foam system based on NFPA 11, and 12 items of fire alarm based on NFPA 72. However, the above mentioned failures are not significant. Examination to figure out the substandard act estimations above base on the International Safety Rating System (ISRS). Element 3 (Inspection plan and maintenance). The evaluation turns out to be that there are 2 areas: Thermal Power Plant and Combined Cycle Power Plant, and 78.04% follow the regulations. The first of 2 failures: 1. inspection and Maintenance 2. inspection analysis report and after evaluating the fire protection system according to NFPA, the result has increase 67.69%. Also the user instruction of fire prevention has an 83.7% effect Therefore, it proves that the employees and people around Power Plant can be confident of Power Plant emergency plan.

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Thesis Advisor's signature