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The Four Pillars of Safety Management

Safety Policy - First SMS Pillar

Safety policy is concerned with the structure and outline of how safe operations will be conducted. Among other things, it involves planning, organizing, compliance with regulations and law, documentation, and emergency preparedness and response. It is at this level that upper-level management must buy-in and continuously support the SMS. Without management buy-in and support, the SMS is bound to fail. Employees are highly influenced by management behavior examples and therefore if employees see management intentionally breaking rules or ignoring policy it is likely the employees will emulate this behavior.

Safety Risk Management - Second SMS Pillar

Possibly the most important component of the SMS, safety risk management is the process by which risks are identified, mitigated, or eliminated before they become a visible (surfaced) accident or incident. This is a proactive (as well as predictive) approach to error prevention and mitigation, which is a paradigm shift from the strictly reactive approach that has been used in the past.

Risk can be thought of as the consequence of a hazard and is measured in terms of severity and probability. You will develop a Preliminary Hazard Analysis (PHA) that will be used to identify the hazards that exist in your operation. Hazard identification can be accomplished by a

variety of methods that include observations, audits, safety surveys, investigations, and research. Other sources can include factual briefings from frontline personnel, subject matter experts, brainstorming, and analysis tools such as event trees, fault trees, FMECA's, and so on. Once the hazards are identified you will then need to analyze the data to determine what type of controls may need to be put in place. Risks that have a high severity and high likelihood rating would be the ones you want to address as a priority. On the other hand, risks that have a low severity rating and a low likelihood of occurrence may be classified as acceptable risks that you can just live with.

Safety Assurance and Internal Evaluation - Third SMS Pillar

The well-known Heinrich Ratio states that, for every fatal accident, there will be three to five nonfatal accidents and 10 to15 incidents; but there will also be hundreds of unreported occurrences. Unreported occurrences are extremely problematic since no defenses can be employed if nobody knows that these occurrences exist.

There are quite a few subcomponents in this category, one of the most important being *error reporting*; however, an error reporting system may be one of the most challenging SMS components to implement. Employees may feel that while there are clear advantages to error reporting, at the same time they may also feel that embarrassment and potential personal punitive implications far outweigh the organizational advantages. Yet, a good and effective safety culture must include an error reporting system. In order to attain this goal you will need to ensure that your organization has a Just Culture. A Just Culture is a culture that acknowledges that well-intentioned people still make mistakes and they should not be punished for slips, lapses, mistakes, and other *unintentional* errors. However, a line is still drawn where *willful violations* and *purposeful unsafe acts* will still be dealt with in some sort of punitive fashion. The bottom

line of a Just Culture is trust. Employees must know that they can report errors without retribution.

Safety Promotion - Fourth SMS Pillar

Subcomponents of this category include the development and continuous reinforcement of a healthy safety culture, communication, training, and feedback of lessons learned. The most important point about safety promotion is that there needs to be an ongoing, palpable presence to the SMS. This requires, among other things, open communication between management and employees, feedback offered on a regular basis, and appropriate employee training on the SMS.