

TerranearPMC Safety Share

Week of May 6, 2013 – Error Precursors

Ethyl Mercaptan was about to enjoy one of the simple pleasures in life; a good ol' cup of Joe! And not just any ol' Joe! Starbucks dark roast Sumatra! Taking a small sip and savoring a taste that was created on the other side of the world was just one of those things that continued to amaze her. How was it possible for the average guy in America to be able to indulge in something that was grown in the mountains of some obscure region of the world on a daily basis? While she was pondering her day dream of what life must be like in Sumatra, Pete Best and Charlie Watts walked in. They were summer interns, learning a little bit of the safety and health profession before continuing their studies at their respective schools. They were recently assigned the task of conducting an investigation of a fender bender in the parking lot.

Pete passed the report to Ethyl who gave a quick perusal when her eyes widened to the size of cantaloupes. In a panic Ethyl put down her cup of coffee as she began to gag, causing her to almost spew a mouthful all over her desk. Quickly swallowing the hot liquid, she looked up at the two young men with a questioning look.

“Cause of accident?” she read from the form. “...not paying attention?”

Pete and Charlie looked at each other. Charlie shrugged his shoulders and responded.

“Yeah, that's what happened. What's wrong with that?”

Ethyl read a little more and then looked back up at the two of them.

“Corrective action?” ...reprimanded the employee and told her to pay closer attention while backing up in the parking lot?”

Now they got the message. They blew it and now they were ready to go through one more lecture from the all-knowing sage. Ethyl Mercaptan easily read the looks on their faces and thought to herself, “college kids, whew!”

Many times, when things don't go as desired, we experience an unplanned event. When there are no negative effects, such as no one was injured and equipment or materials was not damaged, we refer to the event as an incident. However, when the chain of events are slightly altered, such as, the event occurring two minutes earlier or later, or a fellow employee grabs another type (or incorrect) tool, the incident could easily result in an injury, illness or property damage. Depending on the location, time, as well as the specific equipment and materials used, the severity of that accident can range from a small finger cut to even a fatality.

The importance of an investigation is to understand how the incident/accident occurred. Of course conducting an investigation for an incident is acceptable; as a matter of fact conducting an investigation at that time is best as we can then correct a situation while we were fortunate enough not to suffer any negative consequences. However, investigations seem to be most prevalent after something quite serious has occurred. Maybe it's because the consequence of an

employee injury or an event such as an explosion at a refinery is so severe that the community demands to know what happened. Or maybe it's because such an event needs to be reported beyond the jurisdiction of the workplace, such as informing OSHA, or corporate headquarters. On the other hand, when an incident occurs, there is a tendency to "sweep it under the carpet." After all, no harm was done and if no harm, no foul, right? True, investigations take time and that may mean a loss of production. On the other hand, by taking the time to correct something due to a small mishap, a larger, more severe event could be prevented. When that happens, the amount of lost production time could be immense. One case to consider is the recent explosion at the fertilizer plant in West, Texas where small infractions were brought to the attention of the company, and while choosing to ignore the issues and not correct those small problems at that moment, the error precursors remained until quite recently, the community suffered needless tragedies while the facility was destroyed. Talk about a loss of production! An event that could have been easily prevented by simply allocating a few hours of maintenance.

Often, an incident occurs because an individual was human. That is, he/she did something that, according to human performance expert studies, do on the average of four times an hour; which is, to make a mistake. During an investigation when we see that a mistake was made, going to the next step and finding out why a mistake was made becomes a very crucial piece of information. Human performance studies have shown that there are many reasons why an individual forgets or "does not think" and therefore, makes a mistake to cause an incident/accident. It is not uncommon for one to feel time pressured (this needs to be done now and finished in an hour), or an employee may be assigned multiple tasks. This can cause high memory requirements leading to forgetting and mixing up bits of information. Repetition of work tasks that require persons to do the same steps in the same order over and over again, have been known to place workers into a state of monotony, resulting in workers losing their sense of awareness. True, another way to say this is that he/she was not paying attention; however, now we can pinpoint a specific reason and therefore have something tangible to correct; that is, a monotonous process. This can be solved with altering shifts or to include engineering controls that would remove the repetitious steps from human error. Distractions are also significant influences on people and therefore, cause mistakes. Distraction can occur, not just from the use of a cell phone or texting (which is prohibited for many tasks like heavy equipment operation or driving in general), but due to having a personal situation (maybe a fight with a good friend or family member) causing one to lose his/her focus on the job at hand.

The point is that by merely stating that someone was *not paying attention* will not offer any value toward understanding why an unwanted event happened and therefore, will not help prevent a similar occurrence from happening in the future. And, of course, a reprimand (unless an intentional act was conducted) is a sure way to loss trust in your fellow employees while ensuring an incident will go unreported.

Everyone thinks of changing the world, but no one thinks of changing himself

Leo Tolstoy