

TerranearPMC Safety Share

Week of February 29, 2016– Hazard Control

A number of years ago I worked at a facility where underground construction activities were being performed. This project was a long-term project where a plethora of heavy equipment as well as other types of construction activities were being conducted on a regular basis. One of the greatest hazards in an underground location is fire. As such, the project had a strict limit on the amount of flammable materials allowed underground. One day, as the project industrial hygienist, I had to halt a surveyor from entering the facility as he was bringing a number of spray paint cans into the facility. These products are EXTREMELY flammable, having flash points less than 0-degrees F! Because this particular facility was not categorized as a “gassy mine” (meaning no methane was present within the geology), smoking was permitted. Obviously, with open ignition sources (welding and other hot work was performed on a regular basis, in addition to smoking) a significant fire hazard was present in the work environment, and therefore certain controls were necessary. Of course, because certain materials that were classified as flammables were necessary to perform various works tasks (as well as combustible materials), specific precautions were necessary. Maintaining safe distances from open flames as well as limiting the amount of flammables into the facility were paramount.

After I refused these materials into the underground environment I found myself to be the target of an email, from an operations engineer that had a distribution list the size of the Brooklyn telephone directory; flaming arrows were darting from the computer screen in my direction carrying the message of how unreasonable I was to halt surveyors from performing their work. The main argument the engineer was presenting; as the email message read, *spray paints are used everywhere and to stop such a common product from being used for such necessary activities was simply unreasonable*. I stared at my computer for what seemed like hours (but probably closer to 5-minutes) trying to figure out how I should respond. I finally just wrote about a paragraph back to the engineer (copying the lengthy distribution list of project personnel) explaining that while the rest of the world may use highly flammable materials, the number of uncontrolled disasters from these products was chilling, while our project touted an exceptional safety record. I concluded by stating, “if only the rest of the world had the same safety record as our project....” Quite honestly, I never received a response.

And at the same time, I never received a response from management for not allowing the spray paint into the underground facility either!

No one can say for sure when an accident is going to happen. While there are many hazardous situations, not every hazard results in a catastrophe. We are, however, capable of recognizing hazardous situations and thus, have the ability to control a potentially dangerous scenario by either stopping the work, or applying appropriate controls (which may be to simply remove the hazard – if feasible). By practicing certain preventative measures we can significantly reduce the



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risks posed by workplace hazards. Many times when a hazard cannot be removed, it becomes the responsibility of Management and S&H to assess the hazard in terms of the likelihood of occurrence. If proper controls are applied for each of the various ways in which a hazardous scenario can occur, and all affected persons understand and concur that work may proceed with the hazard present, but effectively controlled, then – and only then - can the specific task be performed.

The ability to actually quantify a hazard control is not an exact science and therefore, it is important to apply “safety factors,” as well as using conservative approaches. That is why many times more than one control is used. In the case of using flammable materials in an underground environment, increased distances between open flames and flammables as well as maintaining flammables in secure containers and having a person as a designated fire watch for at least 30 minutes after the activity is finished, as well as limiting the amount of flammables, may all be necessary to help reduce a hazard to an acceptable risk. Without taking such precautions, an acceptable risk becomes unacceptable, which in turn, can result in a disaster.

To obtain a man’s opinion of you, make him mad Oliver Wendell Holmes Jr.

(Note: while Mr. Holmes’ quote is indeed provocative and insightful, it is not encouraged that anyone go out of their way to get a fellow employee nor anyone else mad, strictly for the purpose of getting an honest opinion of themselves)

