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COMBUSTIBLE DUST HAZARD AWARENESS

Spanning the globe across international borders there have been many recent combustible dust related explosions causing preventable fatalities, injuries and adverse economic damage. Lately, attention on the issue of combustible dust hazards in the workplace has only been aroused through the media when a major catastrophic incident like this year's Imperial Sugar refinery dust explosion occurred.

2008 Combustible Dust Related Fires

Many national industries are on borrowed time without proper engineering and administrative controls before a rare incident of a combustible dust explosion occurs at their facility. Until then, an occasional combustible dust related fire, the precursor of a future dust explosion occurs with alarming regularity at manufacturing and non-manufacturing facilities throughout the nation.

For example, over the past year the Combustible Dust Policy Institute has found through researching media accounts over 100 combustible dust related fires in the wood, paper, textile, food, plastic, rubber, utility and metal sectors. After reviewing the Chemical Safety Board's Combustible Dust Hazard Study that was submitted to OSHA in 2007 stakeholders might mistakenly believe that dust explosions are the sole problem.

In contrast, if all incidents of combustible dust related fires and explosions were thoroughly researched, trends would begin to emerge, such as fires prior to the explosions. Has your facility recently experienced a fire?

Since the OSHA Combustible Dust National Emphasis Program (NEP) directive was reissued in March 2008, thousands of facilities not listed as a national industry (NAICS) in the Dust NEP are under the false impression that a combustible dust hazard might not exist. This could be a path to disaster and you don't want to go down that road. For instance, this year over 50% of combustible dust incidents have occurred at facilities not referenced as having the potential for combustible dust explosions and fires in Appendix D-1 and D-2 of the OSHA NEP.

2008 Materials

Currently there are over four hundred national industries in the nation's manufacturing sector, yet only sixty-eight (16%) are listed in the NEP. Don't become a statistic by solely relying on the Dust NEP directive, which was only meant to provide guidance in inspection and enforcement activities for OSHA Inspectors.

If you manufacture, process, or handle any combustible particulate solids that generate combustible dust it's time to initiate a process hazard analysis that identifies and evaluates the risk from combustible dust hazards. This vital fire/explosion information can be readily acquired through combustible dust laboratory testing, which will provide initial process safety information where sound decisions on engineering and administrative fire/explosion protection controls can be determined amongst plant management.

West Pharmaceutical 2003

It's odd that petroleum refineries and chemical plants that manufacture, process, and handle highly hazardous chemicals or flammable liquids and gases are required by OSHA through the Process Safety Management (PSM) standard (29 CFR 1910.119) to conduct a process hazard analysis. Yet manufacturing facilities that have identical explosion risks in areas with explosive combustible dust atmospheres with low frequency, but high consequence incidents are not similarly addressed by OSHA. Ironically, any explosion will have similar damaging overpressure effects, deadly thermal radiation, and ensuing projectiles from an incident whether from a vapor cloud explosion at a petrochemical refinery or a combustible dust explosion at a manufacturing plant. **ARE YOU PROTECTED?**

**Reference: John Astad, Director
Combustible Dust Policy Institute
EMSL Analytical Times, Winter 2009**