

Combustible Dust: Why Now and What Now?

By Jonathan Jacobi, CSP, Senior EHS Manager - PureSafety

Some dusts are referred to as “combustible dusts” because of their tendency to ignite when suspended in air. Combustible dusts can come from many sources, such as sugar, flour, feed, plastics, wood, rubber, furniture, textiles, pesticides, pharmaceuticals, dyes, coal, and metals. OSHA estimates that 30,000 U.S. facilities may be at risk for combustible dust incidents.

Dust fires and explosions have made media headlines for the past several years, but this is not a new issue. In 2006 the U.S. Chemical Safety and Hazard Investigation Board (CSB) issued a report which identified 281 combustible dust incidents between 1980 and 2005 that killed 119 workers and injured 718. These incidents will continue unless there are stepped up efforts to prevent them. PureSafety recently introduced a new online Combustible Dust training course to support your efforts.

OSHA does not have a comprehensive standard on combustible dust for general industry, but regulatory changes may be looming, backed by Congress, the CSB, the American Society of Safety Engineers, and special interest groups. Last year, Representative John Barrow introduced U.S. House Bill 5522, The Combustible Dust Explosion and Fire Prevention Act of 2008. The House passed the bill, but it stalled in the Senate with President Bush threatening a veto. The bill has since been reintroduced—and will be viewed through the eyes of a new administration.

Some employers have adopted a “wait and see” attitude about new combustible dust regulations, but there are several reasons—in addition to worker safety—why now is the right time to act.

1. Facilities can be cited by OSHA, right now, in the absence of a comprehensive standard. OSHA’s policy is defined by Combustible Dust National Emphasis Program (NEP), CPL 03-00-2008. The NEP makes reference to 17 existing standards that address topics such as electrical installations, housekeeping, hazard labeling, PPE hazard assessment, and an employer’s general duty to provide a workplace free from recognized hazards. OSHA’s track record of issuing citations using the NEP is growing as demonstrated by \$65,000 in penalties levied against a sugar manufacturing facility on March 11, 2009.

2. Companies may be held civilly liable, right now, in the absence of a comprehensive standard, because consensus standards help to define a standard of care.

3. Increasingly stringent state, local, and organization-specific requirements are being adopted in the absence of comprehensive federal standards and enforced, right now, by insurance risk managers and representatives from the Fire Marshal’s office and state OSHA plans. A good example of these requirements is a guideline document being used in the insurance industry, FM Global Data Sheet, 7-76, Prevention and Mitigation of Combustible Dust Explosions and Fire. As an example, it cites Port Wentworth, Georgia’s sugar refinery explosion that made headlines in 2008 as one of the worst workplace tragedies in decade. In place since 1917, this manufacturing operation is still rebuilding one year later. Employees benefit from the prevention of combustible dust incidents; others do too. Facility insurance providers benefit though the avoidance of claims against insured facilities and operations.

Unfortunately, improvements to dust collection systems, electrical equipment, wiring, and other facility upgrades can require significant investments in human and financial capital—which is a tough sell in an age when competition is fierce, budgets are tight, and cost reduction efforts are mission critical. After all, a plant that’s not running does not need a properly designed dust collection system.

When implementing long-term solutions isn’t immediately feasible, interim control measures to mitigate risk, including process changes and training, should be considered.

For example, a major risk factor in combustible dust incidents—dust accumulation—can be limited with frequent cleaning. In an interview with 60 Minutes, former OSHA Director Ed Foulke stated that, “If the employers comply with the housekeeping standards it would eliminate or at least mitigate the hazard of having a combustible dust explosion.”

Combustible Dust: Why Now and What Now?

By Jonathan Jacobi, CSP, Senior EHS Manager - PureSafety

Improper housekeeping, including forceful sweeping and cleaning with high-pressure compressed air or steam, can create dust clouds—a fire and explosion hazard. Proper housekeeping requires know-how and sometimes additional effort. Training is critical—including a relevant, compelling message that explains the reasons for precautions as much as the precautions themselves. Simple awareness is not enough. People must know about external incidents and gain a realistic perception of the risks involved.

PureSafety's new Combustible Dust course empowers you to effectively convey the fundamental issues and appropriate tactics to use when operating combustible dust processes. To learn more about the combustible dust issue and our new online course, [click here](#) to view a free preview or call us Toll-Free at 888.202.3016 to speak to a PureSafety Regional Sales Manager.

Jonathan A. Jacobi, CSP is Senior EHS Manager with PureSafety. His qualifications include 15 years' experience implementing solutions in the EHS field and 10 years' experience with combustible dust issues.