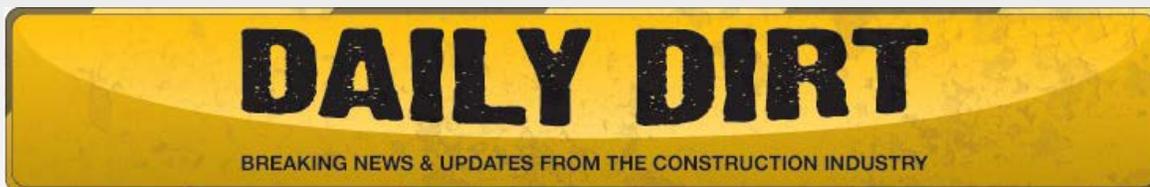




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## OSHA Combustible Dust Standard on the Horizon - What Every Industry Should Know

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Combustible dust, it is not the most glamorous of topics but it is an important one. Why is it important? It is important because between 1980 and 2005, combustible dust incidents claimed the lives of 119 workers and injured another 718.

There is a common misconception that combustible dust hazards primarily affect the grain handling industry. That is simply untrue. Combustible dust hazards exist in many industries and manufacturing processes including: food (e.g., candy, starch, flour, feed), plastics, wood, rubber, furniture, textiles, pesticides, pharmaceuticals, dyes, coal, metal (e.g., aluminum, chromium, iron, magnesium, and zinc), and fossil fuel power generation. The handling and processing of these materials can generate very small particles. These small particles are so light that they easily become airborne. Once airborne, the particles settle on surfaces, inside crevices, and even inside the ventilation system. It takes a little more than 1/32 of an inch of accumulation over five percent of a room's surface area to create a combustible dust explosion hazard. If disturbed, the accumulation can create a potentially explosive dust cloud.

The elements of a combustible dust explosion are fairly straight forward. You start with the traditional fire triangle of fuel, heat, and oxygen. The combustible dust acts as the fuel source. Heat generated from equipment can provide the ignition source. And the oxygen comes from the air around us. Now if you take the fire triangle and you add to it a dust cloud in a confined space, you have a recipe for a potentially catastrophic combustible dust explosion. More information concerning facility dust hazard assessment, dust control, ignition control, damage control, and training can be found on the OSHA website in its Safety and Health Information Bulletin on Combustible Dust in Industry: Preventing and Mitigating the Effects of Fire and Explosions.

Currently, OSHA does not have a comprehensive standard that addresses combustible dust hazard. However, that is about to change. OSHA has initiated rulemaking to create a comprehensive standard to control the risk of combustible dust explosions industry wide. Beginning this month, OSHA will begin its small business review of a combustible dust standard. The purpose of the small business review is to estimate the proposed rule's economic impact on small businesses.

The small business review panel will evaluate comments from small business representatives, review the proposed rule, and review the analysis prepared by OSHA. Thereafter, the proposed rule will be published along with the panel's report in the Federal Register. Once the proposed rule is published in the Federal Register, it will be open for comments from the general public. Any comments submitted must be considered by OSHA. In this regard, if you believe that your small business may be adversely impacted by the proposed regulation, it is important that you file a comment with the Small Business Administration Ombudsman. For more information on commenting on enforcement action, please visit the OSHA website on the Small Business Regulatory Enforcement Fairness Act (SBREFA).



Although beyond the scope of this article, it is important to note that despite the lack of a specific OSHA combustible dust hazard, OSHA may nevertheless cite employers for combustible dust hazards under the General Duty Clause, Section 5(a)(1) of the Occupational Safety and Health Act of 1970. In fact, OSHA has issued citations for combustible dust hazards in over 200 inspections since 1980. Unfortunately, enforcement under the General Duty Clause is reactive in that the citations are issued in response to an accident. Conversely, the impending proposed combustible dust standard will be aimed at prevention. A similar preventative standard established for the grain handling industry has significantly reduced the occurrence of explosions within the grain industry and has significantly mitigated their effects.

This article relied heavily on the U.S. Chemical Safety and Hazard Investigation Board (“CSB”) Investigation Report, Report No. 2006-H-1, Combustible Dust Hazard Study. The Combustible Dust Hazard Study contains a wealth of information on dust explosions basics, the CSB investigations of dust explosions, combustible dust incident data, and hazard communication and prevention. The Combustible Dust Hazard Study also contains information on the National Fire Protection Association’s two principal voluntary consensus standards to prevent and control dust explosion risks, which are NFPA 654 (*Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids-2006*) and NFPA 484 (*Standard for Combustible Metals-2006*).

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