

Combustible Dust

OSHA CITING MORE GRAIN FACILITIES OUTSIDE THE GRAIN HANDLING STANDARD

Though the status of a possibly combustible dust standard from the Occupational Safety and Health Administration (OSHA) is still unknown, OSHA has not backed down from addressing this issue during recent inspections all across the country.

In fact, OSHA has reissued a directive called the Combustible Dust National Emphasis Program (NEP) to increase its enforcement activities and to focus on specific industry groups that have experienced either frequent combustible dust incidents or combustible dust incidents with catastrophic consequences. OSHA will continue this NEP until a new rule is passed.

Though OSHA seems to be following the Grain Handling standard (1910.272) housekeeping requirements for grain facilities, citations have been written during recent inspections at grain facilities for housekeeping violations outside 1910.272, if the inspector thought that a violation existed but could not justify it

SAFETY
Joe Allen



by the Grain Handling standard.

In fact, one citation at a feed mill was changed from a grain housekeeping violations to a general housekeeping violation (1910.22), when it was shown that the 1/8-inch dust standard did not apply to feed mills but only grain elevators.

Reference to NFPA

OSHA also can cite dust violations under the General Duty clause by referring to one of the National Fire Protection Association (NFPA) shown in the table on page 45. In a report written in October 2009, the Status Report on the Combustible Dust NEP, OSHA listed 32 examples of citations using the General Duty clause over the previous two years.

Violations included dust collection equipment that was not operational, missing explosion venting or suppression systems, hot work permits not being used, and uncontrolled ignition sources in areas where combustible dust

was present, among others.

One reason that OSHA's reference to national consensus standards like NFPA is problematic is that the requirements are much more stringent than the Grain Handling standard.

For example, NFPA 654 states that immediate cleaning is warranted whenever a dust layer of 1/32 inch thickness accumulates over a surface area of at least 5% of the floor area of the facility or any given room. This compares with the Grain Handling standard that has a maximum level of dust at 1/8 inch in priority housekeeping areas.

Explosion Prevention

Whether or not a Combustible Dust standard ever becomes a regulation, or whether or not the grain industry is part of the regulation once it is finalized, the grain industry needs to be ever vigilant in addressing this issue. We want to prevent a dust explosion and want to be in compliance. What steps should we take to do that?

- **Implement a rigorous housekeeping program.** Have a written housekeeping schedule that is followed. This includes providing training for employees on what is needed and why it needs to be done.

You also need to hold employees accountable for their responsibilities. If the dust is not piling up in the boot pit, covering ledges and spouting, and lying under seldom-used equipment, it is not there for the inspector to see or a pressure wave come along and place it into suspension.

- **Keep equipment in operating condition.** Make sure your dust collection system is working properly. Implement a maintenance program, where inspections are completed, and repairs are made as needed. Make sure that you have hazard monitors in the proper places and that your monitors are in working order. Repair leaks in

NFPA Number	Title of NFPA Standard	Current Edition
61	Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities	2008
68	Guide for Venting Deflagrations	2007
69	Standard on Explosion Prevention Systems	2008
70	National Electrical Code	2008
77	Recommended Practice on Static Electricity	2007
85	Boiler and Combustion Systems Hazards Code	2007
86	Standard for Ovens and Furnaces	2007
91	Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists and Noncombustible Particulate Solids	2004
484	Standards for Combustible Metals	2006
499	Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Location for Electrical Installations in Chemical Process Areas	2008
654	Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids	2006
655	Standard for Prevention of Sulfur Fires and Explosions	2007
664	Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities	2007

grain handling equipment.

- **Limit ignition sources.** Magnets upstream of grain processing equipment and grating in receiving areas will help keep tramp metal out of the facility. Dust-tight or explosion-proof lighting and other electrical equipment should be used in the hazardous areas of your facility. Conduct hot work outside of the facility, if possible.

Use hot work permits and follow them when working inside the facility.

- **Enclose grain handling equipment.** This will assist in keeping a clean facility. It does not, however, eliminate the risk of a primary explosion.

- **Move equipment outside.** With additional regulatory pressure and more difficult insurance underwrit-

ing, companies are making the decision to move equipment outside or build new facilities with all grain handling equipment outside.

Joe Allen is a risk management area manager for KFSA, Hutchinson, KS; 800-362-2104.