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Tempers Flare Over Combustible Dust

OSHA refuses to issue mandatory standards, but House members introduce legislation

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WORDS WERE SHARP at a March 12 House Education & Labor Committee hearing on combustible dust. In a tight row sat the chairman of the [Chemical Safety & Hazard Investigation Board](#) (CSB), the assistant secretary of labor who heads the [Occupational Safety & Health Administration](#), the sister of a victim killed in a 2003 industrial dust explosion in Indiana, a chemical engineer with the [National Fire Protection Association](#) (NFPA), and an attorney for the [U.S. Chamber of Commerce](#).

The panelists either strongly favored OSHA using its authority to regulate combustible dust or just as forcefully opposed it. There was no middle ground at the highly polished witness table.



Charles Votaw

Worlds Apart Miser (right), whose brother was killed by a dust explosion, and OSHA's Foulke (left) have opposing views on enacting mandatory dust regulations.

The regulation of dust could affect tens of thousands of companies with plants that generate nanosized particles of combustible materials and the many workers who labor in their factories. Although OSHA can set mandatory, prescriptive dust regulations, it does not want to exercise that authority.

The impetus for the hearing was [H.R. 5522](#), legislation authored by Rep. [George Miller](#) (D-Calif.), chairman of the committee and a longtime worker-safety advocate, and Rep. [John Barrow](#) (D-Ga.), whose district includes the Imperial Sugar plant in Port Wentworth where 13 workers have died and 10 remain critically injured from a huge combustible dust explosion and fire in early February ([C&EN, Feb. 25, page 33](#)).

CSB has just begun its investigation at [Imperial Sugar](#), reported CSB member William E. Wright at the hearing. He described "snowlike accumulations of sugar dust" on rafters, ductwork, and piping. "Most employees and contractors had received little training on the explosion hazard from the accumulated dust," he added.

The bill would force OSHA to issue and enforce mandatory regulations to control combustible dust in industrial workplaces. Provisions would be similar to regulations OSHA has had in place since 1987 for grain elevators. The mandatory, enforceable standards were enacted following a series of deadly grain explosions, and according to an OSHA study, the standards reduced grain dust injuries by 55% and deaths by 77% with little negative impact on business.

Miller's bill springs from recommendations to regulate dust from CSB, an independent federal accident investigatory agency. The bill is based on general combustible dust requirements developed by NFPA, a 100-year-old nonprofit association of 81,000 individuals and 80 trade associations that advocates for greater fire prevention and public safety.

"In 2006, CSB issued a comprehensive study that identified hundreds of combustion incidents that killed over 100 workers during the previous 25 years," Miller said. He underscored CSB's recommendations that OSHA go beyond its general housekeeping standard and instead develop specific enforceable limits for combustible dust, including engineered controls, clear procedures, and worker training programs.

"What is particularly troubling about the Imperial Sugar explosion is that not only was it preventable," Miller said, "but OSHA had been specifically warned about dust hazards and provided with guidance on how to address them."

Miller's dissatisfaction with OSHA went beyond dust, however. During the hearing, he laid out a host of previous CSB safety recommendations that OSHA had failed to act upon. He called the CSB recommendations the "gold standard" in accident prevention.

"OSHA has recognized these hazards for many years," countered OSHA's Edwin G. Foulke Jr., when defending the agency he heads. "OSHA has been implementing various initiatives and standards to deal with the problem."

The agency "already has tough standards on the books that address combustible dust hazards," Foulke said, singling out general requirements for dust housekeeping, emergency action plans, ventilation, and communications. He said, for instance, OSHA's housekeeping standard allows dust accumulation to no more than 1/32 of an inch in thickness. He also pointed to a recent OSHA safety and health bulletin on dust, warning letters sent to 30,000 employers following the

Georgia explosion, and a combustible dust Web page that alerts workers and employers about dust fires and explosions.

And late last year, he said, OSHA began a "national emphasis program" to focus attention on combustible dust and to train its inspectors to look for possible dust problems. The agency is planning to make at least 300 dust-related inspections this year.

But mandatory regulations must wait until the results of the inspections program are determined, he said. "Then OSHA will assess the need for regulatory change," Foulke stated. Meanwhile, "if employers follow the existing OSHA requirements, employees will be protected from combustible dust explosions."

Sitting next to Foulke was Tammy Miser, who could not disagree more on the value of OSHA's program.

"OSHA put out a bulletin on combustible dust," she said, "but at the very beginning it says: 'This Safety and Health Information Bulletin is not a standard or regulation, and it creates no new legal obligations.' "

She asked Foulke, "How seriously do you think companies will take [this]?"

After injuries from an aluminum dust explosion at an Indiana factory killed her brother five years ago, Miser has become an advocate for controlling combustible dust and formed a family support group for victims of dust explosions and fires.

Her brother was alive but burned beyond recognition when she finally located him in a Fort Wayne burn unit five hours after the accident. She described watching as her family decided to remove him from life support and seeing him take his last breath and say his last words: "I'm in a world of hurt."

MISER TESTIFIED at a CSB dust investigation hearing in June 2005 and said she was "very happy when CSB issued its recommendation to OSHA. Finally, I thought, something would get done."

"But there has been no response from OSHA," she pointed out. "In essence, the heads of OSHA have told the families that their loved ones' lives were not worth developing a standard, even when most of the work has been done by CSB and NFPA."

Miller said the lengthening list of accidents show OSHA's voluntary approach isn't working.

OSHA's only ally at the witness table was David Sarvadi, an attorney representing the Chamber of Commerce.

Sarvadi opposes the bill and mandatory OSHA regulations. The voluntary standards are sufficient, he said, since dust hazards are well-known, but greater employer education programs should be implemented.

He warned that the NFPA standards are too complex, a concern shared by two House members at the hearing.

Amy Spencer, NFPA senior chemical engineer, countered that the bill's provisions include standards that chemical engineers are very familiar with. "Our job is now to work to educate people who are using the standards." The provisions boil down to about 20 pages, she added. "These are just reminders—mandatory reminders—of what people are supposed to do to keep their factories safe."

Spencer urged OSHA to move ahead immediately. She noted that NFPA first began studying dust explosions in 1923, that CSB had studied them for years, and that OSHA's inspection program is not likely to discover anything fundamentally new about the hazards of dust.

At the hearing's conclusion, Miller told C&EN: "We want to move quickly on this legislation. The case has been clearly made by the chemical safety board, by history, and by the success we've had in other areas with similar comprehensive regulations."

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