

# Tennessee plant where five workers died found rife with dangers

Naomi Spencer  
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After a six month-long investigation, the federal Chemical Safety Board reported that uncontrolled hazards and an absence of safety measures were behind a series of fatal fires at a Gallatin, Tennessee, metal plant earlier this year. Five workers have been killed and three others injured at the Hoeganaes Corp. plant since late January. The accidents account for all but one of the six dust-related fatalities across the country in 2011.

Hoeganaes is a subsidiary of British-based multinational firm GKN, and has other plants in Germany, China, and Romania. GKN has annual revenues upwards of \$7 billion.

The Tennessee plant is located about 30 miles northeast of Nashville, and employs 175 workers. Hoeganaes melts scrap metal for customer repurposing. The molten iron is sprayed and cooled into a powder, processed in furnaces with hydrogen, and then crushed and milled into a fine powder. The plant is a significant supplier to regional auto manufacturers.

The CSB notes that it has seen significant increases in production since it came online in 1980. According to the company's web site, since then, the Gallatin plant's capacity has risen from 45,000 tons and three grades of metal powder, to "in excess of 300,000 tons and...more than 20 base grades."

"The Tennessee location was chosen for its proximity to expected future auto industry expansion, the business-friendly state and local governments and the high-quality workforce available in the area," the company states.

Thousands of industrial plants opened shop in the US South in the past three decades, many relocating from the industrial Midwest and Northeast, where labor costs were higher. The primary attractions have been regressive tax, labor, and environmental laws, along with a poor and non-unionized population desperate for jobs.

International firms, and particularly auto companies seeking to cut shipping costs on vehicles bound for the US market, have also established large factories in the South. Tennessee currently ranks fourth among US states in auto production, and is the leading non-coastal state for foreign

investment.

The results of the CSB investigation, issued November 16, provide something of a window into the exploitative conditions in Southern shops, and the hazards confronting industrial workers worldwide. Every day, across the US, workers are injured and killed in entirely preventable accidents.

So steady is the pace of US industrial accidents, in fact, that only the worst disasters make the headlines. A simple Internet search on the latest industrial accidents, however, invariably returns pages of news briefs from around the country. In most cases, the factory suspends operations for little more than a few hours before the production schedule is resumed.

In 2010, the Bureau of Labor Statistics recorded 4,547 workplace deaths and 3,063,400 injuries. Since 2008, there have been at least 35 dust explosions with 26 dead and 128 hurt.

With the deepening of the economic crisis, the Obama administration and its state-level counterparts have moved aggressively to dismantle safety enforcement in the name of facilitating "job creation." The destruction of the already meager regulatory oversight guarantees that sweatshop conditions will prevail, with profit margins underwritten by the lives and health of workers.

The CSB report on the Hoeganaes plant reviewed a string of accidents in the early months of 2011. On January 31, two maintenance mechanics were severely burned after a thick layer of iron powder on the flat surfaces of a bucket elevator ignited. The elevator's dust collection system was out of service. CSB investigators found that the elevator's motor had exposed wiring and was not properly grounded. One of the victims died February 2; the other remained hospitalized for months before dying of his burns in May.

Less than two months later, on March 29, a flash fire erupted on flat surfaces above a furnace, injuring one worker. Inspectors found the presence of large quantities of settled dust above the furnace, and hanging dust clouds next to an open-flamed furnace along with several ignition

sources nearby.

Two months after that accident, on May 27, a hydrogen explosion and secondary dust fire claimed the lives of three workers and critically injured two others.

The CSB found a hydrogen leak was caused by corroded piping that had long been neglected. Hydrogen is used in the furnace processing to remove oxygen from the iron. This is delivered to the furnaces through underground pipes connecting to an adjacent facility.

Hoeganaes had no system in place to inspect or maintain the piping, and no testing for gas was done prior to opening the underground trenches holding the piping near several ignition sources. Further, the CSB reported that the company had no procedures to respond to gas leaks. The processing area near the furnaces contained electrical equipment unsafe for use near flammable gases, meaning that flying sparks regularly posed a fire hazard.

Perhaps most damning, the CSB found that Hoeganaes gave workers no training in recognizing the dangers they faced from the accumulations of metal dust near open sources of ignition.

Workers at the Gallatin facility told CSB investigators that, in addition to the fatal accidents, there were numerous small dust flash fires that did not result in injuries. Inspectors found motes of dust hanging in the air and settled in large drifts 2 to 3 inches thick. Hoeganaes did not mitigate the hazards, even after repeated accidents, and operators were compelled simply to tolerate the unsafe conditions.

The CSB determined that “Hoeganaes management personnel were aware of metal powder combustibility hazards but did not mitigate the hazard through engineering controls and housekeeping.” Instead, the company relied on flame-retardant clothing to protect workers against flash fires when they broke out.

Dust fires are eminently preventable. The CSB has enforced combustible dust standards for agriculture since 1987; after regulations on grain dust were imposed, dust incident fatalities dropped by 70 percent. The federal government does not, however, regulate dust limits in general industry, including metal shops.

At the state level, regulation is still more lax. The Tennessee Occupational Safety and Health Administration (OSHA) does not even inspect general metal operations such as Hoeganaes for dust. In Tennessee, companies are allowed to reject the voluntary fire safety guidelines established by the National Fire Protection Association (NFPA); Hoeganaes did not adopt them.

The conditions at Hoeganaes are far from unusual. A 2006 report issued by the CSB found that in nearly half of manufacturers’ safety data, no warnings about dust build-up were posted in facilities, and only 7 of 140 safety guidelines

the CSB reviewed referenced NFPA standards. The CSB also found that fire code officials rarely inspect industrial facilities to enforce local and state codes.

The Gallatin Fire Department, which inspected the plant just two weeks before the May accident, likewise has no guideline for acceptable dust levels. An analysis of incident reports by the *Gallatin News Examiner* found that the fire department responded to fires or injuries at least 30 times over the last 15 years.

In typical fashion, the company responded to the November CSB findings with a pious statement that it “deeply regrets the loss of life.” Hoeganaes management insists that it is developing “an industry-leading powder metal dust management system” to “ensure that similar accidents will not happen again.” The plant continues to operate, though CSB inspectors pointed out that the company has done little besides order that thick piles of dust be swept up.

In the aftermath of the accidents, the state OSHA fined Hoeganaes a mere \$129,000—equivalent to \$25,800 per death.

The CSB announced its conclusions before a public forum in Gallatin. Expressing their grief and anger, residents made clear the far-reaching impact of the deaths.

Chris Sherburne, widow of Wiley Sherburne, the first worker killed in the January accident, addressed the meeting. “I’ve been asked to explain how our lives have been affected. I don’t know if I can actually do that.

“Everything changed that morning,” she told the board. “We walked into the hospital and the first thing the doctors told us was that he was burned on 95 percent of his body and they didn’t think he was going to make it. There’s nothing you can say to that.”

She also noted that the five workers who were killed had multiple dependents. “Every day, something they say or something they do—it’s heartbreaking,” she said of the children. “And the questions they ask, there’s just no answer.”

The tragedies are all but certain to be replayed. On December 7, four workers were burned in a flash fire at Henderson, Kentucky, plastics maker Polymer Partners LLC. That fire, triggered by dust, is one of numerous other accidents at the factory over the past few years.



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