

# HARD LABOR



Each year, some 4,500 American workers die on the job and 50,000 perish from occupational diseases. Millions more are hurt and sickened at workplaces, and many others are cheated of wages and abused. The stories in this digital newsbook explore the threats to workers — and the corporate and regulatory factors that endanger them.



The Center for  
**Public Integrity**

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[www.publicintegrity.org/environment/hard-labor](http://www.publicintegrity.org/environment/hard-labor)

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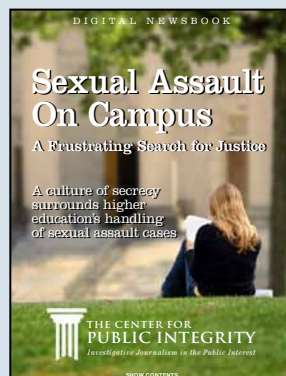
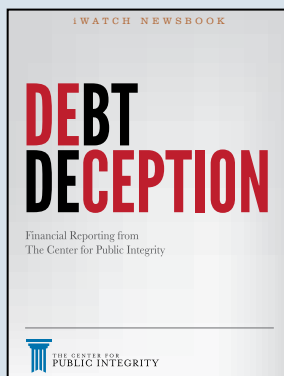
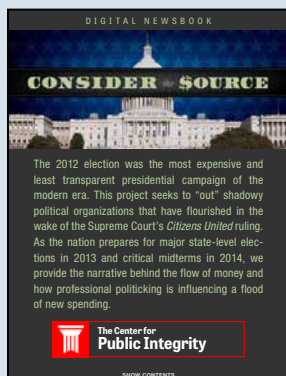
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# Millions of American workers suffer injury, disease or exploitation, with little safety net to protect them

*By Jim Morris, Chris Hamby and Ronnie Greene*

**T**HEY ARE America's invisible backbone — laborers, coal miners, fishermen, farmworkers and factory technicians, whose sweat equity helps buildings rise, crops travel from the fields to dinner plates, and the economy hum.

Yet across the U.S., across scores of blue-collar industries, workers are being injured and killed by the thousands with little protection from Congress and the federal agencies that are supposed to safeguard them: the Department of Labor, the Environmental Protection Agency and the U.S. Coast Guard.

They are people like Nick Revetta, killed by an explosion at a behemoth U.S. Steel plant on Pennsylvania's Monongahela River. An inspector with the Occupational Safety and Health Administration



pushed for a thorough review of the death, but his bosses — focused on hitting inspection quotas — pulled him off the case and told him to hit golf balls instead. U.S. Steel was not fined; the plant blew up again less than a year later.

They are people like Ray Mar-

Each year, some 4,500 American workers die on the job and 50,000 perish from occupational diseases. Millions more are hurt and sickened at workplaces, and many others are cheated of wages and abused.

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cum, a retired 83-year-old Kentucky coal miner whose lungs are filled with a dust that is killing him — and his three sons, all miners suffering similar fates. Across Appalachia, black lung is back, thanks, in part, to corporate cheating, weak rules and tepid enforcement.

They are people like Carlos Centeno, a temporary worker burned over 80 percent of his body at a Chicago-area factory. Company managers refused to call 911 as Centeno screamed for help, and a horrified co-worker finally drove him to a local clinic. He died three weeks later.

They are people like Tania Banda-Rodriguez, a teenage farmworker sickened in the blackberry fields of Arkansas and sent to the hospital vomiting and spitting blood. For 10 months, her lawyer tried to learn which pesticide sickened her. The state initially refused to open its files. The EPA refused to weigh in.

And, they are people like Fred

Mattera, a Rhode Island fisherman who watched a friend's 22-year-old son die on a fishing boat and vowed to improve safety in an industry with America's highest death rate. Despite decades of deaths, Congress refuses to require inspections of aged fishing boats.

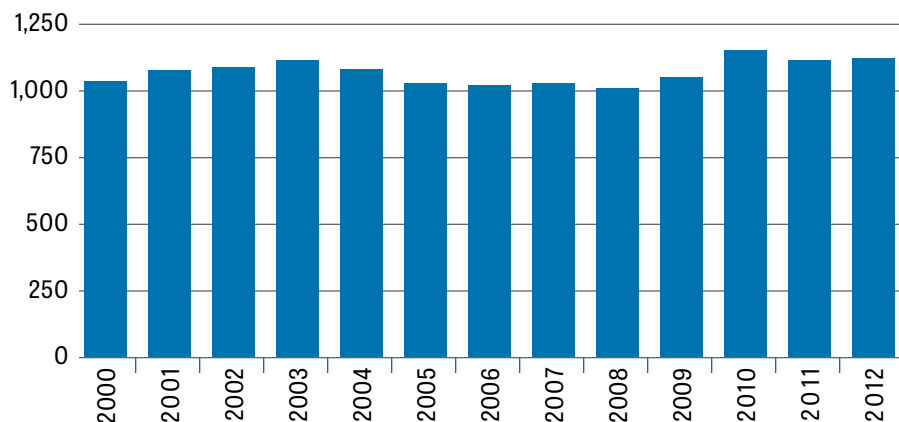
The Center for Public Integrity told these stories and others in *Hard Labor*, an unprecedented exploration of the often-hidden hazards on U.S. jobsites, portraying a culture where laborers receive thin protection despite congressional vows to safeguard America's workforce.

Center reporters traveled to eight states and Canada, telling human narratives behind the tragedies and scrutinizing the role of regulators in every case. We documented systemic flaws in government oversight, using data in many stories to underscore widespread problems that come to a head with wrenching consequences for real people. We explored health and safety breakdowns in industries

## Growing workload

The number of inspections by OSHA has risen nearly 16 percent since 2000, while the number of inspectors has increased by only 8 percent.

### Total Federal OSHA Inspectors by Year (2000–2012)



SOURCE: OSHA

from coke production to coal mining, plastics manufacturing to organic chemistry.

And, we put worker peril in context, describing how the annual jobsite death toll — nearly 5,000 perished in 2011 — exceeds the total number of U.S. fatalities in the nine-year Iraq war. Combined, America's annual fatal tally from workplace injury and illness is comparable to the loss of a fully loaded

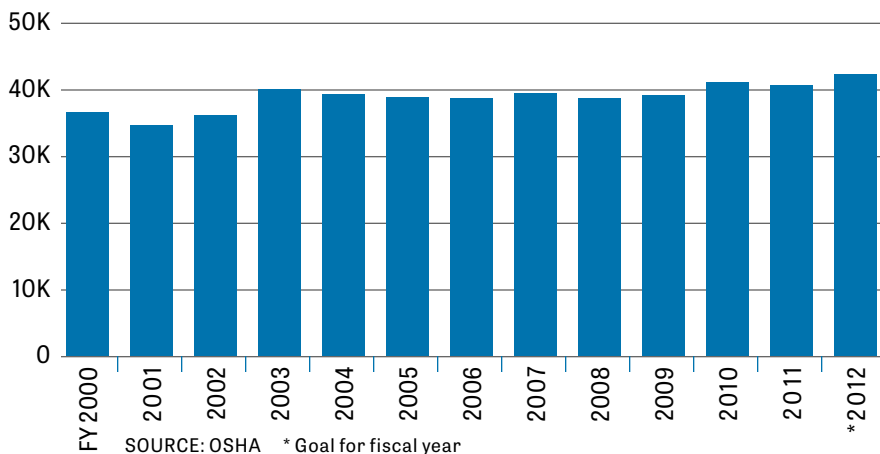
Boeing 737 every day. Yet the typical fine for a worker death is less than \$8,000.

A Center story, built from an analysis of a decade's worth of OSHA data, helped explain why: The government systematically deletes or fails to collect corporate fines even in cases of death. That finding was one piece of a deep body of work shining light on threats to U.S. workers.

## Growing workload

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### Total Federal OSHA Inspections by Year (2000–2012)



“The Center for Public Integrity is doing a real service by publishing these stories,” wrote Ross Eisenbrey, with the nonpartisan Economic Policy Institute. “In the case of workplace safety and health, we need more regulation, not less.”

We expanded our reach by partnering with local media outlets from the Charleston Gazette in West Virginia to Boston’s WBUR and Chicago Public Radio, and na-

tional outlets including NPR. These partners, building on our research, produced their own deeply reported pieces. Other partners, such as Mother Jones and NBC News.com, republished our stories.

Our reports, touching communities across the U.S., prompted immediate reform.

After our examination of the death of Nick Revetta — and the role of inspection quotas in an in-



vestigation that produced no tangible punishment — OSHA pared its inspection goals. After our exclusive report spotlighting the resurgence of black lung disease in Appalachia, federal regulators escalated their inspections of dangerous, dust-filled mines. “These groundbreaking reports should be a call to action for everyone connected to the mining industry,” said Sen. Tom Harkin, D-Iowa.

These steps begin to make good on the government’s promises to protect America’s blue-collar laborers.

They are the direct result of

Hard Labor: The most exhaustive reporting produced exploring the hazards imperiling America’s most hidden, vulnerable workers. Thus far, the project has been honored with the Edgar A. Poe award for national reporting from the White House Correspondents’ Association and the non-deadline reporting award (online) from the Society of Professional Journalists. At this writing the series is a finalist in the online category of the Gerald Loeb Awards for distinguished business reporting from the UCLA Anderson School of Management. ■

## Edgar A. Poe Award

**JUDGE’S COMMENTS:** With deft story-telling and precise data, “Hard Labor” compellingly shows the government has failed to keep its promise to protect workers from injury and death on the job. Drawing on years of data and on-the-ground reporting in eight states and Canada, the authors demonstrate how corporate corner-cutting, government inability or unwillingness to impose meaningful penalties, and bureaucratic pressure to make caseload quotas how stymied real regulation. They tell the workers stories in a manner that evokes Studs Terkel, excellently weaving human interest with deep-data scrutiny and using numbers sparingly but with powerful effect. “Hard Labor” clearly meets the Edgar A. Poe award’s standard of “excellence in news coverage of subjects and events of significant national or regional importance to the American people.”



On Sept. 3, 2009, contract laborer Nick Revetta was killed in an explosion at U.S. Steel's Clairton Plant near Pittsburgh. Revetta's death and the events that followed reveal the limitations of a federal law meant to protect American workers.

# In U.S. Steel town, fatal gas explosion goes unpunished by OSHA

*By Jim Morris*

Published Online: May 21, 2012

**C**LAIRTON, PA. — Early on the morning of Sept. 3, 2009, Nicholas Adrian Revetta left the Pittsburgh suburb of Pleasant Hills and drove 15 minutes to a job at U.S. Steel's Clairton Plant, a soot-blackened industrial complex on

the Monongahela River. He never returned home.

Stocky and stoic, Revetta was working that Thursday as a laborer for a U.S. Steel contractor at the same plant that employed his brother, for the same company that had

employed his late father. Shortly before 11:30 a.m., gas leaking from a line in the plant's Chemicals and Energy Division found an ignition source and exploded, propelling Revetta backward into a steel column and inflicting a fatal blow to his head. Thirty-two years old, he left behind a wife and two young children.

Nick Revetta's death did not make national headlines. No hearings were held into the accident that killed him. No one was fired or sent to jail.

Revetta was among 4,551 people killed on the job in America in 2009, carnage that eclipsed the total number of U.S. fatalities in the nine-year Iraq war. Combine the victims of traumatic injuries with the estimated 50,000 people who die annually of work-related diseases and it's as if a fully loaded Boeing 737-700 crashed every day. Yet the typical fine for a worker death is about \$7,900.

"These deaths take place behind closed doors," says Michael Silverstein, recently retired head of Washington State's workplace safety

agency. "They occur one or two at a time, on private property. There's an invisibility element."

Under the Occupational Safety and Health Act of 1970, American workers are entitled to "safe and



**Nick Revetta, right, with his brother Patrick.**

Courtesy of Patrick Revetta

healthful" conditions. Nick Revetta's death and the events that followed lay bare the law's limitations, showing how safety can yield to speed, how even fatal accidents can have few consequences for employers, and how federal investigations can be cut short by what some call a de facto quota system.

In the Revetta case, the Department of Labor's Occupational Safety and Health Administration — OSHA — failed to issue even a minor citation to U.S. Steel, the world's 12th-largest steelmaker and an economic leviathan in Western Pennsylvania. The company paid no fine, although current and former workers say that U.S. Steel's contractors — including Revetta's employer, Power Piping Co. — faced intense pressure to finish their work.

OSHA did look into Revetta's death, as required by law. Michael Laughlin, a safety inspector from the agency's Pittsburgh office, spent more than two months on the case, working tirelessly to find the cause of the explosion. Yet emails obtained by the Center for Public Integrity show that Laughlin's requests for help went unanswered, and he was pulled off the investigation by a supervisor striving to meet inspection goals.

"My problem is at what point do

## OSHA inspector's plea: 'My spirit is broken.'

### OSHA inspector appeals for more time on Revetta investigation

I tired to explain all this to Bob but he told Frank I was about turning in cases that were not complete and will. My problem is at what point do we give up quality for met. I think you now I have always done my part to es attorney keeps contacting the office for the freedom.

We have numerous issues that need answers too. It chemicals such as Methanol used in the cryogenic pr of contractor and to not ever activating the alarm for a

I've tried to keep Frank abreast of the situation but he some guidance because I'm torn and my spirit is brok my ability.

OSHA inspector Mike Laughlin complains to deputy regional administrator Ed Selker that he isn't being allowed time to complete an investigation into the explosion that killed Nick Revetta.

### OSHA manager tells inspector to 'relax'

Relax, We'll figure something out, don't worry! Hope weekend, go out and hit some balls!

Selker responds to Laughlin's plaintive email.

we give up quality for quantity," Laughlin wrote in an appeal to a higher-ranking OSHA official in Philadelphia in November 2009. "I need some guidance because I'm torn and my spirit is broken because

of the need to complete this case to the best of my ability.”

The official advised Laughlin to “relax” and use the weekend to “go out and hit some [golf] balls!”

In the end, OSHA penalized only an insulation contractor that had been working in the area of the explosion. The contractor paid \$10,763 in fines unrelated to the blast and was not implicated in Revetta’s death.

“The OSHA investigation that was done missed the point,” says John Gismondi, a lawyer who represents Nick Revetta’s wife, Maureen, in a lawsuit against U.S. Steel. “It wasn’t the right type of investigation. They spent all their time on penny-ante stuff. How do you have a situation where all the pipes are owned or maintained by U.S. Steel, you have an explosion, a guy is killed and you have no violation? How is that possible?”

“I’m upset with U.S. Steel,” says Maureen Revetta, 34, “but I think

## Pressure to meet inspection goals

### OSHA supervisor pushes inspection numbers

As per our calculations this morning, we need an average bulk of this will fall on our shoulders. I would hate to be

An OSHA supervisor reminds other agency officials that the end of the fiscal year is coming and they should keep up their pace of inspections.

### ‘A ton of heat’ possible if goals aren’t met, supervisor warns

Essentially, do what you gotta do to stay gainfully to open enough inspections to make all of our goals guarantee there wouldn’t be a ton of heat coming getting a new RA soon and being perceived as “sh accidents/fatalities/sig cases have been on every the clock strikes October.

The supervisor warns that there could be serious consequences if inspection goals aren’t met.

### OSHA’s ‘quota system’

Comments on this (Quota System threat).

An OSHA official uses the term “quota system threat” to describe the supervisor’s plea for more inspections.

I’m angrier with OSHA. They’re the government agency that’s supposed

to keep people safe ... It just seemed like they purposely didn't want to fine U.S. Steel."

Ten months after her husband's death, a second explosion rocked the Clairton Plant, sending 17 workers to the hospital. OSHA blamed the accident on a contractor short-cut approved by U.S. Steel, an allegation the company is contesting.

In a written statement to the Center for Public Integrity, OSHA said it conducted a "thorough investigation" of Nick Revetta's death. "It was determined [that] there was insufficient factual evidence that could support the issuance of citations specifically related to the root cause of the incident."

David Michaels, assistant secretary of labor for occupational safety and health, would not talk about the Revetta case; nor would Robert Szymanski, head of OSHA's Pittsburgh Area Office. Edward Selker, the now-retired OSHA deputy regional administrator who urged inspector Laughlin to go hit golf balls, did not return calls to his home. A U.S. Steel spokeswoman declined to comment. In a court filing, the company denied any negligence in the case.

The silence has shaken Revetta's former co-workers. "It just hasn't gone away," says John Straub, a U.S.

Steel employee who has worked in Clairton since 1979. "Nobody has really explained to us exactly what happened. They tell us they don't know what the ignition source was. I was working in that same area a couple of weeks before the explosion. I look back and say, 'That could have been me.' "

### **'A ton of heat'**

The recession has made American workplaces seem safer than they are. In 2008, the year before Nick Revetta was killed, 5,200 people perished on the job. A decade earlier, the toll exceeded 6,000. The soft economy, the U.S. Bureau of Labor Statistics notes, has led to fewer workers and fewer hours in high-risk industries such as construction. Even so, the latest government tally — 4,690 worker deaths in 2010, up 3 percent from 2009 — is sobering. The U.S. workplace fatality rate remains roughly six times that of the United Kingdom, which has stricter safety rules.

It would take the perpetually short-staffed OSHA 130 years to inspect every workplace in the U.S. Managers and their underlings must strike a balance between meeting "performance goals" set in Washington and conducting comprehensive

inspections when deaths occur. A target of 42,250 inspections nationwide was established for fiscal year 2012, up 5.6 percent from the previous year's goal. The number of federal inspectors, meanwhile, has stayed mostly flat; there were 1,118 in February 2012.

In a statement, OSHA said it “does not set strict inspection quotas. The Agency does, however, set inspection goals — and they are just goals — in order to monitor and manage our activities. We do not believe that these inspection goals preclude the Agency from doing a thorough inspection.”

Others aren't so sure.

“They called them goals, but you were definitely expected to make your numbers — that was the term of art,” says David DiTommaso, a former OSHA area director in Montana. “If you didn't, you had to have a reason and you would be judged on it.”

In August 2011, with the federal fiscal year nearing a close, an

unidentified safety supervisor in OSHA's Region 3 office, covering Pennsylvania, Delaware, Maryland, Virginia, West Virginia, and Washington, D.C., urged inspectors to step up their pace and not get bogged down in the minutiae of



**A Labor Day parade in Pittsburgh in 2009 was dedicated to Nick Revetta.** Courtesy of Patrick Revetta

complex cases, including those involving deaths and serious injuries.

“As per our calculations this morning, we need an average of 14 inspections opened per week,” wrote the supervisor, whose name was removed from an email obtained by the Center for Public Integrity.

The supervisor went on: “Essentially, do what you gotta do to stay



gainfully employed. It's great to be caught up, but we only have a short window to open enough inspections to make all of our goals. I suppose you could say, 'it's not my problem' but I can't guarantee there wouldn't be a ton of heat coming down from the RO [regional office] on any office that falls short. We are going to be getting a new RA [regional administrator] soon and being perceived as 'slackers' is not a good first impression. I know how difficult all of the accidents/fatalities/sig [significant] cases have been on everyone but that won't likely be taken into consideration when the clock strikes October" — the beginning of the new fiscal year. One OSHA official referred to the supervisor's email as a "Quota System threat."

Other OSHA emails obtained under the Freedom of Information Act reveal the numbers-driven pressures that existed in Pittsburgh after Nick Revetta's death.

In a message to then-deputy regional administrator Selker two months after the first Clairton explosion, inspector Laughlin acknowledged that "goals must be met" but said the Revetta case was "clearly not done." His bosses nonetheless directed him to end the investigation. (Laughlin died in Janu-

ary after being struck by a car.)

A chart dated two days after Revetta's death shows that OSHA's Region 3 was easily surpassing its counterparts in the numbers game. With the fiscal year coming to an end, the region was ahead of its goal by 245 inspections. In an email four days later, Selker complimented Szymanski and other managers in Pittsburgh for the "very encouraging and impressive inspection stats ... We are very well positioned to make sure all FY2009 inspections are 'cleaned up' and issued by 9/30/2009. This will allow a good quick and clean start to what appears will be a challenging FY2010. We can hit the ground running and get off to a good start in the first quarter instead of playing catch-up. If we can hold our own in the first quarter, it will make the rest of the year much less tense."

## Patrick and Maureen

Nick Revetta's older brother, Patrick, is tall and solidly built, with grey stubble. Forty years old, he lives 11 miles from Clairton but has tried to avoid the place since Nick's accident. He made an exception one bitterly cold day in January 2011. After pointing out Neil C. Brown Stadium, where he played quarter-



back for the Clairton High School Bears, he drove past a string of deserted businesses on his way to U.S. Steel's hulking Clairton Plant on the Monongahela River.

Clairton, a city of 6,800 about 15 miles south of downtown Pittsburgh, has seen better days. In 1980, U.S. Steel employed nearly 5,000 at the Clairton Works, as it was then known, where coal is superheated in ovens and turned into coke, a key ingredient in steel. Though the plant remains a major employer, its staffing has dropped by three-quarters, not counting contract workers. Almost one-quarter of the city's residents and nearly half of its children live in poverty.

The Revetta brothers and their sister, Kathy, grew up in Clairton the 1970s and '80s. "This place was booming," Patrick recalls. Nick was the "spitting image" of his father Adrian, who worked for Power Piping Co., a construction and fabrication contractor. "They walked alike. They were built the same way — like bulls, basically," Patrick says. Adrian got Nick a job at Power Piping; Nick would work there for 11 years.

Nick and Patrick grew exceptionally close after their mother, Patricia, died of cancer in 1991. "He was like a son to me," Patrick says. "He

drank his first beer with me at my college. I took him everywhere. I raised him."

Nick met Maureen Mulligan in 1994, when they were 17, and they married nine years later. Their son Nick was born in 2005, their daughter Gianna in 2008. The children's names were tattooed on their father's right arm, along with the word *Italia*, a nod to his heritage.

Thin and well-spoken, Maureen is a special education and speech teacher. She struggles to raise the children without their father. Six-year-old Nick craves male attention. "When [the accident] happened, he was 4½," Maureen says. "I don't think he knew people died. I said, 'Daddy got hurt at work and he's never coming home.'"

The Clairton Plant is the largest operation of its kind in the country, with 12 clusters of coke ovens, known as batteries, which produce 4.7 million tons of the carbon-rich fuel annually. At the depth of the recession, in early 2009, coke prices were depressed and activity in Clairton was sluggish. As prices began to rebound that year, "there was a mad rush to get everything up and running again," Patrick says.

Nick was caught in that rush. Power Piping was brought in to help

refurbish gas processing equipment. “You could see it every day,” says Patrick, a U.S. Steel employee whose job at the time was to help control emissions from the coke oven batteries. “There was just too much pressure. They had to have that production, man. Nick, he kept telling me they were shortcutting stuff, putting pressure on them to hurry up and get the job finished. I said, ‘Just watch your ass.’”

OSHA inspector Laughlin’s voluminous notes reflect the frenetic work environment experienced by U.S. Steel contractors such as Power Piping. “They were pushing the manpower ... U.S. Steel pushing ... pushing people,” Laughlin wrote while transcribing one worker interview.

The winter before he was killed, Nick logged 60 days straight at the Clairton Plant. “He was very proud of his job, proud of providing for his family,” Maureen says. “He never complained about working.” Subdued among strangers, animated among friends, Nick had few hobbies outside his family time. “I never really worried about his safety,” Maureen says. “Then, one morning about two weeks before he died, he said, ‘I don’t think you know what a dangerous place I work at.’”



**Nick and Maureen Revetta** Courtesy of Maureen Revetta

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Around the same time, Patrick recalls, Nick complained that there were gas “leaks all over the place” in a part of the plant’s Chemicals and Energy Division known as the No. 2 control room. “I always knew somebody would get killed inside that place,” Patrick says, “but I never thought in a million years it would be my baby brother.”

Four days before Labor Day 2009, Nick and a co-worker were

given a routine assignment. They were to repair concrete pillars supporting the dormant B Cold Box, a pipe-filled structure the size of a storage pod in the No. 2 control room. The box is part of a cryogenic process used to separate “light oil” containing benzene, xylene and toluene from coke oven gas; the chemical byproducts in the oil are then sold.

Nick was standing near the box, getting ready to mix grout, when, at 11:26 a.m., an explosion sent him hurtling backward into a column. He appears to have died instantly. A foreman at the plant later told OSHA inspector Laughlin that it looked like Nick had been buried in a snow drift, the “snow” being piles of white, fluffy insulation blown from the B Cold Box.

At the moment of the blast, Patrick was coming off his shift at the plant’s B Battery, maybe 100 yards away. “I heard a loud arcing noise,” he recalls. “I turned in that direction and saw the flash and heard the explosion.” He called Nick three times on his cell phone but got no answer.

Patrick ran to the lunch trailer and encountered Nick’s boss, who said Nick was unaccounted for. Then he saw his brother being carried out

on a stretcher. Patrick’s chest grew tight, his breathing labored. He thought he was having a heart attack and was taken by ambulance to the plant clinic.

Eventually, a U.S. Steel worker who’d found Nick told Patrick his brother was dead. Patrick began cursing everyone within earshot, then went straight to Jefferson Regional Medical Center, where Nick had been taken. He asked to see his brother’s clothing, which was “soaking wet. You could smell the benzene.” He saw no signs of trauma: “There wasn’t a burn mark on him.”

Although an autopsy would establish the cause of death as blunt-force trauma to the head and trunk, Maureen also detected no evidence of serious injury when she saw Nick’s body that afternoon. “He looked perfect,” she says, “except for a little red line on his nose.”

## The investigation

Mike Laughlin was dispatched to the Clairton Plant about two and a half hours after the explosion. A heavyset Army veteran with a thick grey mustache, Laughlin had investigated dozens of fatal accidents since joining OSHA in 1990.

Rose Bezy, vice president of Unit-

ed Steelworkers Local 1557, which represents about 1,200 U.S. Steel workers in Clairton, joined Laughlin as he picked his way through the debris around the demolished B Cold Box. “The guy was relentless,” Bezy says. “He was all over the place.”

U.S. Steel officials followed Laughlin as he worked. “Whenever he would take a picture,” Bezy says, “there would be a U.S. Steel guy with a camera, taking the same picture.” Three well-dressed corporate security officials from Pittsburgh appeared at the plant several hours after the accident, Bezy says, and forbade Clairton managers from sitting in on interviews with lower-level employees, as would customarily occur. “It looked to me like U.S. Steel’s own managers were intimidated,” she says.

Laughlin realized early in the Revetta investigation that he needed help navigating complex federal rules detailing the steps companies must take to prevent catastrophic fires, explosions and chemical releases. He kept pressing Pittsburgh area director Szymanski to pair him with someone who had expertise in this “process safety management” protocol. OSHA has several hundred inspectors nationwide



**Online Video:** A laborer dies in a gas explosion, safety questions linger.

Emma Schwartz

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with such specialized training, two in Pittsburgh. These specialists can draw conclusions from mangled pipes and burned-out vessels—clues likely to be missed by generalists like Laughlin.

Laughlin made his initial request for help not quite two weeks after Revetta’s death. Former OSHA managers say the request should have been granted. “It doesn’t make a whole lot of sense that you have an explosion where one of your [inspectors] is asking for help and you don’t give it to him,” says Dave May, a former OSHA area director in New Hampshire who oversaw some 100 death investigations. “In a fatality you bend over backwards to get the help.”

DiTommaso, the former Mon-

tana area director, says, “In a situation like [the Revetta accident], we would have got a team in there. You would call the regional administrator and say, ‘Look, I’ve got this type of case. Can we get some people who have heavy experience in that from somewhere around the country?’ You’ve got to make sure there’s not a continuing hazard.”

The precise cause of the explosion that killed Nick Revetta remains a mystery. Workers had been grinding and welding on the B Cold Box just prior to the blast, but none of the witnesses interviewed by Laughlin reported smelling gas. “No evacuation alarm ever went off,” a foreman told Laughlin, according to the inspector’s notes.

Another witness said he’d heard “a large gas escaping sound — definitely a pipe hissing — and [seen] a big ball of fire” near Quad 3, a trailer-sized structure, containing four cryogenic vessels, located close to the disabled B Cold Box. There had been an explosion in Quad 3 in 2005. No one was hurt, and U.S. Steel blamed the event on lightning.

Lawyer Gismondi says U.S. Steel’s own investigation, which has not been made public, concluded that “there was a gas leak

inside [Quad 3] and oxygen got in.” This suggests that two of the three ingredients required for an explosion — flammable gas and oxygen — were present. All that was needed was an ignition source — something as simple as static electricity. U.S. Steel declined to comment.

## Near-misses

John Straub, a senior operating technician with U.S. Steel, was at home the morning Nick Revetta died. He learned about the explosion from his wife, who’d seen a bulletin on TV. “I said, ‘I know exactly where it was.’” A casual acquaintance of the Revetta brothers, Straub had worked in the area of the blast and had been troubled by what he described as sloppy “hot work” procedures designed to contain sparks from welding and burning.

The job to which Nick Revetta had been assigned — the rebuilding of the B Cold Box — was, in Straub’s view, being done without proper enclosures to segregate potential sources of ignition. It was part of a disturbing trend he’d observed: Precautions that would have been taken five years earlier were deemed too expensive and time-consuming.

“In the old days, responsibility for safety was shared by the contractor and U.S. Steel,” Straub says. “Now it’s just somebody else working. You don’t look at [a contract employee] like it’s your son or your daughter or your dad working, which you should.”

Straub filed a 10-page, handwritten complaint with OSHA’s Pittsburgh office in January 2010, alleging that U.S. Steel had violated the process safety management standard. Straub claimed that several “near-misses” in the No. 2 control room before Revetta’s death hadn’t been investigated. Six months later, OSHA cited U.S. Steel for five “serious” violations related to Straub’s complaint and proposed a \$32,400 fine. The company settled and paid \$19,800.

Not long after Straub filed his complaint, Maureen Revetta learned that OSHA’s investigation into her husband’s death had been closed, with no citations issued to U.S. Steel. She and Gismondi had two unsatisfying meetings with OSHA officials in the summer of 2010. In the first, “One guy said, ‘We don’t have enough resources,’” Maureen says. “I wouldn’t tell parents that I don’t have enough resources to teach their kids. I have to

figure it out. That’s no excuse.” In the second meeting, which included then-deputy regional administrator Selker, Gismondi produced inspector Laughlin’s written request for help and asked why it hadn’t been honored. “They were flustered,” the lawyer says.

In October 2010, Gismondi approached OSHA chief David Michaels at a conference in Pittsburgh and hand-delivered a letter. “Mrs. Revetta and I have strong concerns that the OSHA investigation into this accident was not as thorough and complete as it should have been,” it said. A month later, Michaels replied that the process safety investigation sought by Laughlin “would not likely have determined the root or underlying causes of the incident that killed Mr. Revetta” and said that Straub’s complaint had resulted in citations that would discourage “unsafe practices at the Clairton Plant.”

In her own letter to Michaels, the United Steelworkers’ Bezy observed that it took an expert — Pittsburgh-based OSHA inspector Jan Oleszewski — to document the violations Straub had alleged. Oleszewski or someone like him should have been assigned to the Revetta investigation, Bezy argued.

“I fear that [U.S. Steel] will continue to injure and kill our employees and those who contract to work in our plant,” she wrote. “They seem to be above the law in matters of Health and Safety.”

Indeed, one week before Oleszewski cited U.S. Steel for violations stemming from the Straub complaint, the Clairton Plant blew up again. It was July 14, 2010 — not even a year after Nick Revetta was killed.

### **‘You thought someone was dying’**

That morning, Denny Lentz, a steamfitter with Power Piping, was helping a co-worker install a flat piece of steel between flanges on a 30-inch coke oven gas line in the Clairton Plant’s B Battery. The “blank” was supposed to block the flow of gas while the men repaired a leaking valve. Something went wrong: Lentz, outfitted in a self-contained breathing apparatus, could hear and feel the gas escaping. “It was blowing the coal dust off the ceiling,” he says. “Once you got gas blowing everywhere, it’s gonna find a spark.”

Lentz says that a gas alarm went off several times, but a U.S. Steel supervisor silenced it each time. “I was thinking, ‘I gotta hurry,’” Lentz says.

He was rushing to tighten the bolts on the flanges when a wall of flame “came right at me and blew me over.” He remembers picking himself up off the ground and hearing screams: “You thought someone was dying.” The fire peeled the skin off his hands; his ears and the back of his head were burned as well. Others, including the U.S. Steel supervisor, were burned more severely.

OSHA said the procedure approved by U.S. Steel — allowing coke oven gas to keep flowing through the line rather than shutting it off and purging it with nitrogen — invited disaster. The agency cited the company in January 2011 for 12 alleged violations and proposed a \$143,500 fine. One violation was classified as “willful,” suggesting OSHA believes the steel maker either disregarded or was “plainly indifferent” to safety rules. U.S. Steel is appealing. Lentz and other workers hurt in the accident are suing the company.

The B Battery conflagration may have been foreshadowed 2½ years earlier in River Rouge, Mich. At U.S. Steel’s Great Lakes Works on Jan. 5, 2008, a pipe dislodged by a gas explosion fatally crushed Thomas Pichler Jr., a 27-year-old contract pipefitter. A lawsuit filed by Pichler’s parents alleged that U.S. Steel al-

lowed flammable gas to enter the supposedly inactive pipe; the case was settled out of court for an undisclosed sum in March 2011.

Although Michigan's workplace safety agency did not cite U.S. Steel, the lawsuit uncovered evidence of company culpability. U.S. Steel allowed coke oven gas to enter a line that was supposed to have been out of service, says Robert Darling, the lawyer for Pichler's parents. During the litigation, U.S. Steel officials betrayed no knowledge of what caused the explosion.

The breakthrough came when the president of Pichler's employer testified in a deposition that only U.S. Steel had the key to remove a lock on a valve that kept gas from flowing into the pipe on which Pichler was working. Evidence showed that the lock had been removed prior to the explosion. U.S. Steel did not respond to requests for comment on the Pichler case.

Could a more complete OSHA probe and sanctions in the Revetta case have prevented the second blast in Clairton? Celeste Monforton, a former OSHA analyst who lectures at the George Washington University School of Public Health, says that Revetta's death should have prompted a broader investigation that might

have identified other hazards.

"OSHA should have used that as an opportunity to look at the entire operation rather than just limiting its inspection to the area where the fatality occurred," Monforton says. "To me, it's just inexplicable that they didn't do it. People can say all they want about OSHA's lack of resources, but they had the tools to go in."

The OSHA Field Operations Manual gives local managers considerable latitude in death cases to determine the scope of investigation. May, the former New Hampshire area director, says, "If the place is a mess and it's had a fatality, it's not atypical that you jump in and say, 'We need to do the whole place.' "

## **Burros, crabs...and people**

Under the Occupational Safety and Health Act, a willful safety violation that causes the death of a worker is a misdemeanor, punishable by no more than six months in prison. Contrast this with the Wild Free-Roaming Horses and Burros Act, which carries a one-year sentence for killing or merely harassing one of the animals on public lands.

OSHA chief Michaels says that statutory changes, enabling OSHA to assess stiffer civil penalties and



making it easier to criminally prosecute wrongdoers, are needed.

“There’s no question in my mind that higher penalties would encourage employers to eliminate hazards before workers are hurt,” he says. “I think all of us recognize that fear of prison focuses the mind.”

In 2010, Michaels told a Senate panel about Jeff Davis, a boilermaker at the Motiva Enterprises oil refinery in Delaware whose body “literally dissolved” in sulfuric acid after a storage-tank explosion in 2001. Motiva was fined \$175,000 for the accident, which hurt eight others.

“Yet, in the same incident, thousands of dead fish and crabs were discovered, allowing an EPA Clean Water Act violation amounting to \$10 million,” Michaels testified. “How can we tell Jeff Davis’ wife Mary, and their five children, that the penalty for killing fish and crabs is many times higher than the penalty for killing their husband and father?”

That same year, Rep. George Miller, then chairman of the House Committee on Education and the Workforce, introduced legislation that would have raised limits on OSHA penalties and made it easier to hold corporate officials criminally liable for flagrant violations. Opposition from Republican members of Con-

gress and business groups, including the U.S. Chamber of Commerce, killed the legislation. “It’s been a constant campaign” to demonize OSHA, says Miller, a California Democrat. “The attack on this type of regulation is across the board. It’s not nuanced.”

## Postscript

Patrick Revetta has lost 30 pounds since Nick was killed. “He’s not the same person I’ve known for 10 years,” says his wife, Kathy. “He holds everything in. He sits there in a daze.” Still a U.S. Steel employee, Patrick is out on medical leave for post-traumatic stress disorder.

“I got a lot of bitterness in my heart over this, and I don’t think it’s ever going to go away,” he says. “How is it that somebody gets killed, OSHA finds nothing and they send guys back in and go back to full production? I believe OSHA turned their head to it.”

His father, Adrian, died of complications from diabetes 13 months before Nick was killed. Adrian would not have allowed the cause of the 2009 explosion to remain undetermined, Patrick says. “If my dad were still alive, there would have been an answer.”

On a Saturday in January last year, he drove a visitor from Clairton to

the snow-covered Finleyville Cemetery, where his brother, parents and grandfather are buried, and parked his truck next to the family plots. A small Pittsburgh Penguins flag fluttered next to Nick's head-

stone; following the hockey team had been one of his passions.

On his way down the hill a few minutes later, Patrick gave his horn two taps. Goodbye, little brother. ■

## IMPACT:

# OSHA pares inspection goals

*By Jim Morris*

Published Online: June 7, 2012

**TWO WEEKS** after a Center for Public Integrity story highlighted concerns about alleged quotas imposed on federal workplace safety inspectors, the Occupational Safety and Health Administration has pared its inspection goal for the year.

OSHA had established a target of 42,250 inspections nationwide for fiscal year 2012, which ends Sept. 30. An OSHA spokesman confirmed Wednesday that the new goal is 41,000 inspections.

The revision was made primarily because the agency has been conducting “more complex, time consuming” inspections this year, the spokesman wrote in an email.

OSHA told the Center it sets goals, not quotas. But some former agency managers said that inspectors who fail to “make their numbers” face repercussions from their bosses.

On May 21, the Center published a story about a 2009 explosion at a U.S. Steel plant near Pittsburgh that killed Nick Revetta, a 32-year-old contract laborer. The OSHA inspector who led the accident investigation complained that he was unable to do a thorough job because of de facto quotas imposed by his supervisors. U.S. Steel, which has denied wrongdoing, was not cited in the case. ■



Carlos Centeno with his partner, Velia Carbot. Centeno was employed as a temp worker at a Chicago-area factory in 2011 when a solution of hot water and citric acid erupted from a 500-gallon tank, burning him over 80 percent of his body. His bosses refused to call 911, and more than 98 minutes passed before he arrived at a burn unit. He died three weeks later. Centeno family

# ‘They were not thinking of him as a human being’

*By Jim Morris and Chip Mitchell*

Published Online: December 20, 2012

**C**HICAGO — By the time Carlos Centeno arrived at the Loyola University Hospital Burn Center, more than 98 minutes had elapsed since his head, torso, arms and legs had been scalded by a 185-degree solution of water and cit-

ric acid inside a factory on this city’s southwestern edge.

The laborer, assigned to the plant that afternoon in November 2011 by a temporary staffing agency, was showered with the solution after it erupted from the open hatch of a 500-gal-

lon chemical tank he was cleaning. Factory bosses, federal investigators would later contend, refused to call an ambulance as he awaited help, shirtless and screaming. He arrived at Loyola only after first being driven to a clinic by a co-worker.

At admission Centeno had burns over 80 percent of his body and suffered a pain level of 10 on a scale of 10, medical records show. Clad in a T-shirt, he wore no protective gear other than rubber boots and latex gloves in the factory, which makes household and personal-care products.

Centeno, 50, died three weeks later, on December 8, 2011.

A narrative account of the accident that killed him — and a description of conditions inside the Raani Corp. plant in Bedford Park, Ill. — are included in a U.S. Occupational Safety and Health Administration memorandum obtained by the Center for Public Integrity. The 11-page OSHA memo, dated May 10, 2012, argues that safety breakdowns in the plant warrant criminal prosecution — a rarity in worker death cases.

The story behind Centeno's death underscores the burden faced by some of America's 2.5 million temporary, or contingent, workers — a growing but mostly invisible group of laborers who often toil in

## Timeline of torment

*Temp worker Carlos Centeno's excruciating journey from a factory floor to a hospital appropriate for his life-threatening burns. Asterisks indicate events where times are approximate. Maps indicate the shortest routes, not necessarily the actual routes.*

**Reporting:** Chip Mitchell and Jim Morris; **Visuals:** WBEZ/Logan Jaffe

**November 17, 2011**  
**1:30 PM**

### **Acid solution erupts from tank \***

Ron's Staffing Services Inc. employee Carlos Centeno, 50, approaches the end of his shift at Raani Corp., a maker of household and personal-care products in Bedford Park, a Chicago suburb. He is wearing a T-shirt and medical-grade latex gloves but no gear protecting him from chemicals or hot liquids, according to Occupational Safety and Health Administration records. A mixture of scalding water and anhydrous citric acid erupts from a hatch in this 500-gallon tank and burns most of his body.

SOURCES: OSHA records, Material Safety Data Sheet from Raani Corp.

the least desirable, most dangerous jobs. Such workers are hurt more frequently than permanent employees and their injuries often go unrecorded, new research shows.

Raani's "lack of concern for employee safety was tangible" and injuries in its factory were "abundant," Thomas Galassi, head of OSHA's Directorate of Enforcement Programs, wrote in the memo to David Michaels, assistant secretary of labor for occupational safety and health.

Raani managers failed to put Centeno under a safety shower after he was burned and did not call 911 even though his skin was peeling and he was clearly in agony, Galassi wrote. "It took a minimum of 38 minutes before [Centeno] arrived at a local occupational health clinic ... after having been transported by and in the vehicle of another employee while he shivered in shock and yelled, 'hurry, hurry!'"

A clinic worker called an ambulance, which, according to Chicago Fire Department records, arrived at 2:26 p.m. Centeno was in "moderate to severe distress with 70-80% 1st and mostly 2nd degree burns to head, face, neck, chest, back, buttocks, arms and legs," the records show. Paramedics administered morphine.

"The EMT's were horrified and

## Timeline of torment



**1:35 PM**

### Company fails to call to 911 \*

Centeno takes off his T-shirt and complains of extreme pain. Pieces of skin peel from his body, according to Occupational Safety and Health Administration records. Raani Corp. officials discover the injury within minutes but fail to call 911 and fail to rinse him in a safety shower the company has installed, according to OSHA records. A Raani official takes time to review Centeno's driver's license and fill out paperwork authorizing treatment at a clinic, the records say.

SOURCES: OSHA records, WBEZ/Center for Public Integrity interviews.

angered at the employer, for not calling 911 at the scene and further delaying his care by transferring him to a clinic instead of a hospital,” Galassi’s memo says.

John Newquist, who retired from OSHA in September after 30 years with the agency, said the case was among the most disturbing he encountered as an assistant regional administrator in Chicago.

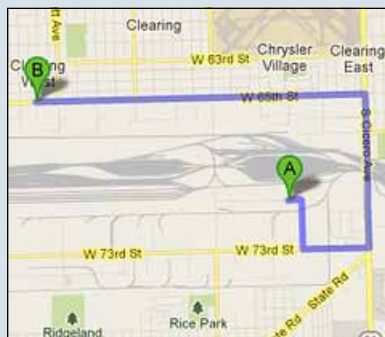
“I cannot remember a case where somebody got severely burned and nobody called 911,” said Newquist, a former compliance officer who investigated more than 100 fatal accidents during his career. “It’s beyond me.”

On May 15, OSHA proposed a \$473,000 fine against Raani for 14 alleged violations, six of which are classified as willful, indicating “plain indifference” toward employee safety and health. No decision has been made on whether the case will be referred to the Department of Justice for possible prosecution, agency spokesman Jesse Lawder said. OSHA hadn’t inspected the Raani factory for 18 years prior to the accident.

Centeno’s family has filed a wrongful-death lawsuit against Raani and a workers’ compensation claim against the temp agency that employed him, Ron’s Staffing Services Inc.

“It’s just wrong, what happened,”

## Timeline of torment



Google Maps

### 2:00 PM

## Coworker takes victim to clinic \*

One of Centeno’s coworkers drives him from the factory to MacNeal Clearing Clinic, an occupational health center in Chicago. The clinic has no burn unit. Its “primary goal,” according to the group that runs it, “is to improve the productivity and profitability of your workforce.” During the four-mile drive, Centeno shivers and yells, “Hurry, hurry!” according to Occupational Safety and Health Administration records.

SOURCES: Chicago Fire Department incident report, OSHA records, MacNeal Clearing Clinic records, Vanguard Medical Group website.

Centeno's 26-year-old son, Carlos Jr., said of Raani managers' actions after his father's accident. "They were not thinking of him as a human being."

Raani is appealing the OSHA citations. H. Patrick Morris, a lawyer for the company, did not answer questions about the alleged violations. Morris said, however, that while Centeno was "a good worker and nice person," the company has "good and valid defenses" to the allegations in the family's lawsuit. Raani has yet to file court documents outlining its position.

Jeffrey Kehl, a lawyer for Ron's Staffing, declined to comment.

## **'I wanted him to quit'**

Carlos Centeno came to Chicago from Mexico City in 1994. He was joined six years later by his partner, Velia Carbot, and Carlos Jr. A daughter, Alma, stayed behind.

The family settled in Humboldt Park, a working-class neighborhood on the city's northwest side. A second daughter, Melanie, was born in 2001.

Centeno held jobs as a bartender, newspaper deliveryman and forklift driver at a warehouse. In June 2010, after being laid off by the warehouse, he put in an application

## **Timeline of torment**



**2:08 PM**

### **Victim arrives at clinic \***

Centeno reaches MacNeal Clearing Clinic a "minimum of 38 minutes" since the acid solution scalded him in the factory, according to Occupational Safety and Health Administration records. The clinic staff observes burns over "at least 80 percent of his body" and rinses off the chemicals. The clinic reports his pain as "10/10"—the most severe level. The clinic provides Centeno an injection for relief but he remains "in severe pain."

SOURCES: OSHA records, MacNeal Clearing Clinic records.



at the Ron's Staffing office on West 63rd Street, not far from Midway International Airport. He was sent to the nearby Raani Corp. factory, which makes products ranging from shampoos, styling gels and deodorant sticks to dishwashing liquids and household cleaners. His starting pay was \$8.25 an hour.

Raani, founded in 1983 by Rashid A. Chaudary, a Pakistani chemist-turned-entrepreneur, has about 150 employees, roughly 40 percent of whom are contingent workers, according to the May 2012 OSHA memo. Centeno cleaned the tanks in which the factory's products are mixed. His work clothes became so rank, he had his own laundry basket at the family's apartment, partner Carbot said; about six months before the fatal accident, chemicals splashed in his right eye and he couldn't see out of it for three days, she said.

"I wanted him to quit," Carbot, speaking in Spanish, said. "But, at the same time, we knew he hadn't found another job yet, and expenses continued, unfortunately, and he had to work."

The OSHA memo describes a factory in which workers were often hurt and injuries were not properly recorded. An OSHA inspection on December 9, 2011, the day af-

## Timeline of torment



**2:21 PM**

### **Ambulance dispatched to clinic**

After a MacNeal Clearing Clinic employee calls 911, the Chicago Fire Department dispatches this Engine Co. 32 ambulance. The firehouse stands about a mile north of the clinic.

SOURCE: Chicago Fire Department incident report, WBEZ/Center for Public Integrity interviews.

**2:26 PM**

### **Ambulance arrives at clinic**

The ambulance reaches MacNeal Clearing Clinic. Paramedics find Centeno on his feet in "moderate to severe distress." They observe burns on his "head, face, neck, chest, back, buttocks, arms and legs."

SOURCE: Chicago Fire Department incident report.



ter Centeno died, revealed, for example, that workers “were handling chemicals including, but not limited to, corrosives and acids while wearing only medical grade latex gloves,” the memo says.

Workers were seen putting their hands directly into streams of chemicals poured from drums, OSHA enforcement director Galassi wrote. “Another significant hazard [to] which employees are exposed, as evidenced by the fatality, was the high temperature (nearly boiling) water and cleaning solutions used for cleaning tanks, process lines and floors. Employees interacted with high temperature liquids wearing only latex gloves and tee-shirts.”

A manager explained that thick, black gloves were kept in the maintenance department “because they were expensive and the employees stole them,” Galassi wrote. The manager said, however, that “any employee could obtain the black gloves if so desired.”

A review of Raani’s medical files turned up five injuries, apart from Centeno’s, that had occurred since 2010 but had not been entered in OSHA logs, as required by federal law, Galassi wrote. Injuries “involving chemical exposure to eyes, high temperature liquid burns and cuts

## Timeline of torment



**2:34 PM**

### Paramedics begin their treatment

The paramedics provide Centeno oxygen but struggle to find an unburned part of his body for intravenous therapy. They eventually establish the IV and provide morphine, but Centeno’s pain level remains “10 of 10.”

SOURCES: Chicago Fire Department incident report, Occupational Safety and Health Administration internal memo.

had been a common occurrence for years,” his memo says. One worker who had been burned and whose skin was peeling was told by a manager “to leave it alone, it wasn’t dangerous.”

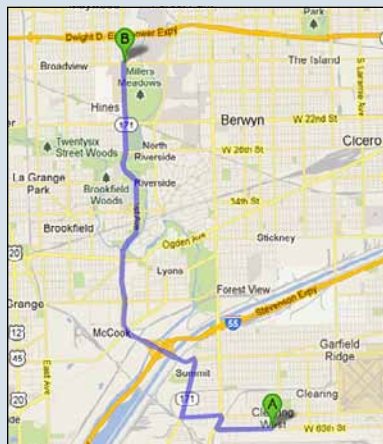
Another was burned so badly he needed skin grafts, but the incident wasn’t recorded even though CEO Chaudary “stated he was aware of the injury,” Galassi wrote. On January 27, 2012, more than two months after Centeno was scalded, a worker performing a similar tank-cleaning procedure received severe burns to his left leg. He was handed a written notice from management. “You are hereby warned to be careful in the future,” it said in part.

“Instead of issuing the appropriate [protective gear] to its workers and ensuring its usage, Raani Corporation has chosen to blame their employees outright for their injuries and non-compliance,” Galassi wrote.

Two managers “admitted to witnessing [Centeno] with his shirt off and speaking with him” shortly after he was burned, the memo says. “Both managers agreed the injured employee’s skin was burned, damaged, wrinkled and parts were ‘peeling.’ ”

The managers not only failed to call 911 — they made Centeno wait while one filled out paperwork be-

## Timeline of torment



Google Maps

**2:54 PM**

### Ambulance leaves with victim

After putting Centeno on a stretcher and into the ambulance, the paramedics drive him toward Loyola University Hospital, more than 9 miles northwest in Maywood, a Chicago suburb. On the way, they bypass closer hospitals that lack specialized burn units. Centeno’s pain remains excruciating. He cries, moans and winces.

SOURCES: Chicago Fire Department incident report, Occupational Safety and Health Administration internal memo.

fore allowing him to be taken to a local clinic, Galassi wrote. The co-worker who drove Centeno about four miles to the MacNeal Clearing Clinic said “he was asked to lie on his written statement and write that Carlos Centeno was acting fine, conscious and talking on the drive to the clinic. Even after the incident, company officials have not concluded that 911 should have been called immediately.”

Chaudary, who was not on the scene the day of the accident — November 17, 2011 — told an OSHA inspector that the “wrong valve opened” on the tank Centeno was cleaning, according to the memo, but insisted that “if Carlos Centeno had lived, the decision to not call an ambulance would have been the right call.”

Centeno’s co-workers, however, “provided signed statements of the severity of the injury and the extreme delayed response in seeking medical care,” Galassi wrote.

Chaudary did not respond to requests for comment.

Not long after he was doused with the hot water-citric acid mixture, Centeno called Velia Carbot, asking for Carlos Jr. He sounded agitated and had trouble speaking, Carbot said, but would not explain what had happened.

Carbot went across the street and

## Timeline of torment

### 3:00 PM

#### Relatives arrive at hospital \*

Centeno’s wife and son arrive at Loyola University Hospital’s emergency area and begin waiting for the man’s arrival. Two ambulances pull in but neither is carrying him.

SOURCES: WBEZ/Center for Public Integrity interview with Velia Carbot and Carlos Centeno Jr.



### 3:08 PM

#### Victim reaches hospital

Carried by an ambulance like this one, Centeno arrives at Loyola University Hospital. A stretcher carries him out of the vehicle and into the hospital. The hospital admits him into an intensive-care burn unit, where he will die 21 days later.

SOURCES: Chicago Fire Department incident report, Loyola University Hospital records.

got Carlos Jr., who called his father's cell phone. It was answered by a co-worker, Samuel Meza, who said Carlos Sr. had been burned at work. "He was like, 'I'm taking him to the clinic,'" Carlos Jr. said.

Meza called Carlos Jr. after he arrived at the MacNeal Clearing Clinic. While they talked, Carlos Jr. said, "I could hear that the nurse in the clinic was telling him, 'Why are you bringing him here? ... He needs to go to the emergency room.'"

Carbot and Carlos Jr. began driving to the clinic, 13 miles south of Humboldt Park, but diverted west to Loyola Hospital when Meza told them that's where Centeno would be heading.

Carlos Jr. and Carbot got there first, watching ambulance after ambulance pull up. "I remember just walking up to all the ambulances and it was someone else," Carlos Jr. said. "It wasn't my dad. It just makes you more anxious."

At 3:08 p.m., more than 98 minutes after he had been burned, Carlos Sr. made it to Loyola. "When they finally opened the doors and I saw it was him, I could just see he was in pain," Carlos Jr. said. "He was trying to hide it. He saw my mom and I could see his eyes started to tear."

Carlos Centeno Sr. died three

weeks later, on December 8. OSHA, which learned of his death from the Cook County medical examiner, began its inspection of Raani the next day. Its last visit to the plant had been in 1993, when, responding to a worker complaint, it cited the company for six alleged violations — including failing to protect workers from unexpected energizing or startup of machines — and proposed a \$9,500 fine. Raani settled the case for \$6,500 in 1994.

In an emailed statement, OSHA said no follow-up inspection was conducted. This is "not unusual," the agency said, "as long as we receive documentation from the employer that the violations were corrected."

## **Dangers of temp work**

The use of contingent workers by U.S. employers has soared over the past two decades. In 1990, according to the U.S. Bureau of Labor Statistics, there were about 1.1 million such workers; as of August 2012, the number was 2.54 million, down slightly from pre-recession levels but climbing.

The American Staffing Association, a trade group, says the hiring of contingent workers allows employers to staff up at their busiest times and downsize during lulls.

Temporary work enables employees to have flexible hours and “provides a bridge to permanent employment,” the group says on its website.

Recent research, however, suggests a dark side to contingent work.

A study published this year of nearly 4,000 amputations among workers in Illinois found that five of the 10 employers with the highest number of incidents were temp agencies. Each of the 10 employers had between six and 12 amputations from 2000 through 2007. Most of the victims lost fingertips, but some lost legs, arms or hands.

The researchers, from the University of Illinois at Chicago School of Public Health, called the glut of amputations a “public health emergency,” inflicting psychological and physical harm and costing billions.

Another study, published in 2010, found that temp workers in Washington State had higher injury rates than permanent workers, based on a review of workers’ compensation claims. In particular, temp workers were far more likely to be struck by or caught in machinery in the construction and manufacturing industries.

“Although there are no differences in the [OSHA] regulations between standard employment workers and temporary agency employed

workers, those in temporary employment situations are for the most part a vulnerable population with few employment protections,” wrote the researchers, with the Washington State Department of Labor and Industries.

In fact, experts say, there’s little incentive for host employers to rigorously train and supervise temp workers because staffing agencies carry their comp insurance. If an agency has a high number of injuries within its workforce, it — not the host employer — is penalized with higher premiums.

“This is really about an abdication of responsibility,” said Tom Juravich, a professor at the University of Massachusetts, Amherst, who has studied the temp worker phenomenon. “If some of the jobs in your facility are undesirable and dangerous, you outsource them to people who won’t complain. If you have a direct worker who’s injured, you have an obligation to him through workers’ comp. If he’s a contingent worker, you don’t have that obligation.”

As part of a three-year study, researchers in Canada interviewed temp workers and managers at temp agencies and client companies. “To be frank,” one agency manager confided, “clients hire us to have temps

do the jobs they don't want to do." Co-author Ellen MacEachen, of the University of Toronto and the Institute for Work and Health, said, "Even if [temp workers] are not cheaper, they're more disposable. ... You can get rid of them when you want, and you don't pay benefits."

Bureau of Labor Statistics numbers say contingent workers' injuries are declining. Yet, new evidence suggests these injuries are undercounted.

In a BLS-funded project completed last summer, officials with the Washington State Department of Labor and Industries interviewed 53 employers who had used temp workers. Only one-third said they would enter a temp worker injury in their OSHA log, as the law requires. The others said they wouldn't or claimed ignorance. "A lot of them just didn't know" the rules, said Dr. David Bonauto, the department's associate medical director.

The executive director of the Chicago Workers' Collaborative, which advocates for temp workers, says OSHA should target employers known to make heavy use of staffing agencies.

"The rise of the staffing industry is partially to give companies a greater distance from regulation," said Leone José Bicchieri. "OSHA

needs to come up with different approaches for this rapidly growing sector" — meeting with temp workers offsite, for example, so they're not intimidated by supervisors.

Temp workers are often reluctant to report injuries because they are so easily replaced, Bicchieri said.

"They have no power to speak up," he said. "The whole temp industry was created so the client company has less liability. We need to put workplace injuries back on the plate of the client company."

Stephen Dwyer, the American Staffing Association's general counsel, cautioned against an OSHA crackdown on temp agencies. "To the extent that efforts become heavy-handed, there can be a disincentive, then, to using temporary workers," Dwyer said, to the detriment of the workers, client employers and "the overall economy."

In a statement, OSHA said it "feels strongly that temporary or contingent workers must be protected. They often work in low wage jobs with many job hazards — and employers must provide these workers with a safe workplace."

The agency said it has brought a number of recent enforcement actions against employers for accidents involving temp workers. In June, for

example, OSHA cited Tribe Mediterranean Foods for 18 alleged violations following the death of a worker at its plant in Taunton, Mass. The worker — not properly trained, according to OSHA — was crushed by two rotating augers while cleaning a machine used to make hummus. The case was closed after Tribe agreed to fix hazards and pay a \$540,000 fine.

“While some employers believe they are not responsible for temporary workers ... OSHA requires that employers ensure the health and safety of all workers under their supervision,” the agency said

## **Weak law, few prosecutions**

Although the Galassi memo recommends criminal action in the Centeno case, employers in America are rarely prosecuted for worker deaths.

The Occupational Safety and Health Act of 1970 is exceptionally weak when it comes to criminal penalties. An employer found to have committed flagrant violations that led to a worker's death faces, at worst, a misdemeanor punishable by six months in jail.

By comparison, a violation of the Endangered Species Act carries a maximum sentence of one year.

“It should not be the case that a facility that commits willful violations of the worker safety laws faces only misdemeanor charges when a worker dies because of those violations,” said David Uhlmann, a law professor at the University of Michigan and former chief of the Justice Department's Environmental Crimes Section.

“The company involved as well as any responsible corporate officials should face felony charges that carry significant financial penalties for the company and the possibility of lengthy jail terms for the individuals,” Uhlmann said. “Anything less sends a terrible message about how we value the lives of American workers.”

Federal prosecutors are generally unenthusiastic about worker cases, said Jordan Barab, second-in-command at OSHA. The Justice Department “often says, ‘You know, we're not going to spend all these resources just to prosecute a misdemeanor,’” Barab said.

At Justice, Uhlmann made creative use of environmental statutes to get around the OSH Act. In one case, a worker at an Idaho fertilizer plant named Scott Dominguez nearly died after being sent into a steel storage tank containing cyanide-rich sludge. Dominguez had been

ordered into the 25,000-gallon tank without protective equipment by the plant's owner, Allan Elias, who had refused to test the atmosphere inside the vessel.

Dominguez collapsed and sustained brain damage from the cyanide exposure. Prosecutors charged Elias with three felony counts under environmental laws, including the Resource Conservation and Recovery Act, which governs the handling and disposal of hazardous waste.

Because Elias had fabricated a confined-space entry permit indicating it was safe for workers to enter the tank, he also was charged with one count under a section of Title 18 of the United States Code, for making a false statement to, or otherwise conspiring to defraud, government regulators.

After a jury trial in 1999, Elias was convicted on all counts and sentenced to 17 years in prison.

Environmental statutes don't always apply in worker death or injury cases. The accident that mortally wounded Carlos Centeno, for example, appears not to have involved hazardous waste, or air or water pollution.

Charges under Title 18 remain a possibility, Uhlmann said. Nonetheless, he said, the OSH Act needs re-

vision. Congress came close to adding felony provisions to the law in 2010 but failed amid pushback from the business community.

"Accidents are not criminal," Uhlmann said. "What are criminal are egregious violations of the worker safety laws that result in not just deaths but serious injuries."

Sen. Tom Harkin, an Iowa Democrat who chairs the Senate Health, Education, Labor and Pensions Committee, is a co-sponsor of the Protecting America's Workers Act, which would enhance criminal and civil penalties for OSHA violations.

"In every other walk of life, if a person engages in willful conduct that results in someone else's death, we throw the book at them," Harkin said in a statement. "But if someone dies on the job, the rules are different. Even intentional lawbreaking that kills a worker brings no more than a slap on the wrist."

Whether a bulked-up worker-protection law would have improved conditions at the Raani Corp. is a matter of speculation. According to Thomas Galassi's memo, the accident that ultimately killed Carlos Centeno merited only a one-line entry in the company's files, stating that an internal committee would investigate.

During the inspection after Cen-



teno's death, a newly hired Raani manager asked OSHA officials to help him convince his superiors to train and provide safety gear to workers, Galassi wrote. The manager had concluded that those above him had "no respect for the hazards of the chemicals on site or human life." ■

**About this story:** *This package was jointly reported by the Center for Public Integrity's Jim Morris and*

*WBEZ's Chip Mitchell; story editing by CPI's Ronnie Greene and WBEZ's Cate Cahan; photography by WBEZ's Logan Jaffe; data visualization by WBEZ's Elliott Ramos; multimedia editing by CPI's Paul Williams and WBEZ's Tim Akimoff; and executive editing by CPI's Ellen Weiss and WBEZ's Sally Eisele. Additional reporting and production assistance by CPI's Chris Hamby and WBEZ's Anthony Martinez and Bryan Hayes.*

## FOLLOW-UP

# OSHA strengthens protections for temp workers

*By Jim Morris*

Published Online: April 29, 2013

Federal regulators today announced new measures to protect 2.5 million temporary workers in America amid evidence such laborers are hurt more often than regular employees.

In December, the Center for Public Integrity and WBEZ/Chicago Public Media highlighted the case of temporary worker Carlos Centeno, who was badly burned in a Chicago-area factory in November 2011 and died three weeks later. Occupational Safety and Health Administration records obtained by the Center concluded that Centeno's bosses refused to call 911 as his skin peeled and he screamed for help.

OSHA said today it had sent a memo to regional administrators "directing field inspectors to assess whether employers who use tempo-

rary workers are complying with their responsibilities” under the law.

“Inspectors will use a newly created code in their information system to denote when temporary workers are exposed to safety and health violations,” the agency said in a press release. “Additionally, they will assess whether temporary workers received required training in a language and vocabulary they could understand.”

As the Center/WBEZ story noted, recent research indicates temporary workers are more prone to injury than permanent ones due to often-subpar safety training and the feeling among some employers that temps are expendable. Last year, for example, researchers who studied nearly 4,000 amputations among workers in Illinois found that five of the 10 employers with the highest number of incidents were temporary staffing agencies.

The new OSHA memo, written by enforcement director Thomas Galassi, says the agency has received “a series of reports of temporary workers suffering fatal injuries during the first days on a job. In some cases, the employer failed to provide safety training or, if some instruction was given, it inadequately addressed the hazard, and this failure contributed to their death.”

Centeno was employed by a staffing agency at the time he was burned. A co-worker wound up driving him to a clinic after a delay of at least 38 minutes. Centeno didn’t make it to a hospital burn center until an hour after that.

OSHA recommended that the host employer, Raani Corp., which makes personal-care products, be criminally prosecuted for the accident. The agency has proposed a \$473,000 civil fine against Raani, which is appealing. In court filings in a lawsuit brought by Centeno’s family, the company denies fault.

Centeno, a 50-year-old immigrant from Mexico, was among 4,693 workers who suffered fatal, work-related injuries in 2011. Three more workers died in 2011 than in 2010, according to the U.S. Bureau of Labor Statistics. Worker deaths in 2010 also rose when compared to the previous year: 4,690 died in 2010, while 4,551 died in 2009. ■

# Even after workplace deaths, companies avoid OSHA penalties

*By Chris Hamby*

Published Online: December 21, 2012

**S**YRACUSE, N.Y. — The temperature outside barely reached double digits on the morning of Jan. 15, 2009, and, inside the Crucible Specialty Metals steel mill here, it was bitterly cold. Ice coated the equipment, forcing employees to use torches to free the machines so they could start their work.

Danger was everywhere, federal records show. Equipment was old and in disrepair. Molten steel snaked through the building, and, at any moment, could snag and twist out of control, burning anything in its path. Shafts driving the machines that compress the steel spun at high speeds with no guards to shield employees working



**Sue Grobsmith looks at the files she's gathered on the accident at a steel mill near Syracuse, N.Y., that killed her husband, Jack.** Sam Maller

nearby. Sometimes, workers said, the torches backfired and burned them.

This was Jack Grobsmith's domain. He'd worked at Crucible for

more than 35 years and had ascended to the position of head roller. He adjusted the equipment and made sure the steel bars came out just the right size. Around the factory, he was known as a jokester with a purpose — showing up at events in character as Crucibella, donning a dress, lipstick and '60s-era Easter hat to preach about safety.

That frigid January morning, Grobsmith went to one of the stands that compresses steel to hook up a water hose. Next to him, two rotating shafts driven by a 900-horse-power motor spun at 240 revolutions per minute. Grobsmith struggled with the hose, which was covered in grease, then slipped on ice coating the area.

The shafts pulled him in, crushed his body and shot him out the other side.

Grobsmith's assistant roller and longtime friend Rocky Saccone ran over. "It just happened so fast," recalled Saccone, who retired a few months later. "We pulled him out, and that was it."

The federal Occupational Safety

and Health Administration cited Crucible for more than 70 violations and levied almost \$250,000 in fines — high numbers for an agency with relatively little power to impose harsh penalties.

What almost no one outside of OSHA has known until now: The



**The Crucible Industries LLC steel mill near Syracuse, N.Y., where federal workplace safety regulators alleged more than 70 violations after investigating Jack Grobsmith's death in 2009.** Sam Maller

agency never collected a penny for Grobsmith's death because it failed to file paperwork in time after Crucible filed for bankruptcy.

The company's bankruptcy case drew significant media coverage because of the economic impact on the

community. Yet OSHA, which has an office based in Syracuse, said in a written statement to the Center for Public Integrity that it didn't learn Crucible was in bankruptcy until March 2010. By then, it was too late to file as a creditor and try to collect. OSHA said collection would have been difficult even if it had filed.

A private equity firm bought the company's assets and reopened the mill — calling it Crucible Industries — with most of the same management. The penalty simply disappeared.

OSHA never told Grobsmith's wife, Sue. After hearing the news from a reporter, more than three-and-a-half years after her husband's death, she fanned herself with her hands. "I'm blown away by the fact that Crucible never paid any fines," she said several moments later. "OSHA doesn't feel the need to bring that out?"

Crucible has not responded to repeated requests for comment.

The events in Syracuse are part of the largely untold story of what happens after a workplace death has faded from memory and OSHA struggles to hold employers accountable. Though OSHA trumpets announced penalties as evidence of its commitment to forcing

companies to follow the law, what actually happens to these penalties is more complicated.

Even after investigating a death and issuing a penalty, federal OSHA or the state agencies it oversees have failed to collect any of the original fine in one of every 10 cases since 2001, the Center found. In many other cases, regulators have settled for a fraction of the penalty initially imposed.

Overall, the federal and state agencies have collected at least 40 percent of the monetary penalties initially assessed after workplace inspections, forgoing \$1.3 billion in the process, a Center data analysis found.

Most overdue debts end up at a private collection agency under contract with the Treasury Department. Yet a Center analysis of Treasury Department data found that only about 12 percent of OSHA debts have been collected in recent years. The penalties OSHA is allowed by law to impose are significantly lower than those assessed by many other enforcement agencies, providing little incentive for the government or collection agencies to prioritize them.

Both OSHA and the Treasury Department can ask the Justice Department to take an employer to

court, but data show relatively little money has been collected this way.

Worker advocates say such failures to collect undermine enforcement.

“The penalties matter,” said Peg Seminario, director of safety and health at the AFL-CIO. Not collecting, she said, “basically means that they can violate the law and have very few consequences.”

OSHA does face substantial hurdles. The agency can’t force an employer to fix a hazard while a citation is contested, and litigation can drag for years. OSHA sometimes settles by deleting violations and erasing or reducing penalties — accepting, in some cases, company pledges to make safety improvements.

Even when a penalty becomes final, the agency may not be able to collect. Sometimes an employer disappears or convinces the government it doesn’t have the money. Other times, an employer goes out of business or declares bankruptcy, then forms a new company and continues similar work — a path that is difficult to track and requires legal heavy lifting to combat, OSHA said in a statement.

In its statement, OSHA said it is doing what it can with the authority it has, but it supports legislation that “would give OSHA the tools to

impose appropriate penalties to increase deterrence and save lives.”

Data and cases from across the country show how penalties can wither or disappear, even after workers are needlessly killed.

## **A death, a debt and a drawn-out process**

Algo Escalante Cota had worked in the U.S. for less than a year when, during a roofing job, he crashed through a skylight and plummeted almost 20 feet to a concrete floor below.

The fine for his death spent the next six years winding through a bureaucratic maze that led from Alabama to Washington, D.C., to a New York-based private collection agency, then back again. In the end, the government collected \$0.

Cota, a 39-year-old native of Mexico, found his way to Birmingham, Ala., where he worked for Tony Wright, owner of roofing contractor Integrity Building Services LLC. Wright found Cota and another worker at a congregating spot that Hispanic workers called “La Tiendita,” an OSHA report said.

“There Mr. Wright knew he could hire Hispanic workers which, compared to American workers,

would work for lower wages and who were not trained on the safety and health hazards associated with roofing work,” an OSHA inspector wrote.

Wright brought the men with him on a hot June day in 2005 to repair a leaking roof at a door manufacturing facility in Montgomery. Late in the afternoon of the second day on the job, Cota was lugging two five-gallon buckets of roof sealer when he stepped on a skylight. The fiberglass gave way, and he fell through to the factory floor.

The OSHA inspector cited Wright for failing to cover or guard the skylight and for failing to provide proper fall protection.

Wright had been an officer and co-owner of another business, Superior Roofing Contractors Inc., that had been cited repeatedly for violating fall protection rules. In an interview with the Center, Wright said he negotiated with OSHA on the company's behalf after at least one of those inspections. The company went out of business, Wright said, and he formed Integrity Building Services.

The scene of Cota's accident troubled the inspector, records show. Arriving the day after the accident, he spotted pieces of ply-

wood covering two of the skylights, including the one through which Cota fell. There were also stanchions — stands to mark off dangerous areas on the roof — and a poster board containing safety information for temporary workers.

Wright told the inspector the items had been at the scene before Cota's accident, according to the OSHA report. But the other worker and the plant's owner said Wright hadn't brought the items until after the accident. The inspector believed it was “an effort to deceive OSHA.”

In an interview, Wright acknowledged bringing the equipment to the scene after the accident, but insisted, “That was not to fool anybody.” The plywood and stanchions were temporary protection to make sure no one fell in the hole left by Cota's accident, he said. Asked why he brought the poster board, he said, “That's been a while. ... I don't know.”

Wright contested all of the citations, which included one classified as “willful” — the most severe type OSHA can allege, signifying that the agency believes the employer intentionally violated the law or acted with “plain indifference” to it.

“The proper safety guidelines were

in place,” Wright told the Center, noting that he had spray-painted lines around the skylights. “The proper training had been performed. Daily communication on safety was done. The workman ignored the safety that was in place for him.”

In 2006, the \$48,750 penalty for Cota’s death began its trek through the system. The head of the local office that investigated the death urged a Labor Department lawyer to pursue the full penalty to “achieve the appropriate deterrent effect.” When the department filed its complaint in administrative court, Wright did not respond. Upholding the OSHA citations, a judge concluded Wright had acted “with disdain” for the court’s rules.

Wright told the Center he had limited resources and had to pick his battles, so he chose to fight what he viewed as the more serious threat, a lawsuit by Cota’s family.

## The waiting game

Faced with such an employer, OSHA has a standard procedure: The local office issues a letter demanding payment, then waits one month. Then the national office issues a similar letter, then waits. When the debt has gone unpaid

for 180 days, OSHA refers it to the Treasury Department, which issues its own letter, then waits, usually another month. The department also can try to intercept government payments to the employer, such as tax refunds or payments for contract work.

Ultimately, most OSHA debts end up where Integrity Building Service’s did: a private collection agency. Four companies have contracts with the Treasury Department, and they do the bulk of the work pursuing debtors, said Ronda Kent, a deputy assistant commissioner in the department’s Financial Management Service.

Under the program, the Treasury Department is charged with collecting anything from debts on government loans to penalties assessed by a host of enforcement agencies.

OSHA debts, however, are typically much smaller than those of other enforcement agencies, and it is one of few federal agencies excluded from a law that allows penalties to rise with inflation, with penalties the agency can impose stuck at 1990 levels. A violation deemed “serious” — one that, by OSHA’s definition, “would most likely result in death or serious physical



## It is relatively rare for an employer to end up in court and be ordered to pay an OSHA debt.

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harm” — carries a maximum penalty of \$7,000.

“Just because something’s a low dollar amount, it could be a fine that it’s important to collect it because you certainly don’t want repeat offenders,” Treasury’s Kent said. “You don’t want to make it cost-beneficial for the businesses to continue to violate the law.”

There’s no requirement, though, that this attitude trickle down to the private collection agencies. When it is assigned a debt, an agency must send a letter demanding payment. Beyond that, the agency can choose which debts are worth pursuing. “We leave that to them to make those decisions,” Kent said, noting that the agencies are regularly evaluated.

Between the 2006 and 2012 fiscal years, OSHA referred about \$131 million in debts to the Treasury Department, but only about \$16 million was collected. Data to compare OSHA collections with other agencies was not available.

Likewise, it is relatively rare for an employer to end up in court and

be ordered to pay an OSHA debt. During the seven-year period, the Justice Department collected just over \$267,000 in OSHA debts referred to it by Treasury. OSHA can also refer debts directly to the Justice Department. Since 2008, the department has collected about \$910,000 in debts sent to it by OSHA. For all federal agencies, the Justice Department collected about \$15.4 billion between the 2008 and 2011 fiscal years.

“It’s a problem,” said the AFL-CIO’s Seminario, “but the government has limitations in terms of what it can do, both in terms of its authority and in terms of its resources. ... It’s making choices. It isn’t necessarily that they’re ignoring these cases.”

Legislation that would increase both civil and criminal penalties was introduced in both houses of Congress in 2009 and 2011. The bills haven’t made it out of committee.

In Cota’s death, the private collection agency Pioneer Credit Recovery called Wright a few times trying to collect, Wright recalled.

He told them he was fighting a private lawsuit, and Wright said a Pioneer employee suggested he write a letter and “ask for forgiveness” of the debt. Wright’s lawyer did so.

“Debtor attorney states is in process of settlement agreement in court,” Pioneer reported back to the government. The head of OSHA’s debt collection office replied that getting sued doesn’t mean an employer can avoid paying a penalty. Still, an invitation to negotiate stood out in bold, underlined text: “In an effort to assist the debtor in settling this debt, OSHA is willing to review a reasonable compromise offer for this debt.”

On June 13, 2011, OSHA’s debt collection office said Treasury had deemed the debt “uncollectible.” The case was being closed. Pioneer refused repeated requests for comment, and the Treasury Department declined to answer questions about the specific debt, citing privacy concerns.

“We are disturbed that no penalties were collected in this case,” OSHA responded to a Center inquiry. The agency’s Mobile, Ala., office “has been on alert,” and, if future violations occur, OSHA “will pursue action to the extent of the law to hold this employer accountable.”

Wright, 57, said he still works in the Birmingham area as a consultant to a construction contractor. Integrity Building Services still exists, he said, though it is not taking jobs and is winding down its legal obligations as it prepares to go out of business. The company doesn’t have the assets to pay the OSHA fine, he said.

“Even if we had had the money,” he said, “I would have refused to pay.”

## Negotiations, deletions and more deaths in South Texas

Some cases never make it to the collection stage. After OSHA investigates a death and issues citations, it is often faced with a choice: The agency can push to uphold all the violations and penalties, a process that can involve years of litigation. Or it can negotiate a settlement, which often involves reducing penalties or reclassifying violations.

Another option is deleting violations entirely, erasing the penalties that go with them. In more than 600 cases since 2001, OSHA has investigated a death, issued violations carrying a penalty — and then deleted them all, the Center found. That occurred in roughly one in every 20 cases.

In all closed cases since 2001, OSHA has agreed to delete more than 104,000 violations that had an initial fine, erasing more than \$240 million in penalties.

“There are occasional instances when, after citations are issued, an employer may present additional evidence to indicate that a citation is not warranted,” OSHA said. “If that evidence, when taken into account, persuades the agency that a citation was not warranted, the citation may be deleted.”

Mark Lies, a partner in the Chicago office of the law firm Seyfarth Shaw LLP, is among the lawyers who specialize in squaring off against OSHA. Lies said he often gets involved soon after an accident occurs and has communications come to him, creating an attorney-client privilege. He sits in on employee interviews with OSHA, if the employee chooses, and reviews OSHA’s requests for documents.

Employers often fight even small OSHA penalties because having a violation on record could open up a company to more severe penalties in the future and haunt it in related civil lawsuits, said Julie Pace, a senior member at the Cavanagh Law Firm in Arizona.

There are many ways to attack

an OSHA citation, lawyers say. A lawyer could argue that the OSHA standard cited didn’t apply to the work in question, that no one was actually exposed to the danger or that employee misconduct was to blame, among other defenses.

And if OSHA is unwilling to compromise, Lies said, “it’s very easy for the employer to go to a judge.”

A stark example of a company’s ability to beat back OSHA citations has played out in South Texas.

Gulf Stream Marine loads and unloads ships at ports along the Gulf Coast. In Houston and Brownsville, the company experienced six fatal accidents from 2007 to 2011. OSHA investigated and issued violations in each case, but, in half of them, agreed to delete all of the violations and erase the penalties.

The accidents bore similarities, OSHA records show. In January 2007, a Houston Gulf Stream Marine employee — not certified to drive a fork truck — ran into a security guard with the pipes being carried on the truck, causing fatal chest wounds. Three months later, also in Houston, a bundle of pipes being lifted by crane knocked a worker into the side of a ship. He fell into the water and never surfaced.

In 2008, a worker in Houston was crushed by a truck that came loose from the crane loading it onto a ship. The next year, in Brownsville, a large chain suspended from a crane got stuck, then snapped loose and hit a worker in the head, killing him. An employee in Houston was run over by a truck in 2010, and, the following year, a truck driver in Brownsville was hit with a 40-ton metal beam and killed.

In one case, OSHA deleted two serious violations carrying a \$9,800 penalty after Gulf Stream Marine's safety director sent the agency a map showing the areas of the port leased by the company and the areas controlled by the Port of Brownsville. A spot labeled "incident site" showed the accident occurred just outside the area under Gulf Stream Marine's control. OSHA noted in the file, "The evidence suggests Gulf Stream Marine ... had no controlling authority over safety and health." The citations vanished.

In another case, OSHA deleted two serious violations carrying a \$10,000 fine because "there were issues" with the phrasing of the regulations cited, OSHA told the Center. In a third case, OSHA deleted two serious violations and a \$10,000 fine in a settlement. OSHA said it

got something in return — a company pledge to adopt a new policy.

Others who have dealt with Gulf Stream Marine have been less forgiving than OSHA. "We're getting people killed out there for no reason," said George Gavito, who recently retired as chief of the Port of Brownsville's police department.

Gavito said he constantly clashed with the company over safety issues. Brownsville is near the Mexican border, and many workers are poor immigrants, he said. "They're not going to raise hell," he said.

Lawyer Bill Tinning has battled Gulf Stream Marine twice. In 2005, he represented a worker who was offloading large pipes from a truck when one came loose and crushed his head, leaving him in a vegetative state.

In 2003, he sued on behalf of the family of a worker who had been crushed to death by a load that came loose from a crane Gulf Stream Marine was operating. Tinning alleged in court filings that the company replaced key parts of the crane immediately after the accident, started disposing of the crane even though there was an ongoing OSHA investigation and withheld information about the accident — claiming that one inves-

tigator Tinning wanted to depose was a “non-existent person.”

“It was the most outrageous conduct I’ve run across,” Tinning said.

Gulf Stream Marine refused repeated requests for comment. The company contested the violations in each of the six deaths and, in settlement agreements, has denied breaking the law.

OSHA defended its handling of Gulf Stream Marine, saying “violations have been abated that could have lingered for years had we not settled the cases.”

The agency acknowledged, however, that officials in Houston had failed to flag the inspection of the 2008 death as meeting the criteria for the agency’s “Enhanced Enforcement Program.” Had they done so, there would have been required follow-up inspections and perhaps visits to other company sites. These inspections, OSHA said, might have prevented future accidents.

John Newquist, a former assistant regional administrator for OSHA who retired this year, said Gulf Stream Marine’s record and OSHA’s handling of the death cases “should trigger maybe an outside review of it because there’s something wrong.”

“This should never happen,” he said. “It’s an embarrassment if you’ve got fatality cases and citations deleted.”

### **‘I think about it a lot’**

Every Monday morning at 6:30, the management and employees at Crucible Specialty Metals met to talk safety. Speaking for the workers on the mill floor often fell to Rocky Saccone, who embraced the role. “They would say, ‘Rock’s on a roll; let him go,’ ” Saccone recalled. “It would be days or weeks or months before they would address these issues on the mill, and they wonder why you get upset. It was like pulling teeth.”

One issue that repeatedly surfaced, he said, was installing guards to enclose the rotating shafts on the mill — like the ones that crushed Jack Grobsmith. “It should have been corrected years and years ago,” he said.

A few years before Grobsmith’s death, Saccone said he nearly suffered the same fate when the sleeve of his shirt touched an unguarded shaft. “It ripped it right off in about half a second,” he recalled. “All that was left was the collar of my shirt. The rest of the shirt was disintegrated.”

Then, in May 2008, another worker's shirt was caught in an unguarded bar straightener, federal records show. He was flipped over and injured. OSHA investigated and issued a citation. By that time, OSHA had already cited the company multiple times — in 1997 and again in 2002 — for failing to have machines guarded. An inspector noted portentously in 2002, "Potentially an employee could trip or slip ... and be caught in the two rollers."

Though OSHA said Crucible fixed the specific problem cited in 2008, the agency told the Center: "The company should have installed guards on similar machines throughout the plant." Had Crucible done so, "this may have prevented" Grobsmith's death, OSHA wrote.

In 2009, OSHA's Syracuse area director authorized the maximum fine for violations related to Grobsmith's death "to get the necessary deterrent effect," he wrote in a memo, noting the company's history of accidents and failure to guard machines.

Three days after a judge ap-

proved the settlement between Crucible Specialty Metals and OSHA, a private equity firm finalized its purchase of the company. A few months later, OSHA received a letter, this time on Crucible Industries letterhead, saying it would take longer than initially agreed to



**Sue and Jack Grobsmith hold their grandchildren, Evan and Jack, who was named for his grandfather. Family photo**

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fix the problems inspectors found. The company "does not admit it bears responsibility for any citations and penalties ... issued to and incurred by the previous owners." It maintained it was correcting cited hazards "in the interest of providing of Crucible Industries' employees a safe workplace."

Both the settlement agreement

and the letter were signed by the same person.

Crucible employees said that, with new owners, there have been safety signs both positive and negative. “I want to believe that the people up top want the cultural change and want it to work, but I’m not sure it filtered all the way down,” said Ed Moran, the safety chairman for the United Steelworkers’ local.

After her husband’s death, Sue Grobsmith considered a lawsuit. Because of state workers’ compensation laws, she couldn’t sue Crucible; her lawyer’s only option was to investi-

gate the contractors who installed the equipment. Crucible, however, said it couldn’t find any of the contracts. “Clearly, Crucible ... was to blame,” the lawyer wrote to her. “Unfortunately, with all of this evidence against the employer, we still can’t sue them.”

Now 59, Sue works for the local school district and keeps in touch with Jack’s friends from Crucible. One recent fall day, Saccone and Dave Peel, another longtime friend from Crucible, sat with Sue in the living room of the house she and Jack bought 32 years ago, drinking coffee and talking about Jack.

## About the data and analysis

**T**HE CENTER for Public Integrity’s analysis relies on data from multiple sources, including the Occupational Safety and Health Administration, the Treasury Department and the Justice Department. Using the Freedom of Information Act, the Center obtained an extract of OSHA’s master database of inspection records, known as the Integrated Management Information System, or IMIS. The portion received by the Center contains information about more than 1 million workplace safety and health inspections conducted from Jan. 1, 2001, to the date in early August 2012 when the data were provided.

In analyzing both penalties initially imposed by OSHA and penalties ultimately collected, the Center used only cases considered “closed” by the agency. This excluded some recent cases in which an employer may still be contesting violations or in which OSHA,

Sue and Jack started dating in 1969, in high school. “Right out of high school, I worked for Allstate Insurance, Jack went to school and we knew we were going to get married,” Sue said. When Jack finished at a two-year college, he planned to go back to school and become a teacher and coach. Yet a summer job at Crucible changed his mind; the promise of a good paycheck enticed him.

They married in 1972 and had three children. As Jack ascended the ranks at Crucible, double shifts became common. He became close with co-workers, sharing barbe-

cues, graduations, weddings.

“He’d have me in tears at times because he’d be so damn funny,” Rocky said. “It could be an old, stale joke that I would still laugh at after 30 years.”

Inevitably, the conversation returned to Jan. 15, 2009. As Rocky described running to Jack’s battered body, Sue’s expression changed. “I didn’t know that you were the first there,” she said, grabbing his hand. “Thanks, Rock.”

Rocky paused, and his eyes welled. “I think about it a lot,” he said. “I still do. I think about it a lot.” ■

the Treasury Department or another entity is still attempting to collect a fine. When calculating penalties initially imposed, the Center included violations and their accompanying fines that were later deleted as part of settlement negotiations or the litigation process.

The Treasury Department agreed to provide data on OSHA debts collected under its cross-servicing program for the fiscal years 2006 to 2012. Collection rates were calculated using the total amount collected and the total amount referred in a given year. Data that would trace individual debts across years was not available.

Referrals of OSHA debts to the Justice Department can come from either OSHA or the Treasury Department. Data on such referrals by the Treasury Department was included in what the department provided. The Justice Department’s data went back only to 2008. Collections for all agencies by the Justice Department are contained in annual reports to Congress by the Treasury Department’s Financial Management Service. ■





Ray Marcum, left, and Thomas Marcum share fishing stories at Jenny Wiley State Park near Prestonsburg, Ky. James Crisp/AP Images for The Center for Public Integrity

# Black lung surges back in coal country

*By Chris Hamby*

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**P**RESTONSBURG, KY. — Ray Marcum bears the marks of a bygone era of coal mining. At 83, his voice is raspy, his eastern Kentucky accent thick and his forearms leathery. A black pouch of Stoker's 24C chewing tobacco pokes

out of the back pocket of his jeans. "I started chewing in the mines to keep the coal dust out of my mouth," he says.

Plenty of that dust still found its way to his lungs. For the past 30 years, he's gotten a monthly check

to compensate him for the disease that steals his breath — the old bane of miners known as black lung.

In mid-century, when Marcum worked, dust filled the mines, largely uncontrolled. Almost half of miners who worked at least 25 years contracted the disease. Amid strikes throughout the West Virginia coal-fields, Congress made a promise in 1969: Mining companies would have to keep dust levels down, and black

lung would be virtually eradicated.

Marcum doesn't have to look far to see that hasn't happened. There's his middle son, Donald, who skipped his senior year of high school to enter the mines here near the West Virginia border. At 51, he's had eight pieces of his lungs removed, and he sometimes has trouble making it through a prayer when he's filling in as a preacher at Solid Rock Baptist Church.

## Key Findings

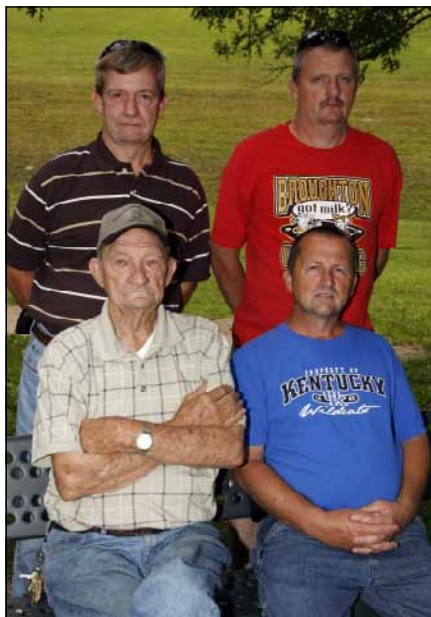
- After decades of decline, black lung is back. Its resurgence is concentrated in central Appalachia. Younger miners are increasingly getting the most severe, fastest-progressing form of the disease.
- The system for monitoring miners' exposure to the dust that causes black lung allows companies to cheat or exploit loopholes. From 2000 to 2011, the federal Mine Safety and Health Administration, MSHA, received more than 53,000 valid samples showing an underground miner had been exposed to more dust than was allowed, yet the agency issued just under 2,400 violations. This may be attributable, in part, to rules that allow samples to be averaged, potentially masking some miners' high exposures.
- Even when companies get caught, they have little to fear. They can take five of their own dust samples to prove compliance, and an MSHA citation goes away. The agency has routinely given companies extra time to fix cited dust problems, granting extensions in 57 percent of cases between 2000 and 2011.
- Miners have been exposed for years to excessive amounts of toxic silica dust, generated when powerful machines cut through rock. In each of the past 25 years, the average valid silica sample was above the allowed limit.

There's James, the youngest, who passed on college to enter the mines. At 50, his ability to breathe is rapidly declining, and his doctor has already discussed hooking him up to an oxygen tank part-time.

Both began working in the late 1970s — years after dust rules took effect — and both began having symptoms in their 30s. Donald now has the most severe, fastest-progressing form of the disease, known as complicated coal workers' pneumoconiosis. James and the oldest Marcum son, Thomas, 59, have a simpler form, but James has reached the worst stage and is deteriorating.

Men with lungs like the Marcums' are not supposed to exist. In the hard-won 1969 law, Congress demanded that dust be controlled and new cases of disease be prevented. The idea was that, even if black lung didn't disappear, there would be a small number of mild cases and virtually no one like Donald and James Marcum, said Dr. Donald Rasmussen, a pioneer in recognizing and diagnosing black lung.

"In 1969, I publicly proclaimed that the disease would go away before we learned more about it," Rasmussen, now 84 and still diagnosing



**Bottom row from left: Ray Marcum, Donald Marcum, (Top row from left) Thomas Marcum and James Marcum pose for a photograph at Jenny Wiley State Park near Prestonsburg, Ky. Each has black lung, despite a 1969 law designed to eradicate the disease.** James Crisp/AP Images for The Center for Public Integrity

miners, said in a recent interview at his office in Beckley, W.Va. "I was dead wrong."

Throughout the coalfields of Appalachia, in small community clin-

## What is black lung?



**Healthy lung**



**Early stages**



**Late stages**

Miners get coal workers' pneumoconiosis, known as black lung, by breathing tiny dust particles generated when powerful machines cut through coal and rock. Over time, dust collects in miners' lungs and causes breathing difficulties. In the early stages, miners may not notice any symptoms. As the disease progresses, the lungs become scarred, shriveled and black, and miners often develop a cough or shortness of breath. In the late stages of the most severe form of the disease, known as progressive massive fibrosis, miners have to struggle for each breath. Read more at NPR.

Images: NIOSH

ics and in government labs, it has become clear: Black lung is back.

The disease's resurgence represents a failure to deliver on a 40-year-old pledge to miners in which few are blameless, an investigation by the Center for Public Integrity and NPR has found. The system for monitoring dust levels is

tailor-made for cheating, and mining companies haven't been shy about doing so. Meanwhile, regulators often have neglected to enforce even these porous rules. Again and again, attempts at reform have failed.

A Center analysis of databases maintained by the federal Mine

Safety and Health Administration found that miners have been breathing too much dust for years, but MSHA has issued relatively few violations and routinely allowed companies extra time to fix problems.

MSHA chief Joe Main issued a statement in response to the findings: “The current rules have been in effect for decades, do not adequately protect miners from disease and are in need of reform. That is why MSHA has proposed several changes to overhaul the current standards and reduce miners’ exposure to unhealthy dust.” Similar attempts at reform have died twice before.

From 1968 through 2007, black lung caused or contributed to roughly 75,000 deaths in the United States, according to government data. In the decades following passage of the 1969 law, rates of the disease dropped significantly. Then, in the late 1990s, this trend reversed.

Many of the newer cases have taken a particularly ugly form. While rates of black lung overall have increased, incidence of the most severe, fast-progressing type has jumped significantly. These cases, moreover, are occurring in younger and younger miners. Of particular concern are “hot spots” identified in

central Appalachia by the National Institute for Occupational Safety and Health, NIOSH, a government research agency. Though levels of disease are still below what they were before 1970, medical experts and miners’ advocates are alarmed.

“I think any reasonable epidemiologist would have to consider this an epidemic,” said Scott Laney, a NIOSH epidemiologist. “All cases of [black lung] are preventable in this day and age, but these cases of [the most severe form] are just astounding ... This is a rare disease that should not be occurring.”

The National Mining Association, the main trade group representing mining companies, disputes some of NIOSH’s data but agrees that black lung’s resurgence is a problem in need of attention. To the association, however, it is primarily a regional phenomenon of central Appalachia — one that doesn’t justify new national rules. What’s needed, the group says, is further study and better enforcement of current standards.

Researchers are struggling to explain what, after years of progress, has caused the backsliding and why black lung, traditionally viewed as an old man’s disease, is striking younger and younger miners and

robbing them of their breath faster and faster. They are trying to figure out why men like the Marcums are the new face of black lung.

### **‘A diabolical torture’**

“They call me Lucky,” retired miner James Foster says as he takes off his shirt and presses his chest against an X-ray machine in the back of an RV in Wharton, W.Va. “Worked 37 years in all kinds of mines. Been covered up twice. Been electrocuted.”

His brushes with death aside, he’s here because he fears there may be one hazard he can’t dodge. “I come in here to file for my black lung,” he says. During a recent heart surgery, he says, doctors said they saw what appeared to be signs of the disease.

He’s one of a handful of miners on an April afternoon to move through the RV parked at the fire department in Wharton, in the heart of coal country. Inside, a team of NIOSH workers shepherds them from station to station: medical history, questionnaire, breathing test, chest X-ray. Foster hopes the tests will provide evidence he can use to submit a claim for benefits. Other miners are still working and want to make sure their lungs are clear.

It is from this rolling medical

unit, in part, that NIOSH has documented the return of black lung. For decades, miners have been entitled to free X-rays every five years, and this has helped track the drop in the disease’s prevalence. After the data started showing a reversal, NIOSH sent its RV out to gather more data in 2005.

What these researchers found, combined with data from routine medical monitoring, was worrisome: From the 1970s through the 1990s, the proportion of miners with signs of black lung among those who submitted X-rays dropped from 6.5 percent to 2.1 percent. During the most recent decade, however, it jumped to 3.2 percent.

Even more disturbing: Prevalence of the most severe form of the disease tripled between the 1980s and the 2000s and has almost reached the levels of the 1970s.

In a triangle of Appalachia — southern West Virginia, eastern Kentucky and western Virginia — the numbers were even higher. The rolling unit found a disease prevalence of 9 percent in Kentucky from 2005 to 2009, for example.

A wake-up call for some came after the Upper Big Branch explosion in southern West Virginia in April 2010, which killed 29 miners. Of

the 24 who had enough lung tissue for an autopsy, 17 had signs of black lung. Some had fewer than 10 years of experience in mines; they ranged in age from 25 to 61.

The disease leaves miners' lungs scarred, shriveled and black. They struggle to do routine tasks and are eventually forced to choose between eating and breathing.

"No human being should have to go through the misery that dying of [black lung] entails," said Dr. Edward Petsonk, who treats patients with black lung and works with NIOSH. "It is like a screw being slowly tightened across your throat. Day and night towards the end, the miner struggles to get enough oxygen. It is really almost a diabolical torture."

## Underpinnings of an epidemic

There are theories about why the disease has returned, but no definitive answers. One likely explanation: Miners are breathing a more potent mix of dust. Coal seams are surrounded by rock, much of which contains the mineral silica. When ground up, silica is more toxic to the lungs than coal dust and can cause faster-progressing disease.

With larger coal seams becoming mined out, companies are turn-

ing to thinner seams surrounded by more rock. At the same time, because of the price of coal and advances in mining equipment, it now makes more sense economically for companies to cut through large amounts of rock to get at the coal. Companies haul it all out and then separate the rock from the coal at processing plants.

"In central Appalachia, you look at what's coming out of the mines, and it's probably 60 percent rock on a good day," said Rick Honaker, a University of Kentucky professor who consults for mining companies and has seen their data.

NIOSH research suggests this may be having an effect. A particular marker on a chest X-ray is often indicative of silica-related disease. Comparing miners' X-rays taken from 2000 to 2008 with those taken during the 1980s, researchers found that the proportion bearing these markers had nearly quadrupled and, in central Appalachia, had increased almost eight times over.

Rules are supposed to limit the amount of silica in the air in mines, but a Center analysis of MSHA's dust sampling database, obtained under the Freedom of Information Act, shows that the agency has long failed to control silica dust.





Powerful mining equipment, such as longwall and continuous mining machines, can chew through coal and rock quickly, potentially generating large amounts of dust than can reach miners' lungs. The number of tons of coal produced per hour of work has roughly tripled since the late 1970s.

### Longwall mining machine

A longwall uses spinning shearers to slice through panels of coal as large as 1,000 feet wide and a couple miles long.

hydraulic jacks

pillars

panel

### Continuous mining machines

Continuous mining machines use a rotating drum equipped with teeth to carve out roughly 20-foot-wide rooms in the coal, leaving pillars to help support the roof. Many are now operated by one man with a handheld remote control.

Longwall images/  
Wikimedia Commons

**iWatch News**  
By The Center for Public Integrity

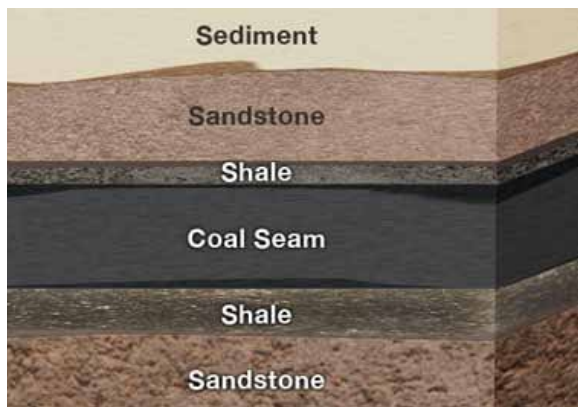


In each of the past 25 years, the average of all silica samples — taking into account only those deemed valid by MSHA — has been higher than the allowed limit. Last year, for example, roughly 40 percent of the valid samples were above this limit. What's more, the limit MSHA enforces is already twice the level NIOSH determined to be safe in 1974.

The National Mining Association contends that what appears to be a nationwide increase in black lung is actually a spike in silica-related disease in Appalachia. “The problem here is, look, these people were overexposed to horrendous levels of silica, for God’s sake,” said Bob Glenn, an expert hired by the association. “Why hasn’t something been done?”

To the association, this means there is no need for a new rule on coal dust, just better enforcement of the silica standard.

Another possible explanation



Coal is trapped in seams between layers of rock, and the thickness of a coal seam can be anywhere from a few inches to a dozen feet or more. By now, many of the thicker, more accessible seams have been mined out. The price of coal and the advent of more powerful machines have made it economical for companies to go after thinner seams, which often entails cutting through more rock containing the mineral silica. When ground up, silica is more toxic to miners' lungs than coal dust. In the regions hardest-hit by the resurgence in black lung, X-ray evidence indicates an increase in silica-related disease. Graphic by Ajani Winston/iWatch News

for the uptick in disease: The number of hours worked by miners has steadily increased over the past three decades, MSHA data show. Ten- and 12-hour shifts and six- or seven-day workweeks are now common.

“I have stayed [in a mine] sometimes two days and never come out,”

said Donald Marcum. Sometimes, he said, “you’d just lay down beside the power box, sleep an hour or two and stay right there.”

Longer hours mean more exposure to dust and less recovery time. The lungs can clear some dust by themselves if given the chance, and many miners said in interviews that they often spit up a mixture of mucus and dust.

At the same time, production has increased, thanks in part to powerful new equipment. A longwall shearer, for example, can carve out huge swaths of coal in little time.

Mark McCowan ran one of these behemoths for the final years of his career. “By the time I was 40 years old, I had mined more coal than most miners mine in a lifetime,” he recalled, sitting in his living room in Pounding Mill, Va. “You would get in some areas of the coal face where, when you mine, you can’t see the hand in front of your face. ... I would eat so much dust I would throw up.”

McCowan was diagnosed with black lung at age 40. His disease has progressed to the most severe form; now 47, he finds it harder and harder to breathe. He pointed to a photo of a beaming, blond-haired 2-year-old on his wall — his grandson, Haiden. McCowan sees him two

or three times a week and plays with him for as long as his lungs can take. “My biggest fear,” he said, “is I won’t live long enough for him to remember me.”

## Decades of cheating

Donald Marcum knew he was at least a passive participant in something that was against the rules, maybe even criminal. Every couple of months, his bosses had to send MSHA five samples showing they were keeping dust levels under control. The man with the greatest potential exposure — often Donald because he was running a continuous mining machine, which chews through coal and rock and generates clouds of dust — was supposed to wear a pump to collect dust for eight hours.

That almost never happened. Most of the time, he said, the mine foreman or someone else would take the pump and hang it in the cleaner air near the mine’s entrance.

When MSHA inspectors showed up to take their own samples, it wasn’t so easy to cheat. Donald would actually wear the pump, but he and his co-workers would mine only about half as much coal as they normally did, generating far less dust.

“We just done what we was told be-

cause we needed to feed our families and really didn't look at what it might be doing to our health," he said.

Donald's experience echoed what Center and NPR reporters heard from retired miners throughout West Virginia, Kentucky and Virginia who had worked underground as recently as 2008. Dust pumps ended up in lunchboxes or mine offices. Mine officials stalled regulators who had shown up for a surprise inspection and radioed to the men underground, who fixed the ventilation and cleaned up the work site.

It's difficult to tell how widespread such practices are, but many former miners described some variation of cheating occurring regularly at almost every mine where they had worked — and a culture of fear fostered by the companies. "We always set and thought, you know, maybe if we didn't do it this way, that they'd come in and shut the mines down. Then we'd be out of work," said David Neil, a 52-year-old West Virginia miner with black lung who now drives a coal-hauling truck.

Tim Bailey, a lawyer in Charleston, W.Va., zeroes in on this type of cheating when he sues a coal company on behalf of a miner with black lung. In general, the only option for miners who get the disease is to file

a claim with the state or the U.S. Department of Labor to try to get benefits. But Bailey takes a different tack, drawing on a state law that allows workers to sue their employer in cases of knowing exposure to dangerous conditions.

This often amounts to proving that the company manipulated its dust samples. In depositions, miners have described hanging dust pumps in cleaner air or getting advance warnings of inspections. Over the past eight years, he's handled about 40 such cases. In each case, he said, the coal company eventually settled.

"These are criminal acts," Bailey said. "What's different about these black lung cases is that the cheating is such a part of everyday practices."

Then there are the numbers themselves. For decades, the average sample submitted by a coal company has been far below the limit. NIOSH researchers used a formula to estimate the prevalence of black lung that would be expected based on the dust samples and compared this with the disease rates actually occurring.

What the researchers found was surprising: The two didn't match up at all. In some areas of the country, there was actually less black lung than they'd predicted. But in central Appalachia, the disease rates

were much higher — more than three times the predicted levels in eastern Kentucky, for example.

It was possible, researchers concluded, that the nature of the dust had become more potent. Another possibility: The dust samples reflected the results of rampant cheating.

Many of the games described by miners today remain unchanged from those outlined by miners who testified at a 1978 MSHA hearing. The early 1990s saw the “abnormal white center” scandal, in which MSHA figured out that many coal company officials had blown dust off the sampling filters, leaving a white center, before submitting them. A spate of criminal convictions of companies and some employees and contractors followed. This time period accounted for the bulk of the 185 guilty pleas or convictions for dust sampling fraud between 1980 and 2002, according to data provided by MSHA to the Center and NPR.

The agency said it had no records of criminal convictions or guilty pleas since 2002 and wouldn't say whether any criminal cases had been pursued. MSHA did provide data indicating that it had decertified 14 mine officials since 2009, pulling their authority to conduct dust samples.

“I don't know if any [cheating] is going on today,” said Bruce Watzman, the National Mining Association's senior vice president for regulatory affairs. “I hope not. We encourage our members to fulfill their obligations under the law.”

Cheating aside, the system for monitoring dust levels is almost designed not to detect problems. Nor has MSHA always been swift to act when violations do surface.

From 2000 to 2011, MSHA received more than 53,000 valid samples — both from companies and its own inspectors — that showed an underground miner had been exposed to more dust than was allowed, yet the agency issued just under 2,400 violations, a Center analysis of MSHA data showed.

This may be attributable, in part, to the way the rules are written. When companies submit five samples to MSHA, some are allowed to be above the limit. Only the average of these five has to be low enough, allowing companies to negate high samples taken from miners enshrouded in dust. What's more, the pump runs for only eight hours, even if the miner works 10 or 12.

While an inspector is sampling, a company is allowed to mine as little as half the amount of coal it normal-

ly does. Companies that typically cared little about hanging curtains to keep air flowing through the mine or making sure water sprays used to suppress dust were working suddenly did when it came time to sample, several miners said.

Even when a company gets caught with samples that are too high, all it has to do to make the citation go away is take five of its own samples that indicate compliance. “The analogy I use is, if I pull you over for speeding, going 80 in a 50,” Bailey said, “and I tell you ... here’s a journal, and I want you to record your speed on this same piece of road for the next five days. And, if at the end of those five days, your speed is below the speed limit, then I am going to tear your ticket up.”

Sometimes MSHA has allowed dust citations to go uncorrected for weeks or even months, potentially leaving miners overexposed, a Center analysis of agency data shows. MSHA sets a date by which a violation must be fixed, but, from 2000 to 2011, the agency granted extensions for 57 percent of the violations.

Long extensions have been particularly common in southern West Virginia, one of the key “hot spots” of disease resurgence identified by NIOSH. In this area, which ac-

counted for about 30 percent of the nation’s dust sampling violations, MSHA gave companies an extension about two-thirds of the time and allowed, on average, about 58 extra days to prove compliance.

Asked about these numbers, the agency said in a statement, “The majority of these extensions ... are for good reasons such as getting approved dust controls implemented or allowing the operator time to collect additional samples to submit to MSHA.”

## **A roadmap for reform**

Even before the reappearance of black lung, the need for change was apparent. A proposed MSHA rule led to hearings in 1978, during which miners testified to widespread manipulation of dust samples. That proposal stalled and was withdrawn by the Reagan administration.

In 1995, NIOSH reviewed the scientific evidence and concluded that the limits for both coal dust and silica should be cut in half and periodic medical exams for miners should be enhanced. The same year, the secretary of labor appointed a committee to determine how to eliminate black lung.

The committee’s report offered a

roadmap for reform. It recommended that MSHA consider lowering the coal mine dust standard. It suggested the agency reduce miners' silica exposure and establish a separate limit for this more potent type of dust. Samples should be taken while the mine was producing at least 90 percent of what it normally did, the panel said, and samples should be adjusted to reflect longer work shifts.

Perhaps its strongest recommendation: "The committee believes that the credibility of the current system of mine operator sampling to monitor compliance with exposure limits has been severely compromised. ... One of MSHA's highest priorities should be to take full responsibility for all compliance sampling."

In July 2000, MSHA proposed a rule that would have adopted some of these recommendations. Before the rule became final, though, George W. Bush took office, and the rule died.

"It's really fairly remarkable that we came up with these recommendations back in 1996 during a Democratic administration, and nothing has happened," said David Wegman,



**Online Video:** A 1980 MSHA video about black lung disease

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who was chairman of the committee and is now an emeritus professor at the University of Massachusetts Lowell's School of Health and Environment.

History may be repeating itself. MSHA proposed a rule in 2010 that would cut the overall limit for dust in half and require companies to use continuous personal dust monitors, which would provide real-time measurements. The current pumps have to be sent to a lab, where analysis can take weeks.

Under the rule, the samples would be weighted to account for shifts longer than eight hours, and companies could be cited for a single sample over the limit — rather than an average of five — or a week-

ly accumulation of exposure above a certain limit. The rule would also expand the free X-ray monitoring program to include lung function tests and medical assessments.

Still, the rule leaves much of the sampling in the hands of the coal companies themselves. Asked why, Main said, “It’s an enormous task for the government to take on.”

Even industry favors MSHA’s taking over all compliance sampling. “We need to get to a point where we remove this cloud of controversy and instill in the minds of everyone that the samples are accurate,” the National Mining Association’s Watzman said.

There isn’t much in the rule that the association supports, however. The real-time dust monitors — a centerpiece of the proposal — are still not accurate enough to be the basis of citations, Watzman argued. Dennis O’Dell, safety director for the United Mine Workers of America, said the few problems with the monitors are “little things that can be tweaked.” The union favors the proposed rule, though it would like to see portions of it changed.

All of this may be moot. A presidential election is approaching, and many fear a change in administrations could mean what it meant in

the early 1980s and the early 2000s: the death of reform.

## ‘I never said nothing’

In coal country, weakness is a sin. Mining is just about the only career choice, and one generation often follows another underground.

Convincing a miner to go to a clinic, get an X-ray or file a claim for benefits can be a challenge. “They’re not going to come and complain about how they feel, just because that’s part of our culture,” said Debbie Wills, sitting in the clinic in tiny Cedar Grove, W.Va., where she helps miners get evaluated and file for black lung benefits.

At the same time, fear is almost as deeply rooted. Many miners don’t want their employers to know they have signs of black lung — or even that they’ve been X-rayed. Anita Wolfe, who runs NIOSH’s surveillance program and is often out with the RV that screens miners, said she has seen men approaching on foot from miles away because they didn’t want anyone to see their cars parked nearby.

Thanks to a rule MSHA issued in 1980, a miner whose X-ray shows signs of black lung receives a letter that requires his employer to trans-

fer him to a less dusty job and pay him the same as before. The miner alone sees the letter, and he can use it whenever he wants.

Only about 30 percent of the nearly 3,000 letters issued to miners since 1980 have been used, according to MSHA data provided to the Center and NPR.

Sometimes miners avoid screening because they just don't want to know. A diagnosis of black lung would likely mean having to leave the mines — the best-paying job around and the only way they know to provide for their families. "It's very known throughout the coal community there's no cure for this," Wills said. "They want to pretend like everything's OK until they just can't do it anymore."

All of this has led NIOSH to believe that the resurgence of black lung may actually be worse than its numbers reveal. "We know that there is disease out there that we are not identifying because miners are avoiding participation based upon disease status," NIOSH epidemiologist Laney said.

Take James Marcum: He spent his last semester of high school taking a class at the University of Kentucky because he already had enough credits to graduate. His fa-

ther, having filed for black lung benefits a few years earlier, encouraged him to go to school and stay out of the mines.

Nonetheless, James took a summer job at a mine to earn money for college. "I started earning them \$800-a-week paydays and said, 'Why would I want to go to college when I'm earning this kind of money?'" he recalled, standing in the shadow of Dewey Dam at the family's annual picnic at Jenny Wiley State Park in Prestonsburg, Ky.

He spent about 90 percent of his 20-year mining career, he estimated, operating a continuous miner. In 1991, the motor of the machine he was running caught fire, and smoke overcame him.

When doctors examined him and took X-rays, they found what appeared to be black lung. James kept the news to himself and didn't file for benefits, afraid he'd lose his job if he did. "It was good money," he said. "I had my kids to raise, and I just had to work. ... I never said nothing. I just went on and done my job."

About six years later, James found himself back in the hospital. He'd been caught between two pieces of the continuous miner and injured his back. Alone in that section of the



mine when the accident happened, he finished his shift and went to the hospital the next morning.

Doctors again took X-rays, and, this time, his lungs were so bad he had to see a specialist. A biopsy confirmed that he had black lung.

Since then, breathing has become more and more difficult for him, especially during the past year. "I miss hunting bad," he said. "I used to take my boys hunting. But I just ain't able no more. ... I ain't got the air to do it."

The youngest of the three Marcum brothers, he has shown the worst decline in lung function. At the family's picnic, while Donald

socialized and Thomas talked to their father, Ray, over plates of fried chicken, coleslaw and potato salad, James sat quietly.

He glanced at his oldest son, 26, who now works in a mine. Without realizing it, James paraphrased his father: "I tried to get him out. He won't come out. He loves the job." ■

**About this story:** *Our stories about black lung were jointly reported by the Center for Public Integrity and NPR News as part of Hard Labor, an occasional series on health, safety and economic threats to U.S. workers. Additional reporting was provided by Ken Ward Jr. of the Charleston Gazette.*

## IMPACT

# Labor Dept. assembling expert team on mine dust enforcement after CPI-NPR investigation

By Chris Hamby

Published Online: July 13, 2012

**F**EDERAL REGULATORS are assembling a team of lawyers and other experts to consider how to bolster coal mine dust enforcement given systemic weaknesses revealed by an investigation into the resurgence of black lung by the Center for Public Integ-

rity and NPR, according to an internal Labor Department communication.

The effort, involving officials from the Mine Safety and Health Administration (MSHA) and other offices within the Labor Department, includes discussion of how regulators might be more aggressive in filing civil and criminal cases against mining companies that violate dust standards, the communication says.

The investigation by the Center and NPR documented a recent increase in cases of deadly coal workers' pneumoconiosis, commonly known as black lung. It highlighted rampant cheating on dust sampling by coal companies, rules riddled with loopholes and weak enforcement.

Black lung was supposed to have been eradicated after a 1969 law forced coal companies to control the amount of dust miners breathe. After declining from the 1970s through the mid-1990s, the disease has reappeared, in part because of flaws in MSHA regulations. The agency proposed a rule in 2010 that would close some loopholes but leave much of the dust sampling in the hands of coal companies, preserving a self-policing system critics and government panels have recommended eliminating for years.



**A coal miner performs a lung function test in a mobile clinic run by the National Institute for Occupational Safety and Health (NIOSH) in Norton, Va. David Deal/NPR**

MSHA spokeswoman Amy Louviere wouldn't discuss specific plans by the agency but said: "[I]t is obvious more needs to be done. We're carefully reviewing the issues that were raised by NPR and CPI, and are committed to taking whatever actions are necessary to end black lung disease."

In interviews, many retired miners, some of whom worked as recently as 2008, described placing dust-sampling pumps in relatively clean air rather than on miners working near the coal face, where the pumps were supposed to be. Similar practices have been described by miners testifying in recent court cases.

Even when federal inspectors conduct sampling, companies are allowed to mine at half of their normal production pace, generating far less dust. Many miners described receiving advance warning that an inspector was coming, giving them time to improve ventilation and clean up work sites.

From 2000 to 2011, more than 53,000 valid samples indicated that miners were exposed to excessive levels of dust, but MSHA issued just under 2,400 violations during that time, a Center analysis found. The disparity is likely attributable in part to rules that allow five samples to be averaged, negating some miners' high exposures.

Between 1980 and 2002, there were 185 criminal convictions or guilty pleas of companies or mine officials for dust sampling fraud, according to MSHA data. But the agency said it had no records of criminal convictions or guilty pleas since 2002 and wouldn't say whether any criminal cases had been pursued. Since 2009, the agency noted, it has decertified 14 mine officials, removing their authority to conduct dust samples.

Several members of Congress have issued statements in response to the Center-NPR investigation.

"These groundbreaking reports should be a call to action for everyone connected to the mining industry," said Sen. Tom Harkin, an Iowa Democrat. "I think the Department of Labor ... is taking important steps to help break this deadly cycle, and I believe that it is the

moral obligation of everyone in the industry and every political leader that represents hardworking miners to help make these reforms a reality.”

Rep. George Miller, a California Democrat, said: “Inaction should not be an option. Republicans should be working with Democrats to clear the bureaucratic hurdles so that long overdue protections can be finalized.”

House Republicans inserted language in a recent budget bill that would bar MSHA from implementing its proposed coal mine dust rule until the Government Accountability Office has evaluated the need for it — an assessment that may be finished in August. ■

## FOLLOW-UPS

# GOP seeks to kill black lung reform

*By Chris Hamby*

Published Online: July 17, 2012

**H**OUSE REPUBLICANS inserted language in a budget bill unveiled Tuesday that would kill a proposed rule to protect coal miners from dust that causes black lung.

Democrats on the House Committee on Appropriations objected, saying in a statement, “Recent reporting by NPR and the Center for Public Integrity has highlighted the need for more effective ‘black lung’ dis-



**U.S. Rep. Hal Rogers, a Kentucky Republican, is chairman of the House Committee on Appropriations. AP**

ease prevention efforts as there has been a resurgence of the disease among coal miners.”

The Center-NPR investigation found that, after decades of decline, black lung is making a comeback, increasingly afflicting younger miners with a more severe, faster-progressing form of the disease. The system for monitoring miners’ exposure to dust is riddled with loopholes, and regulators have sometimes failed to enforce even these rules. Mining companies have taken advantage of a self-policing system to manipulate dust sampling results for decades.

In 2010, the federal Mine Safety and Health Administration proposed a rule that would close some loopholes, though it would still leave much of the sampling in the hands of mining companies. Last December, House Republicans inserted language in a previous budget bill that would have barred any money from being spent to implement the rule until the Government Accountability Office evaluated whether the proposal was necessary. That study is on track to be released in August.

The insertion of a paragraph into the new Labor Department’s budget bill goes further, barring the agency from using any money to continue developing the rule, issuing it or enforcing it.

Both Denny Rehberg, the Montana Republican who wrote the bill, and Hal Rogers, chairman of the appropriations committee, are up for re-election this year, and both count the coal mining industry among their top donors. Rogers, a Kentucky Republican, has long been a champion of the industry, and mining companies have donated more to his campaigns over the years — about \$378,000 — than any other industry. Neither Rehberg nor Rogers responded immediately to requests for comment Tuesday.

The National Mining Association said in a statement that it “sympathizes with the chairman’s frustration at MSHA’s apparent unwillingness to consider seriously the constructive proposals we have made to address this problem directly and improve miners’ health.” The association, which represents primarily large mining companies, believes the increase in black lung is a regional problem con-

centrated in central Appalachia and not one that requires imposing new rules across the country. It has suggested a number of changes to the proposed rule.

Rep. George Miller of California, the senior Democrat on the House Committee on Education and the Workforce, said in a statement: “Republicans are sending a message that profits for their wealthy campaign contributors are more important than the lungs and lives of America’s coal miners. The recent investigative report by several news organizations on the devastating impact of black lung and the lengths that some mine operations go to circumvent their responsibility to protect miners should have been a wakeup call. It’s clear that voices wealthier than coal miner families drowned out that message.” ■

## GAO report supports science behind black lung rule

*By Chris Hamby*

Published Online: August 17, 2012

**R**ESearch SUPPORTS an Obama administration plan to reduce coal miners’ exposure to the dust that causes black lung, a much-anticipated Government Accountability Office report released Friday found.

Last December, House Republicans inserted language into an appropriations bill requiring the study. No money could be used to implement a proposed coal mine dust rule until the GAO evaluated the research underpinning it, the rider said.

The GAO report lends support to one piece of the federal Mine Safety and Health Administration’s efforts to address a resurgence of black lung, particularly in parts of Appalachia. A Center for Public Integrity-NPR investigation in July found that the disease has returned amid widespread cheating on required dust sampling by some mining

companies and enforcement lapses by MSHA.

In October 2010, the agency proposed cutting in half the amount of dust to which miners could be exposed, but the proposal has drawn opposition from some in the mining industry and Congress. Some miners' advocates worry the rule could die, as previous reform attempts have, if it isn't finalized before the coming election.

"Black lung is a growing health crisis," Rep. George Miller, D-Calif., said in a statement Friday. "But special interests and their congressional allies have repeatedly tried to stop the mine safety agency from updating its rules to address this disease. The GAO's report shows that the latest line of attack was groundless and, as a result, unsuccessful. Opponents of the proposed rule attacked the science, but the study they called for shows the science to be sound: the proposed rule would reduce coal miners' risk of developing black lung."

National Mining Association spokeswoman Carol Raulston said the GAO report hasn't changed the organization's position that the proposed rule is unnecessary. "The data do not seem to indicate that you're going to get the kind of results you'd hope for with this approach," she said.

The increase in disease, the association contends, is confined to pockets of central Appalachia and is the result of miners breathing more dust from ground-up rock, not coal. What's needed, Raulston said, is increased enforcement of standards meant to curb exposure to silica, the mineral in much of the rock surrounding coal seams that can cause a faster-progressing form of disease.

The association has previously criticized some of the coal mine dust studies that the GAO determined were sound. In the report released Friday, the GAO concluded researchers "took reasonable steps to mitigate the limitations and biases in the data" and "used appropriate analytical methods."

Since last December, House Republicans have continued to attack the rule. A paragraph in this year's appropriations bill, written by Montana Republican Rep. Denny Rehberg, would bar MSHA from us-

ing any money to continue work on the rule. Democrats on the committee objected, citing the Center-NPR investigation.

Rehberg did not respond to a request for comment Friday. A spokesman for Rep. Hal Rogers, R-Ky., chairman of the House appropriations committee and a longtime champion of the coal industry, said in a statement, “Our office understands that the House Appropriations Committee is reviewing the report, but it doesn’t appear that GAO answered the very specific questions posed by Congress.” ■

## IMPACT

# Federal inspectors step up enforcement of rules to prevent black lung

*By Chris Hamby*

Published Online: November 1, 2012

**A** **FEDERAL ENFORCEMENT** blitz targeting coal mines with potentially dangerous levels of dust found a host of violations at more than a dozen sites where conditions left miners at risk for developing black lung disease.

Following the April 2010 explosion at the Upper Big Branch mine in southern West Virginia, regulators have focused on problem mines under a new special enforcement program. The most recent round of inspections, however, used new criteria to target mines likely to have problems controlling the dust that can lead to black lung.

The inspections followed a Center for Public Integrity-NPR investigation that highlighted the resurgence of black lung disease and exposed widespread misconduct by coal companies and often-lax enforcement by the federal Mine Safety and Health Administration.

In September, inspectors found more than 120 violations at 13 coal



mines. Many companies failed to ventilate working areas properly and relied on broken-down equipment to suppress dust, citations allege. Two of the mines cited are owned by Robert Murray, who has lent strong support to presidential candidate Mitt Romney. A representative for Murray Energy Corp. could not be reached for comment Wednesday.

The inspections focused heavily on mines in Appalachia, where the increase in black lung has been most dramatic. Overall, rates of the disease have declined since 1969, when, in a landmark law, Congress forced companies to control dust levels.

In the late 1990s, however, the downward trend in disease rates reversed, and government researchers are documenting with alarm the return of black lung, which was supposed to have been eradicated years ago. Even more disturbing: Rates of the most severe form of the disease have tripled since the 1980s.

Carol Raulston, a spokesperson for the National Mining Association, on Wednesday reiterated the industry's position that the disease's resurgence is a regional phenomenon of central Appalachia caused by increased exposure to silica — a mineral found in rock that is damaging to miners' lungs — rather than coal dust. "If they're just focusing on coal dust [in the special inspections]," she said, "they're missing the implications of the latest health data."

The promise of the 1969 law has been undermined by rampant cheating on dust samples and exploitation of loopholes by coal companies, the Center-NPR investigation found. A Center analysis of MSHA databases found that miners have been breathing too much dust for years, but the agency has issued relatively few violations and routinely allowed companies extra time to fix problems.

In 2010, MSHA proposed a rule that would lower miners' exposure to coal mine dust and close some loopholes. Republicans in Congress have sought to block issuance of the rule, mandating a study of whether it was necessary by the Government Accountability Office. The study, released this August, supported MSHA's proposal, but the rule remains in limbo. ■

# Unchecked dust explosions kill, injure hundreds of workers

*By Chris Hamby*

Published Online: May 29, 2012

**G**ALLATIN, TENN. — Small fires were a part of the job at the Hoeganaes Corp. metal powder plant 30 miles northeast of Nashville. By early 2011, some workers later told investigators, they had become practiced in beating down the flames with gloved hands or a fire extinguisher.

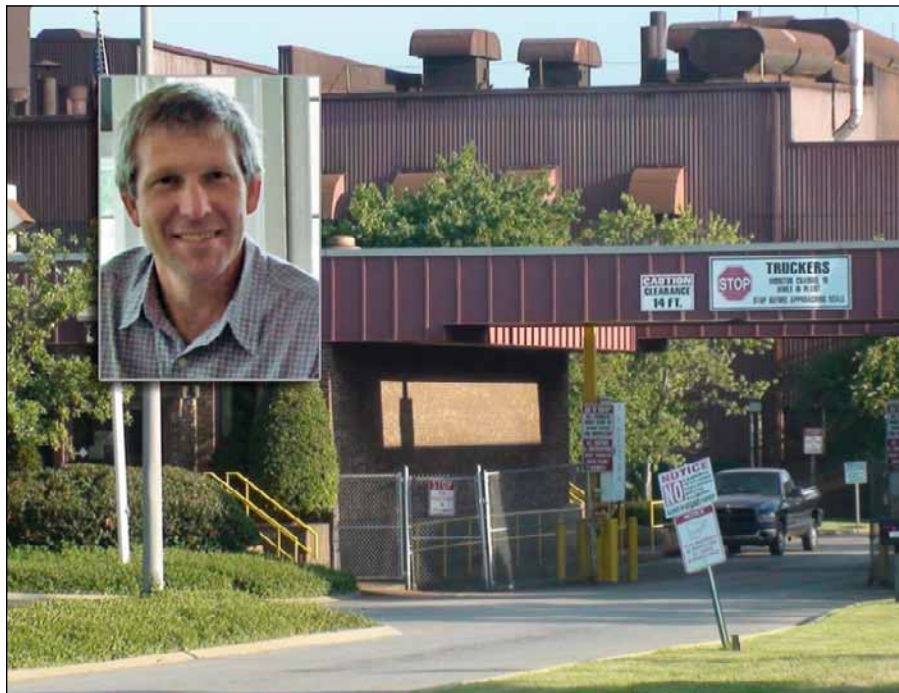
The company's own product fueled the fires. Scrap metal rolls into the rust-colored plant on the town's industrial periphery and is melted, atomized and dried into a fine iron powder sold to makers of car parts. Sometimes, powder leaked from equipment and coated ledges and rafters. Under the right conditions, it smoldered.

Wiley Sherburne, a 42-year-old plant electrician, sometimes told his wife how this dust piled up everywhere, she recalled. On quieter

weekend shifts, he said he could hear the telltale popping sound of dust sparking when it touched live electricity.

In the early morning of January 31, 2011, Sherburne was called to check out a malfunctioning bucket elevator that totes dust through the plant. Near his feet, electrical wires lay exposed. When the machine restarted, the jolt knocked dust into the air. A spark — likely from the exposed wires, investigators later concluded — turned the dust cloud into a ball of flame that engulfed Sherburne and a co-worker.

"He's burned over 95 percent of his body," doctors told Sherburne's wife, Chris, when she arrived at the Vanderbilt University Medical Center's burn unit. "He's not going to live." Her husband died two days later.



**Wiley Sherburne, a 42-year-old electrician, and the Hoeganaes Corp. metal powder plant where he worked. Plant image, U.S. Chemical Safety Board, Sherburne image courtesy of Chris Sherburne.**

The fires at the Hoeganaes plant were not over. Another struck in March, then a third in May. In all, five workers died in accidents that shook this small community. Each man left behind a wife and children. One had four children under 11. Another became a grandfather

the day before an explosion caused fatal burns.

Each blaze here involved combustible dust, a little-noticed danger that has killed or injured at least 900 workers across the country during the past three decades. The fuel has varied, but the effects

have been similarly devastating. In Gallatin, it was iron. In Port Wentworth, Ga., sugar. In Kinston, N.C., plastic. Elsewhere, dust from substances as varied as wood, nylon fiber, coal and flour sparked fires and explosions.

Since 1980, more than 450 accidents involving dust have killed nearly 130 workers and injured another 800-plus, according to a Center for Public Integrity analysis of data compiled by the federal Occupational Safety and Health Administration and the U.S. Chemical Safety Board. Both agencies, citing spotty reporting requirements, say these numbers are likely significant understatements.

Yet a push to issue a rule protecting workers from the danger has stalled in the face of bureaucratic hurdles, industry pushback and political calculations, the Center for Public Integrity found.

OSHA, in a statement, said it must “make difficult decisions as to how to best allocate the agency’s limited rulemaking resources.” While addressing dangers like combustible dust and dangerous substances breathed by workers are important, OSHA said, it “has placed a great deal of emphasis on broad rulemaking efforts that have the

potential to result in fundamental changes [for] safety and health in the workplace.”

Representatives for Hoeganaes refused interview requests from the Center for Public Integrity. In a legal filing, the company has denied violating safety standards at the Tennessee plant where Wiley Sherburne died.

### **‘All of a sudden one day, boom’**

A dust fire is, in a sense, the result of a perfect storm. The powder has to form a cloud in a confined area and touch an ignition source, such as a spark, flame or overheated pipe. “It’s this unlikeliness that leads people to the false sense of security that it can’t occur,” said John Cholin, an engineer who has investigated dust accidents for 30 years and has a consulting firm.

Often, workers don’t know that the dust lurking on flat surfaces could, when dispersed in a cloud, fuel a violent explosion. But experts, worker safety advocates and government officials have been sounding alarms for years.

Steve Sallman, a health and safety official with the United Steelworkers union, still thinks about the dust fire 20 years ago that se-

verely burned two of his co-workers at an Iowa plant making tires for agricultural vehicles. “It bothers me to this day because it was preventable,” he said.

Hindsight in the wake of dust explosions has often revealed missed warning signs. Rarely does a company develop a dust problem overnight.

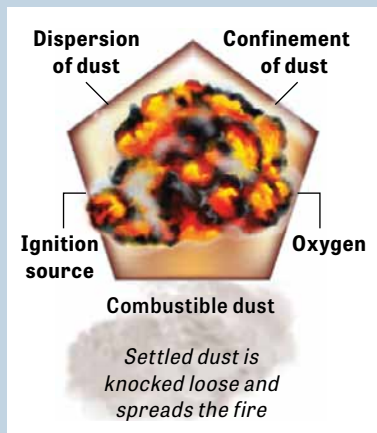
“It goes along for years with the dust building up, building up, and everything’s fine, nobody’s harmed, nobody thinks anything about it,” said Sandra Bennett, an official at the Tennessee Occupational Safety and Health Administration, which investigated the Hoeganaes accidents. “All of a sudden, one day, boom.”

Standards to address the danger have existed for more than 85 years, but following them is voluntary for many plants. Where they do apply, enforcement is so haphazard that the association that sets the standards believes this policing duty should be placed in OSHA’s hands.

The agency seems to agree. In 2009, OSHA announced it was starting the process of issuing a rule to address combustible dust.

Three years later, the process is still stuck in its early stages, and OSHA has given up on making sig-

## Timeline



## Explosive Dust

A dust fire is, in a sense, the result of a perfect storm. The powder has to form a cloud in a confined area and touch an ignition source, such as a spark, flame or overheated pipe. Accidents are unlikely, but, when they occur, the result is often catastrophic. At least 900 workers have been killed or injured in dust fires or explosions since 1980.

### May 2, 1878

Flour dust triggers explosions that level the Washburn “A” Mill in Minneapolis, Minn., killing 18 people.

nificant progress this year, moving the topic to its list of “long-term actions.” Some experts point to key impediments OSHA faces: the potential cost of the sweeping rule, an anti-regulatory political climate and an increasingly drawn-out rule-making process.

Top agency officials refused to explain the rule’s status. In a statement, OSHA said, “Prevention of worker injuries and fatalities from combustible dust remains a priority for the agency.” But, the statement said, developing the rule is “very complex,” and “could affect a wide variety of industries and workplace conditions. As a result it has been moved to long-term action to give the agency time to develop the analyses needed to support a cost-effective rule.”

News of OSHA’s decision reached Chris Sherburne at the end of January, around the first anniversary of her husband’s death. “I just couldn’t believe it,” she said. “You put it on the back burner, and that’s where it’s going to stay.”

Her frustration is shared by victims’ families who have seen other health and safety rules similarly stalled, shelved or eviscerated. Whether it’s combustible wood dust at a sawmill, disease-inducing be-

## Timeline

### 1924

Guidance for preventing dust fires and explosions is published by the National Board of Fire Underwriters and recommended by the National Fire Protection Association.

### 1957

The NFPA publishes Report of Important Dust Explosions, which includes information about more than 1,000 dust explosions between 1860 and 1956.

### 1970s

A series of deadly grain dust explosions garner national attention.

### December 31, 1987

OSHA finalizes a rule to address the handling of grain dust.

### December 11, 1995

A nylon fiber dust explosion almost completely destroys the Malden Mills textile facility in Methuen, Mass., injuring 37 people.

### February 1, 1999

An explosion, likely spread by coal dust, kills six workers and injures 36 at the Ford Motor Company’s

ryllium at an aluminum smelter or lung-wrecking silica at an iron foundry, OSHA allows workers to face conditions that many experts and even the government's own scientists consider unsafe.

OSHA's statement said it is "committed to protecting workers," but that "numerous steps in the regulatory process mean OSHA cannot issue standards as quickly as it would like."

## Not the first time

Documented dust explosions have been killing workers since the late 1800s or earlier, and technical publications discussing the hazard date to the early 20th century.

The Chemical Safety Board, an independent federal agency, has examined a handful of major dust accidents and identified disturbing trends. The board, however, can't issue or enforce rules. Among the catastrophic accidents the board investigated, each plant also had a history of small dust fires that did little or no damage and prompted little concern.

"You have to consider all those fires as close calls for something that could kill somebody," the board's chairman, Rafael Moure-

## Timeline

River Rouge manufacturing plant near Dearborn, Michigan.

### 2003

OSHA reviews the grain dust standard and concludes that it has dramatically reduced deaths and injuries in grain dust fires and explosions.

### 2003

The U.S. Chemical Safety Board (CSB) investigates dust explosion in three states — North Carolina, Kentucky and Indiana — involving three different dusts — rubber, phenolic resin and aluminum — that killed 14 workers.

### 2006

The board releases a broad study of dust dangers, identifying a rash of accidents and recommending that OSHA issue a standard to protect workers.

### February 7, 2008

A sugar dust explosion completely destroys the packing building at the Imperial Sugar refinery near Savannah, Ga., killing 14 workers and injuring at least another 36.

Eraso, said in an interview. “Hoeganaes is precisely the case in point.”

At the Gallatin plant, periodic small dust fires ignited in certain areas, investigators found. Some employees told state inspectors they put out blazes once or twice a month; others said the fires came about once a week.

Because the fires had done little damage, workers had come to accept them as part of the job, investigators found. That changed the January day a dust cloud ignited and fatally burned Wiley Sherburne and Wayne Corley.

Two months later, investigators found, a worker accidentally knocked loose dust that had collected on a furnace and was engulfed in flames. He leaped off a ladder to safety and survived.

Then, on May 27, sparks triggered an explosion of hydrogen gas leaking from a pipe, investigators determined. The blast knocked dust loose from the rafters, and some of it ignited as it rained down on workers. “There was so much dust in the air that you could only see the areas where it was burning,” one employee told investigators. Three workers died, and two more were injured.

Last year was not the first time

## Timeline

### March 11, 2008

OSHA intensifies its special inspection program targeting sites that may have workers at risk from combustible dust.

### July 29, 2008

The U.S. Senate holds a hearing, and then-Sen. Barack Obama declares it is “past time to issue a standard to prevent these kinds of accidents.”

### April 29, 2009

OSHA announces it will begin the process of issuing a rule to address combustible dust.

### September 24, 2009

The CSB releases a report detailing grave failures that led to the Imperial Sugar catastrophe, urging OSHA to “proceed expeditiously” with a rule.

### January 31, 2011

March 29, 2011; and May 27, 2011: Three fires involving combustible iron dust kill five workers and burn another at the Hoeganaes Corp. plant in Gallatin, Tenn.



Hoeganaes had experienced the deadly potential of its iron dust. The May accident in particular bore “striking similarities” to one that occurred in 1992 at the company’s plant in Riverton, N.J., said the CSB’s lead investigator, Johnnie Banks.

Twenty years later, Jeffrey Richardson remembers that accident well. It left him with third-degree burns covering 97 percent of his body. He has one ear and one hand, though it has no fingers. His body is covered with skin grown in a lab; it heals slowly and tears easily.

“They said my foot and my eyelids were the only place where I wasn’t burned,” he recalled recently. “I still to this day have a nurse come every day to dress wounds that I still have ongoing.”

As in the May 2011 accident, a hydrogen explosion shook the building, and burning dust fell from the rafters. Richardson recalls it covering him as he struggled to find an escape route. “I could hear it sizzling and cracking,” he said.

The company contested the 10 serious violations OSHA issued for the fire that burned Richardson, and the agency cut the fine from \$22,500 to \$15,300. Hoeganaes is now contesting the 25 serious

## Timeline

### January 5, 2012

The CSB releases a scathing report on the Hoeganaes fires and urges OSHA to publish a proposed combustible dust rule within a year.

### January 2012

OSHA releases its regulatory agenda, moving the combustible dust rule to its list of “long-term actions” — items that don’t have a currently planned regulatory action within the next year.

violations and \$122,900 in fines assessed by the Tennessee regulators after the 2011 accidents in Gallatin.

## Optional standards, lax enforcement

Many plants already are required to follow rules addressing combustible dust — at least in theory.

The National Fire Protection Association, a nonprofit group that sets an array of standards and conducts research and training, first issued guidance in the 1920s. Since then, committees of industry officials and experts have updated

the association's combustible dust standards regularly. Many experts praise the standards, and OSHA often points to them as widely recognized practices when citing violations.

But two problems limit the standards' reach: They are optional in many areas, and, where they apply, enforcement is often lax or nonexistent, experts have found.

Some state and local governments have adopted the NFPA standards as part of their fire codes, while others have chosen the International Fire Code, which has general guidance on combustible dust and references the NFPA codes without explicitly requiring companies to follow them.

Even where the rules apply, those charged with enforcing them are typically state or local fire inspectors. Inspections of industrial plants are rare, the CSB has found, and inspectors are often ill-equipped to recognize even glaring dust hazards. "The rank-and-file first line of code enforcement is totally ignorant of the problem," Cholin said.

In Gallatin, the fire department's senior inspector visited the Hoeganaes plant in May 2011 — after the first two fires but before the

third. He noted a list of concerns, including inadequate emergency lighting and the need to keep exit routes clear. He didn't mention combustible dust.

The department eventually noted dust levels during inspections this January and March. Asked if inspectors ever brought up combustible dust with Hoeganaes before last year's accidents, Fire Chief William Crook said, "If they have, I'm not aware of it."

The CSB found a similar pattern after other accident investigations in Indiana and North Carolina: Fire officials had missed dust problems in inspections before deadly accidents.

Recognizing dangers that could lead to dust fires and explosions also can be a problem for companies and their insurers. In investigations of four dust explosions that killed 28 workers, the CSB found insurers had missed serious dust hazards during audits in each case.

In Gallatin, the insurer Allianz did note the potential risks from iron dust in a 2008 audit. Hoeganaes commissioned testing in 2009 and 2010 that showed its dust was combustible. In August 2010, Hoeganaes hired a company to clean up the dust, according to a report by the state in-

spector examining the January 2011 accident. But, the report notes, “it was apparent that the employer was not ensuring clean up [sic] was maintained through good housekeeping practices between these cleanings.” Piles of dust up to four inches thick sat on equipment throughout the plant, the inspector found.

Such breakdowns point to the need for an OSHA standard, which could lead to “broader recognition and the potential for stronger enforcement,” said Guy Colonna, manager of the NFPA division that oversees the association’s combustible dust standards.

Still, enforcement by OSHA isn’t a perfect solution. The CSB’s 2006 study found that OSHA inspectors weren’t adequately trained to recognize dust hazards.

In a statement, OSHA said it developed a three-and-a-half-day session to train its inspectors to recognize combustible dust hazards in December 2007. But the agency can get to only a fraction of the plants that may have dust problems.

Since October 2007, OSHA has been targeting plants that may have dust problems through a special enforcement program. During that time, the agency and its state counterparts have conducted more than

2,800 inspections. Asked for an estimate of the number of plants that meet the criteria for inspection under the program, though, OSHA said the total was likely “in tens of thousands.”

Applying the program without a combustible dust standard in place means inspectors must resort to issuing citations for rules not written to address dust. If dust is piling up around the plant, for example, housekeeping standards might apply. If wires are exposed, electrical safety rules might form the basis for a citation.

OSHA can use the “general duty clause” to cite companies for exposing workers to well-known dangers not addressed by specific standards. This approach, however, often leaves the agency vulnerable to industry challenge.

Consider Hoeganaes: The last time the plant was inspected by the Tennessee Occupational Safety and Health Administration before the 2011 fires was in 2008. The inspector, Dave McMurray, visited the plant after the agency received information that a few workers had suffered hearing loss — problems for which he ended up citing the company.

While he was there, however, he saw enough iron dust collecting around the plant to cause concern.

"If you put your hand on the railings, it would come away black," McMurray, who is now retired, recalled in an interview.

Without a combustible dust standard, he felt his only option was to see whether workers were breathing levels of dust that might pose a health risk — a hazard for which there was a standard. The samples, however, weren't above the limit. The monitors measured only what was in the air near the workers at the time, not what had collected on ledges and rafters.

McMurray felt there was little he could do. "It's a whole world of difference when we have a standard," he said. "When we have a specific standard, we go for it." At Hoeganaes, he said, "I went as far as I thought I could."

After the fires in 2011, state regulators drew on a variety of standards to cite Hoeganaes. They alleged electrical safety violations, shoddy maintenance of the hydrogen pipe that leaked in May and an inadequate emergency response plan, for example. They accused the company of allowing dust to build up throughout the plant and failing to train workers on its dangers.

Hoeganaes contested every cita-

tion. Among the legal arguments the company has raised: State officials are trying to enforce a combustible dust rule that doesn't exist.

## **'Past time to issue a standard'**

Four years ago, Jamie Butler sat on a curb outside the burning wreckage of the packing building at the Imperial Sugar refinery in Port Wentworth, Ga., an industrial hub near Savannah. His brother sat beside him. They'd escaped one of the worst dust explosions in U.S. history.

There had been a ball of flame, Butler recalled, and then fire everywhere — on the walls, on machines, in the air. Sugar dust had exploded in a conveyor belt, then triggered blasts throughout the plant. Dust that had built up over the years fueled the explosions and rained down on Butler and his co-workers.

Butler had found a hole that had been blown in the wall and made it, with his brother, to the curb outside. They talked for a minute or two, before emergency responders loaded Butler into one ambulance and his brother into another. "That was the last time I ever saw my brother," Butler said.

The disaster killed 14 people —

including Butler's brother and uncle, a longtime plant employee — and left dozens burned. Butler, now 29 with three children, remained in a coma for months; he has severe burns on his head, face, legs and arms. "Since I got burned, I'll be in the hospital on a regular basis, just sick, throwing up, dehydrated," he said recently, sitting in his lawyer's riverfront office. "I don't sweat how I used to sweat."

The blast was the type of catastrophe that can spur reform. Congress held a hearing, and then Sen. Barack Obama said in a statement, "It is past time to issue a standard to prevent these kinds of accidents."

Even before Imperial Sugar, the CSB has investigated a series of deadly dust accidents and recommended in 2006 that OSHA issue a rule to protect workers from dust fires and explosions. After investigating the disaster in Port Wentworth, the board again urged OSHA to act.

This time, OSHA appeared to be listening. It launched a special enforcement program targeting companies with unaddressed dust problems. In April 2009, the agency announced it was starting the rulemaking process.

"We felt that our efforts had paid

off," CSB chairman Moure-Eraso said recently. "And then we wait and we wait. And there are more accidents; there are more fatalities. And this process continues, and it seems to be never-ending."

Long rulemaking processes have become the norm for OSHA. For the 58 significant standards the agency has issued since 1981, the average time from beginning the process to finalizing the rule was almost eight years, a recent study by the Government Accountability Office found.

To issue a significant new rule, federal agencies must navigate a complicated process that includes multiple rounds of review — both internally and at the White House's budget office — and public comment. New laws and executive orders have added requirements over the past three decades.

OSHA, however, faces particular challenges. The agency must show that a proposed rule is both technically and economically feasible for every industry that would be affected — a research-intensive task. If a rule could affect a significant number of small businesses, OSHA must convene a panel and allow them to raise objections to an unpublished rule draft. It is one

of only three federal agencies required to do this.

OSHA is particularly vulnerable to legal challenges after issuing a standard. In general, agencies must prove to a judge that a rule isn't arbitrary, capricious or an abuse of discretion. OSHA, however, must show its rule is supported by "substantial evidence in the record considered as a whole" — a much higher standard.

All of this means addressing combustible dust is a mammoth task. OSHA has to research the dangers of everything from the coal dust at a power plant to the wood dust at a sawmill, then show that addressing the danger would be realistic in each case. The rule would affect many small businesses, and OSHA said in a statement that it plans to convene the required small-business panel this year.

Industry groups generally haven't opposed a rule altogether, instead arguing that the rule shouldn't apply to them. The National Cotton Council, for example, told OSHA many of its members shouldn't be included and challenged the accuracy of the agency's list that included past cotton dust fires and explosions. The American Home Furnishings Alliance insisted in

written comments that "no federal intervention in our industry is justified or required."

The American Chemistry Council has taken a harder line, arguing that a new rule is unnecessary. "We believe that the accidents that have occurred might have been prevented if current OSHA regulations and relevant combustible dust consensus standards had been followed and enforced," the council wrote to the Center.

Some see the political climate — in which the phrase "job-killing regulation" is never far from the discussion — as one explanation for the slow progress. "OSHA has its heart in the right place; we know that they're struggling with this," said Robyn Robbins, a safety and health official with the United Food and Commercial Workers union. "It's just a shame that people make this political."

## **Lessons from a previous dust fight**

Many arguments echo those made 30 years ago during a tussle that led to a standard now widely considered a success story. In the late 1970s, a series of deadly grain dust explosions at grain elevators and

similar facilities attracted national attention. OSHA announced in 1980 that it was considering a rule to regulate the handling of grain dust.

Large industry trade groups and small grain elevator operators objected vociferously. The National Grain and Feed Association called the rule “unwarranted” in comments to OSHA and said it “could have a substantial economic impact on the grain and feed industry without substantially improving the safety or health of workers.”

In 1987, OSHA issued the rule. In 2003, the agency reported evidence that, in the decade after it took effect, deaths in grain dust explosions dropped by 70 percent and injuries by 60 percent.

In 2010, the National Grain and Feed Association — the same group that had sued OSHA to try to block parts of the rule — noted this “unprecedented decline in explosions, injuries and fatalities at grain handling facilities” in comments submitted to OSHA.

Nor did meeting the rule’s requirements ruin the industry. The association cited the “economic benefit of implementing the grain handling standard” and wrote, “We firmly believe that there is over-

whelming evidence supporting the grain handling standard’s effectiveness in preventing fires and explosions and resulting injuries during a time when grain handling capacity increased almost sixty percent.”

OSHA’s current attempts to address combustible dust are more complicated, encompassing many different industries with different types of dust. But some view the grain dust rule as an example of what could be accomplished.

“A general industry standard does have the potential to be at least as successful [as the grain dust standard] in terms of awareness, but how successful depends on the specifics of the regulation,” said Bob Zalosh, a consultant who investigates accidents and advises companies on prevention.

Some in Congress want OSHA to act now. California Rep. George Miller and two other House Democrats have introduced a bill that would require the agency to issue an interim rule within a year.

“The fact that workers are killed and injured in all too frequent, clearly preventable combustible dust explosions shows that Congress must act,” Miller said in a statement to the Center. “Legislation is needed to protect workers

because of the years it takes to cut through the red tape just to get a final protection in place.”

## ‘Fall through the cracks at every level’

In Georgia, the building Jamie Butler and his co-workers knew during their time at Imperial Sugar is long gone, consumed entirely by the inferno of February 2008. In its place is a modern packing facility company officials say stands as evidence of what they learned from the disaster. The project, which included some work on the refinery itself, took about two years and cost roughly \$220 million, vice president of manufacturing Raylene Carter said.

“If there is ever an explosion again — and that’s just not going to happen — it would never spread from building to building ever again,” Imperial Sugar health and safety official Kathleen Gonzalez said during a recent tour, pointing to a system designed to blanket the area with water and halt a fire in its tracks.

Sugar no longer enters the packing building on a conveyor belt — the location of the initial explosion in 2008. It is shot through pipes in

pellets packed so densely that they shouldn’t be able to ignite. Sensors can detect the first signs of sparks in the pipes, then automatically isolate the area and flood it with a neutralizing solution.

Near work areas, vacuums take spilled dust to a vessel outside the building — a contrast from the company’s previous practice of using compressed air to clean dust, which blew it onto ledges and rafters where it eventually was shaken loose, fueling explosions. A sign reminds workers, “Your job is not complete until your work area is CLEAN.”

The company has told OSHA it “strongly support[s]” issuing a combustible dust rule. “We believe that there is still a low level of knowledge of the extent of hazards of combustible dust in industry,” the company wrote OSHA.

Such about-faces often come after deaths have occurred — and company officials, inspectors or auditors missed warning signs. The NFPA’s Colonna said he is frequently called to conduct training after explosions — in Georgia after the Imperial Sugar catastrophe, and in Kentucky after a 2003 dust explosion killed seven workers. This March, the Gallatin Fire Depart-



ment's two inspectors attended a two-day training seminar on combustible dust led by the NFPA, said Crook, the department's chief.

Meanwhile, dust accidents continue. In February, after a dust explosion, OSHA cited a Wisconsin company that makes whey products. In April, the agency issued violations to a New Hampshire wood pellet mill where a dust-fueled fire spread throughout the building. The same month, the agency alleged violations — some of them willful, which OSHA says are intentional violations or those committed with indifference to the law — at an Illinois pasta manufacturer where two workers were seriously burned in a sugar dust explosion.

"I think the universal theme is that these accidents are a symptom of the fact that there isn't a comprehensive dust standard," said Daniel Horowitz, the CSB's managing director. "Hoeganaes really illustrates how problems like this can fall through the cracks at every level."

## **A father's memory**

In Gallatin, dust piled up for years despite inspections, audits and small fires.

"They need a set of guidelines," Chris Sherburne said. "If there was a standard, I think that would have made a lot of difference because there was so much [dust] there at the time."

As the gears grind in Washington, she's raising a teenage son and tending to a 34-acre patch of farmland. She hasn't given up on some of the plans she and Wiley made. They had always hoped to build a new house on their land to replace their double-wide, and in December 2010 — about a month before his death — they'd decided to start the following spring.

Chris stuck to the plan, functioning as her own general contractor. "I decided to just build it and see what happens," she said recently.

Last December, Chris and her son moved into their new house. No pictures of Wiley adorn the walls or mantelpieces. "It's easier for us not to have stuff in plain view," Chris said. When Wiley's body was cremated, at first the ashes sat on Chris' bedroom dresser. "After a few days," she recalled, "I said, 'Wiley I can't look at you every day; I can't do this.' He's in the closet now."

Some reminders are inescapable. Chris and her son have kept his

tools and work clothes, keepsakes of the man who could fix anything. “You could bring him a motor in a box, and he’d put it back together,” Chris recalled.

As their son approached driving age, the plan was for Wiley to

help him find a clunker and fix it up. Instead, he now drives his father’s souped-up Dodge Ram 2500. “Every now and then, when I see it coming up the driveway,” Chris said, “for a split second I still think it’s Wiley.” ■

## FOLLOW-UP

# House bill targets deadly dust explosions

*By Chris Hamby*

Published Online: February 15, 2013

**A GROUP OF** House Democrats introduced legislation this week that aims to protect workers from combustible dust — a fire and explosion threat that has killed or injured hundreds in recent decades.

Last year, the Center for Public Integrity examined the toll triggered by recent preventable tragedies — and the political and bureaucratic forces that impeded greater protection from a hazard recognized for more than a century. Workers across a range of industries face dust dangers from materials as varied as sugar, coal, wood and plastic.

The federal Occupational Safety and Health Administration began the process of issuing a rule to address the hazard in 2009, but its progress has stalled.

The new bill, announced Thursday, would compel the agency to issue interim protections within a year and set deadlines for finalizing a permanent rule.

“While OSHA has taken some limited steps to protect workers and property from combustible dust explosions, the widely recom-



**A sugar dust explosion in 2008 leveled much of the Imperial Sugar packing facility, killing 14 workers and injuring dozens more. AP Photo**

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mended protections necessary to prevent these explosions are caught up in red tape and special interest objections,” Rep. George Miller, the senior Democrat on the House Committee on Education and the Workforce, said in a statement announcing the bill’s introduction.

Standards set by the nonprofit National Fire Protection Association have existed for decades, but are optional in many areas. Enforcement is often weak or nonexistent. Thursday’s bill would require OSHA to base much of its interim standard on these NFPA guidelines. It would mandate more worker training, a regimen of cleaning and inspections to prevent dust buildups, and work procedures and equipment design to minimize explosion and fire risk.

The new bill would require OSHA to issue an interim standard within a year, then a proposed rule within another 18 months. The agency would then have to finalize the rule within the next three years.

The rule could affect a large number of businesses, and many industry groups have pushed back, arguing for exemptions or calling the measure unnecessary.

The American Chemistry Council has taken one of the strongest positions opposing the rule, saying in a statement last year to the Center, “We believe that the accidents that have occurred might have been prevented if current OSHA regulations and relevant combustible dust consensus standards had been followed and enforced.” A representative for the trade group did not respond to a request for comment Friday.

OSHA has repeatedly set rule deadlines, then moved them back. OSHA is one of only three federal agencies that must convene a panel of potentially affected small businesses to allow them to raise objections to an unpublished rule draft. The agency’s most recent agenda said it hopes to begin this stage in the process in October.

A spokesman for OSHA did not respond to a request for comment on Thursday’s legislation.

As the rulemaking process has dragged on, fires and explosions have continued. The Center detailed a series of three accidents in 2011, all involving combustible iron dust, that killed five workers at the Hoeganaes Corp. plant in Gallatin, Tenn.

OSHA faced a similar situation after a series of high-profile dust explosions at grain elevators in the 1970s. The agency proposed regulating the handling of grain dust, and industry groups objected vociferously. OSHA issued the rule in 1987 and, in a 2003 review, found that deaths in grain dust explosions had dropped by about 70 percent. The primary industry group that opposed the rule recently credited it with reducing deaths and injuries without imposing the devastating economic burden it had originally predicted. ■



Tina Hall and her husband, L.V., in 2005. Tina Hall was fatally burned in a workplace accident in Franklin, Ky., two years later. Courtesy of L.V. Hall

# Kentucky death case: Another black eye for state workplace safety enforcement

*By Jim Morris*

Published Online: August 17, 2012

Kentucky's deletion of all violations in worker death case criticized by victim's family, feds.

**A**ROUND MIDNIGHT on June 1, 2007, Tina Hall was finishing her shift in a place she loathed: the mixing room at the Toyo Automotive Parts factory in Franklin, Ky., where flammable chemicals were kept in open containers.

A spark ignited vapors given off by toluene, a solvent Hall was transferring from a 55-gallon drum to a hard plastic bin. A flash fire engulfed the 39-year-old team leader, causing third-degree burns over 90 percent of her body. She died 11 days later.

After investigating the accident, the Kentucky Labor Cabinet's Department of Workplace Standards cited Toyo for 16 "serious" violations and proposed a \$105,500 fine in November 2007.

"You're disappointed because you think, that's all they got fined?" Hall's sister, Amy Harville, of Moulton, Ala., said in a telephone interview. "But then I thought, at least they got 16 violations. I was thinking they'd stick, as severely as she was burned."

The violations didn't stick. Every one of them went away in 2008, as did the fine, after Toyo's lawyer vowed to contest the enforcement action in court. Last month, in a move believed to be unprecedented in Kentucky, the Department of Workplace Standards reinstated all the violations because, it said, the company hadn't made promised safety improvements.

The case was another black eye for state-run workplace health and

safety programs nationwide. In all, 26 states administer their own programs under federal supervision. Several have been criticized in recent years for capitulating to lawyered-up employers, performing subpar inspections and shutting out accident victims' families.

Officials in Kentucky didn't tell Harville and Hall's husband that the Toyo violations had been dismissed. They found out in 2010 only because Ron Hayes, a fellow Alabamian who runs a nonprofit advocacy group for families of fallen workers, had taken an interest in the case and checked in regularly with the Department of Workplace Standards.

Hayes — whose son, Pat, died in a Florida grain elevator accident in 1993 — lodged a formal complaint against Kentucky with the U.S. Department of Labor's Occupational Safety and Health Administration, which concluded in June 2011 that the state had erred.

"Deleting citations in their entirety sends a signal to employers that they need only contest to alleviate the burden of history," OSHA's regional administrator in Atlanta, Cindy Coe, wrote to Hayes.

In a written statement, Kentucky's Department of Workplace Standards said it dismissed the vio-

lations after determining that “the case would not have withstood legal challenge.” Instead, the department and Toyo entered into a settlement agreement, which provided for follow-up inspections. Toyo’s alleged failure to meet the terms of that agreement led to the reinstatement of the violations last month.

The reinstatement showed that the violations never should have been dropped in the first place, Hayes said. “It’s vindication, because we said all along this was wrong,” he said.

The president of Toyo Automotive Parts did not return calls seeking comment. In a 2008 legal filing, Toyo denied responsibility for Tina Hall’s death, calling the accident “the result of unforeseeable, isolated acts undertaken by an individual employee.”

## Problems in the states

Under the Occupational Safety and Health Act of 1970, states that choose to regulate workplace health and safety must ensure that their programs are “at least as effective” as the federal one. OSHA pays up to half the cost of such programs and is supposed to keep tabs on them.

By some accounts, it hasn’t done a particularly good job. After press

reports about a rash of construction worker deaths in Las Vegas, OSHA reviewed the Nevada program in 2009 and found a long list of flaws. Among them: State inspectors weren’t sufficiently trained to identify construction hazards and were discouraged by managers from issuing “willful” violations — which suggest an employer showed “plain indifference to the law” and can lead to stiff penalties — to avoid protracted court battles.

OSHA looked at the programs in the 25 other states that administer their own, finding deficiencies such as uncollected penalties in North Carolina and misclassified violations in South Carolina. Kentucky, OSHA found, was taking too long to issue citations and wasn’t making complainants aware of “specific official findings.”

In 2011, the Labor Department’s inspector general reported that OSHA hadn’t found a suitable way to measure the effectiveness of state programs. In his response to the IG, OSHA chief David Michaels wrote that the agency was developing a new monitoring system that would involve, among other things, reviews of state enforcement case files.

Still, Hayes believes that “systemic problems” persist. “Oversight

from federal OSHA has been lacking for the past 42 years,” he said. “There are so many different problems from state to state.”

Indeed, Hawaii’s program — described as “poor” in a 2010 OSHA report — has been severely hampered by budget and staffing cuts for the past three years. Things got so bad that state officials recently asked the federal government for help.

### **‘The Five Commitments’**

In its 2007 annual report, Toyo Tire & Rubber Co., a Japanese conglomerate that makes tires, auto parts and chemicals in plants around the world, lists what it calls “The Five Commitments.”

“We make safety our highest priority in the provision of products and services,” reads Commitment No. 2.

Tina Hall thought otherwise, according to her husband. At the time of the accident in June 2007, she was trying to transfer out of the Franklin plant’s adhesive department because the job required her to spend time in the mixing room, where toxic and flammable chemicals were stored.

“She talked about how bad the fumes were in that room,” said L.V.

Hall, who lives in Bremen, Ala. “She said something about the disposal of chemicals — they weren’t doing it right. I’d been wanting her to get out of that mess.”

Tina Hall and other team leaders would go into the mixing room to fill plastic bins, known as totes, with solvents such as toluene. They’d clean gummed-up machine fixtures in the totes. Team leaders also would fill five-gallon buckets with solvents and carry them to adhesive machines on the factory floor. The solvents were used to take residue off the machines.

Kentucky’s Department of Workplace Standards would later cite Toyo for obstructing exit routes in the mixing room, not keeping flammable liquids in covered containers when they weren’t being used, failing to control vapors and having inadequate fire-protection equipment.

On the night of the accident, Tina Hall was cleaning fixtures by herself when a spark, likely caused by static electricity, ignited toluene vapors and set off an explosion in a 55-gallon drum of methyl isobutyl ketone, another solvent.

Then a General Motors assembly line worker, L.V. Hall was awakened at home in Auburn, Ky., by a call from a Toyo team leader around



midnight. His wife, on fire, had managed to get outside and roll on the ground. “How she got outside I don’t know,” Hall said. “It was like an obstacle course to find the exit door.”

Tina Hall was taken to a local hospital, then to Vanderbilt University Medical Center in Nashville, about 45 minutes away. L.V. had a brief talk with her before the doctors put her into a coma to shield her from the pain. “She said, ‘I did everything the way I was supposed to do it,’” Hall said. His wife drifted off and never regained consciousness. She died on June 12, 2007.

### ‘Travesty of justice’

Not long afterward Tina Hall’s younger sister, Amy Harville, was directed to Ron Hayes by an acquaintance. Burly, white-bearded and tenacious, Hayes lives in Fairhope, Ala., and runs the FIGHT Project, which helps families navigate the bureaucracy of workplace fatality investigations. Hayes counseled Harville and L.V. Hall as the state’s inquiry into the Toyo accident progressed.

When the Department of Workplace Standards issued 16 serious violations against the company in No-

vember 2007, “I was OK with it,” L.V. Hall said. “I didn’t realize that once that’s done, these attorneys can get in there and just do away with it.”

Documents obtained by the Center for Public Integrity under the Freedom of Information Act show how Toyo’s lawyer, Mark Dreux of Arent Fox in Washington, D.C., fought the state of Kentucky from the beginning. Dreux declined to comment on the case.

In March 2008, the state offered to reduce the penalty from \$105,500 to \$74,000. Dreux refused. In June 2008, the state proposed a further reduction, to \$15,000, for three violations. Dreux said no. In November 2008, Dreux got what he wanted: No violations and no fine.

It was Hayes who first learned, in July 2010, that all the violations had been deleted. He alerted Harville.

“I was devastated,” she said. “It takes you back all over again, like Tina was killed for the second time.”

She called L.V. Hall, who reacted similarly. “I was just shaking I was so upset,” he said. He called the Department of Workplace Standards and finally reached “the lady attorney who was over the case. I basically told her, ‘I cannot believe y’all dropped every one of those citations.’ She said, ‘Well, Mr. Hall, I

am an attorney and there was not enough evidence.”

Hayes knew what to do. He filed a CASPA — Complaint About State Program Administration — with OSHA’s Atlanta regional office, calling Kentucky’s dismissal of the citations a “travesty of justice.”

After an investigation, Regional Administrator Cindy Coe, in essence, agreed, writing in June of last year that “the violations were well documented and legally sufficient and there was no definitive evidence in the file that indicated that they could not be supported.” Deleting all the citations, Coe wrote, erases an employer’s safety history and deprives regulators of critical information should subsequent enforcement actions commence.

“It also signals to compliance staff that their efforts are for no good end, if the point is to drop everything at the threat of going to court,” the administrator wrote. “It further signals to employees in the workplace that there is no entity on their side.”

In his response to Coe, the commissioner of the Kentucky Labor Cabinet, Michael Dixon, wrote that the state “does not retreat from litigation” but didn’t believe it could defend the case before the Kentucky

Occupational Safety and Health Review Commission, an appeal body.

In May, a state inspector returned to the Toyo plant in Franklin to see if the company had done all the things it said it would do after Tina Hall’s death — making sure supervisors were trained in the correct way to clean fixtures, for example. It hadn’t.

In a July 5 letter, Susan Draper, then director of the Kentucky Labor Cabinet’s Division of Occupational Safety and Health Compliance, notified Ronald Wyans, president of Toyo Automotive Parts (USA), that the 16 original citations had been reinstated, as had the proposed \$105,500 penalty. The Tina Hall case had come full circle.

Sometime in the next few weeks, Amy Harville, L.V. Hall and Hall’s lawyers expect to meet with Dixon and Toyo counsel. They expect to learn whether Toyo intends to accept its punishment or continue fighting.

“When somebody gets killed in one of these workplaces, it shouldn’t be this way,” L.V. Hall said. “I had Ron Hayes on my side and he knew what to do. Most people don’t have Ron. These citations never would have been brought back without him.” ■

# Fishing deaths mount, but government slow to cast safety net for deadliest industry

*By Ronnie Greene*

Published Online: August 22, 2012

**N**ARRAGANSETT, R.I. —  
“Get your panic out now!”

Veteran fisherman Fred Mattera stands atop a fishing trawler at the Point Judith Harbor, seagulls squawking by and a fishy mist in the air, and instructs the seven mostly young, tattooed men standing before him to pull on life-safety immersion suits that cover them from foot to head, to zip up and plunge feet first into the water. Then two groups of fishermen interlock like centipedes and take turns paddling backward until they reach a life raft where, going smallest man first, they pull in one by one.

This is survival training, and the plunge-and-rescue dry run is meant to gird the fishermen for the real thing, which comes too often

in an industry beset by a high death rate and fragile federal net of protection.

Commercial fishing is the deadliest vocation in the United States. Four years running, from 2007 to 2010, the Bureau of Labor Statistics ranked commercial fishing as the most dangerous occupation in the United States. From 2000 to 2010, the industry’s death rate was 31 times greater than the national workplace average.

And no place, a recent National Institute for Occupational Safety and Health report reveals, is more deadly for commercial fishermen than the East Coast. From 2000-2009, the NIOSH report shows, 165 fishermen died from Florida to Maine. That’s more than Alaska — 133 deaths — which had long been



**As safety instructor Fred Mattera looks on, a fisherman jumps into the water in Narragansett, R.I., during a safety drill this month. The immersion training is intended to help curb casualties in the deadliest vocation in the United States, an industry beset by a high death rate and fragile federal net of protection.**

Jesse Costa/WBUR

viewed as the most brutal place for commercial fishing but saw deaths dip amid a safety push. It's a greater death toll than in the Gulf of Mexico, which suffered 116 deaths, or the West Coast, with 83.

The U.S. Coast Guard has been granted only spotty powers to safeguard commercial fishing vessels,

and the industry, steeped in a tradition of independence on the high seas, has long resisted government intrusion. Yet some longtime fishermen from Alaska to New England agree the federal safety net has left workers vulnerable.

"This has been an industry where there just hasn't been a vigorous

pursuit of safety at the federal level,” said former congressman James Oberstar, who held fishing safety hearings in 2007 as chairman of the Committee on Transportation and Infrastructure.

Advocates are trying to cast a new culture of safety. The immer-

sion training in this seaside resort is one piece of a still-in-the works campaign — and, until full federal reform comes, a key ingredient to curbing losses at sea.

“Panic sets in when you don’t know what to expect,” said Mattera, who scrapped his dreams of going to law school 40 years ago when a roommate took him on a fishing boat, and who now runs a company leading safety seminars. “We’re taking that unknown out of it.”

In this tightly knit Rhode Island community, nearly everyone knows someone who died at sea.

“It’s like being a race car driver, one of those things you don’t want to talk about,” said lobster boat captain Norbert Stamps, who took part in the safety session with three crew members from his boat, the Debbie Ann.

“We were all resistant in the beginning,” he said of the hands-on drills. “You now realize this isn’t fun and games. This is really serious stuff.”

Stamps began fishing at 13 and, after more than four decades on the water, said he takes his family to services for brethren lost at sea. “I’m preparing them for the fact that someday, something might happen,” he said. “You stay at sea long enough, everything happens.”

## Key Findings

- One hundred sixty-five fishermen died along the East Coast from 2000-2009. That’s more than anywhere else in the United States, including Alaska and the Gulf of Mexico.
- The U.S. Coast Guard, which regulates fishing vessels, does not have “broad authority” to inspect the boats — only “little bits and pieces of authority,” according to a former U.S. House of Representatives staffer who helped write safety laws.
- The U.S. Coast Guard Authorization Act of 2010 requires the Coast Guard to inspect fishing vessels’ safety equipment every two years. The law does not require dockside inspections of the boats themselves.

A decade ago, Mattera tried to rescue a friend's 22-year-old son from a fishing hold 125 miles out to sea. The Rhode Island fisherman, Steven Follet, had collapsed, apparently after poisonous gases accumulated in the hold. Airlifted to a Cape Cod hospital, he died.

"Believe me, to this day it's haunted me," Mattera said. "Could I have gotten there five minutes sooner? All these things: My kid's the same age as his. I will never forget coming in, going to see the family. In their eyes I was a hero. In my eyes I was a failure."

"In the end he's not alive, and I swore to them, promised in his legacy we would change this culture of fishery."

At his office overlooking the docks here, Mattera keeps a small picture of Follet on the wall near his desk. "It's always in the back of your mind," he said.

## Inspection push snagged in Congress

For decades, safety advocates and government regulators have pushed for mandatory inspections of the often decades-old boats that take to deep water to bring back scallops, fish, squid and lobster.

And for decades, Congress has stood still. Despite the strikingly high death rate among the men and women who live by the boat, the federal government has never required inspections of commercial fishing boats. The Coast Guard performs voluntary exams of safety equipment, and Congress recently acted to make those dockside reviews mandatory. But the law has yet to mandate detailed inspections of the vessels themselves.

"Fishing vessels are uninspected, so the Coast Guard doesn't have jurisdiction to go on and look at the condition of the vessel. There's no standards that a fishing vessel has to be built to or maintained to. That's much different than a ferry or cargo ship," said Jennifer Lincoln, a NIOSH epidemiologist based in Alaska who leads the agency's Commercial Fishing Safety Research and Design Program.

"Every time there's a vessel loss with high numbers of lives lost and the Coast Guard has done an investigation, one of the recommendations that always comes back is that these vessels should be inspected," Lincoln said. "There's industry push back: 'That would be an expensive thing to do.'"

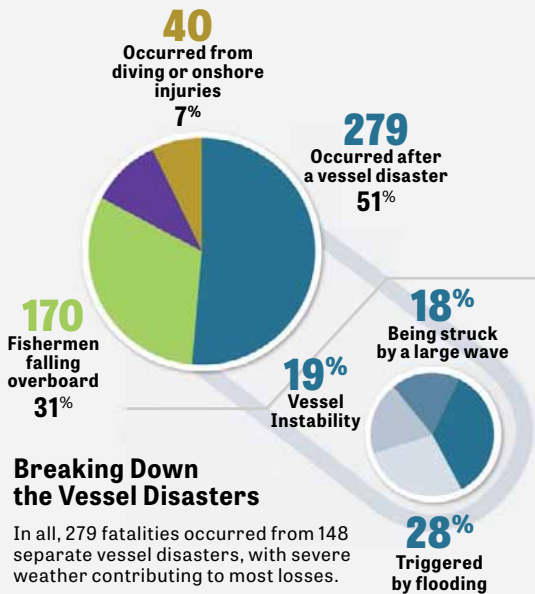
Pushing for sweeping safety

changes, she said, is “like planting a tree.” The government can press for one change, and hope it sprouts into another. NIOSH can suggest reform, but has no law-writing power. That rests with Congress.

The National Transportation Safety Board has argued for vessel inspections and, in 2010, held a forum on fishing safety. “Fishermen tolerate long absences from home, inhospitable environments, and workplaces that are teeming with heavy, dangerous equipment while constantly in motion,” board member Robert L. Sumwalt III said at the hearing. “For some, the price paid is even higher: hypothermia, loss of limbs, and even death.”

From 2000 to 2010, 545 commercial fishermen died in the U.S., reported NIOSH, part of the Centers for Disease Control and Prevention. More than half of these deaths occurred after a vessel disaster, with

## From 2000-2010, 545 commercial fishermen died while fishing in the U.S.



SOURCE: The National Institute for Occupational Safety and Health (NIOSH)



Graphic by Alani Winston

boats sometimes swallowed by the sea. Another 30 percent involved fishermen falling overboard. Other deaths came from accidents on board, or while crew were diving or injured on shore.

Atlantic scallop fishermen suffered some of the highest death

tolls, with a fatality rate more than 100 times the national average from 2000-2009, and some of the industry's most notable disasters.

In December 2004, vast swells rolled the New Bedford, Mass., scalloping boat Northern Edge on its side, plunging the crew of six into frigid waters 45 miles off Nantucket. One man survived, making the Northern Edge New England's deadliest fishing tragedy since the sinking of Gloucester, Mass.'s Andrea Gail in 1991, a case that inspired The Perfect Storm book and movie.

"I often wonder what is the true price of a pound of scallops," fisherman Christopher Gaudiello said at the funeral for Northern Edge victims.

Mattera said the work can be brutal. "If you went scalloping for 10 days and stood in that box for 18 hours a day, day after day after day, you would not believe how fatigued you are," Mattera said. "You cannot compare it to anything. Shuck and

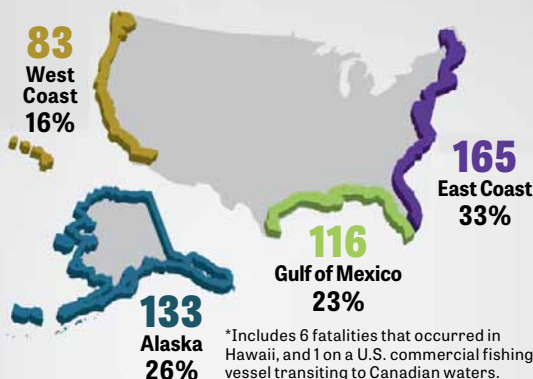
shuck and shuck, you would not believe the monotony. You are in constant pain. ... You are bringing a steel cage swinging in the seas. Man, that stuff hits you, you are a dead man or you are breaking hands, you are cracking skulls."

There's a human cost to the industry push back and congressional inaction, experts say.

Richard Hiscock, a longtime marine safety advocate from Vermont who worked as a U.S. House of Rep-

## U.S. commercial fishing deaths by region, 2000-2009, 504 total\*

As this map shows, the East Coast suffered the highest fishing death toll in a recent 10-year period.



SOURCE: The National Institute for Occupational Safety and Health (NIOSH)



Graphic by Alani Winston



representatives staffer in helping to write safety laws, said government is too often “reactive to casualties.”

Marine safety laws on the books, he said, “have been what I described as the little Dutch boy going around putting his finger in the dike,” Hiscock said. “Every time there’s a major casualty there will be a lot of hubbub and there will be an investigation to see what we can do to improve the existing statutes and plug a loophole.

“And they’ve been doing this since 1838.”

Hiscock draws a contrast between the Federal Aviation Administration, which has broad power to ensure airplanes fly safely, and the Coast Guard. “Congress has given the Coast Guard little bits and pieces of authority, not the broad authority,” he said.

The Coast Guard’s website includes a Hiscock report, “The Tragedy of Missed Opportunities,” that details failed reform attempts dating years. In 1999, a Coast Guard

## The most hazardous fisheries in the U.S., based on overall fatalities from 2000-2009:

Number of deaths in each category



SOURCE: The National Institute for Occupational Safety and Health (NIOSH)



The Center for  
Public Integrity

Graphic by Alani Winston

task force issued *Living to Fish*, *Dying to Fish*, a report citing the industry’s high casualty rate and lack of deep reform.

“Despite long-standing recognition of the serious hazards of commercial fishing, a long succession of proposed laws were not enacted,” the report concludes. “Many fishermen accept that fishing is dangerous, and lives are often lost. Many of those harvesting the bounty of our ocean frontier staunchly defend the independent nature of their profession, and vehemently oppose outside interference.”

Indeed, many fishermen have fiercely opposed government regulations — challenging, for instance, fish catch quotas some say hasten dangers at sea.

## Reform's Piecemeal Rollout

Strides have come, but slowly.

In 1988, Congress passed the Commercial Fishing Industry Vessel Safety Act, requiring fishing boats to carry survival craft, personal flotation devices and other safety equipment on board.

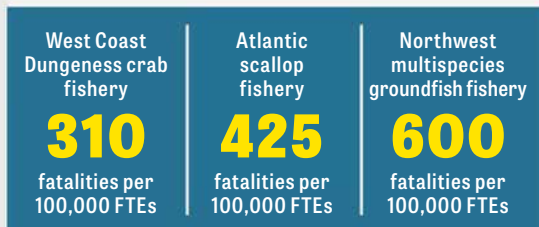
The regulations went into effect in 1991. A year later, the Coast Guard sought authority to inspect fishing boats. Approval never came.

“Whether the industry was lobbying enough or Congress didn’t see the need for it, we just weren’t given the authority,” said Jack Kemerer, division chief of the U.S. Coast Guard’s Fishing Vessels Division.

Kemerer said the 1988 law and subsequent tweaks have helped drop death tolls from even higher

## The highest death rates per 100,000 full-time equivalent works, 2000-2009

How the fishing industry's death rate far exceeds the national workplace average of 4 deaths per 100,000 workers:



SOURCE: The National Institute for Occupational Safety and Health (NIOSH)

 The Center for  
Public Integrity

Graphic by Alani Winston

numbers in the 1980s. “There have been improvements based on the law and safety programs and safety initiatives,” he said.

“But,” he added, “fishing still remains the most hazardous occupation in the country.”

In 2007, the House Subcommittee on Coast Guard and Maritime Transportation held hearings, citing a string of tragedies from Alaska to Maine that had taken 22 lives in recent months.

A core of veteran fishermen, their spouses and safety advocates told

the panel how they had lost friends to the seas.

“If we had regulated airline safety the same way we have regulated fishing vessel safety, all passengers on an aircraft would be issued a parachute and be trained in how to use it,” said Jerry Dzugan, executive director of the Alaska Marine Safety Education Association. “The fishing vessel safety act focuses on survivability after a vessel loss. By anyone’s definition, this is a reactive, rather than a proactive approach to casualties.”

Maine lobster fisherman Robert Baines described finding two teenage boys — aspiring fishermen — drowned in the cold April waters after their boat, inadequate for the weather conditions, capsized. One boy’s body washed ashore; Baines found the other in the water. “I will never forget that unnecessary tragedy,” he said. When the 1988 law passed, he said, the Maine Lobstermen’s Association opposed safety requirements for state registered vessels. “Times have changed,” said Baines, chair of Maine’s Commercial Fishing Safety Council.

Oberstar, then the transportation committee chair, concluded that the government needed a “much more vigorous program” and national standards to safeguard the industry.

He too draws a contrast between the FAA’s powers and those handed the Coast Guard. “Safety in aviation shall be maintained at the highest possible level, not the level industry can afford,” Oberstar said, and flights can be grounded with a mechanic’s signature. “That’s the kind of standard we need for Coast Guard inspectors.”

That standard has not come, but another reform swell passed with the U.S. Coast Guard Authorization Act of 2010. Congress approved an amendment requiring the Coast Guard to examine safety equipment on commercial fishing vessels every two years.

Now, fishermen can seek voluntary examinations of their safety equipment. If they pass, they get a sticker. If they fail the so-called “No Fault Exam,” no violation is issued. Captains of failed boats do risk citation if they take to the seas and happen to be boarded by the Coast Guard. The 2007 congressional hearing, however, revealed that less than 10 percent of the commercial fishing fleet took advantage of the voluntary program.

But even that voluntary review couldn’t ensure fishermen knew how to use the equipment. “That’s like taking your car in to go in for a

safety sticker, and then you get into it and you don't buckle up and you drive down the highway," said Rodney Avila, a New England fisherman and safety advocate.

Under the new rules, which could go into effect later this year or next, the Coast Guard will check to ensure safety equipment is up to date and boats have proper life preservers, survival suits, life rafts, flares, alarms and documentation. The Coast Guard has not yet decided what consequences would follow a failed exam — but one possibility is that the boat would not be allowed to sail.

The rules also call for enhanced training of fishermen and lay the groundwork for safety compliance programs for older or substantially changed vessels.

Still, the pending mandatory dockside exams do not call for Coast Guard inspections of the vessels themselves. That would entail a "cradle-to-grave program" in which the Coast Guard issues a certificate of inspection, re-inspects the boat every year and conducts an out of water inspection every five years.

There's a big difference, the Coast Guard's Kemerer said, between an exam and a fuller inspection. "Safety would certainly be improved," he said.

To some, having equipment exams but not the vessel inspections is like checking a car's seat belts and air bags, but never getting around to the engine and frame.

## Who is to blame?

"That's the \$64,000 question," Hiscock said. "It's a shared responsibility. Congress has never had the courage to do it, and the industry has never pushed for it."

Kemerer said the exam could be a step toward more extensive inspections one day. The stakes, he said, warrant it. "When a serious emergency develops ... the fishermen, if they haven't practiced getting into their life suit or how to deploy a life raft, they are facing death," he said. "Sometimes you only have a matter of minutes."

Still, a question begs: If inspections came, who would pay for them in an industry with approximately 20,000 federally documented fishing boats and some 50,000 state registered vessels?

"We're talking about hundreds of inspectors that would be needed, but right now with the budget climate the way it is, there's no way we could get the number of inspectors," said Kemerer. "It would be great to

have it. The challenge would be: How do we accomplish it?”

Hiscock, the former House official, questions just how hard the Coast Guard has pushed for a full vessel inspection program. “They’re not up there lobbying for inspections constantly,” he said.

## Deaths at Sea

In a stretch of the U.S. where seafood is king, tragedies continue.

Up and down the East Coast, fishermen set out to make a living, but then lose their lives. Some were unprepared for the catastrophe confronting them, government records show.

- In March 2009, the 76-foot fishing vessel *Lady Mary* sank in 210 feet of water 65 miles off the New Jersey coast, killing six crew members. The NTSB said flooding, triggered by a hatch mistakenly left open during rough weather, sank the ship.
- In January 2009, the *Patriot* sank 14 miles east of Gloucester, drowning its two crew members. “The Coast Guard attributes the vessel’s loss to a rapid event, most likely a capsizing, that did not allow the crew time to respond or

access lifesaving gear,” a Coast Guard report found.

“Everyone thinks it’s never going to happen to them, that’s the problem,” said Avila, who served on the New England Fishery Management Council. “A lot of fishermen have never set off flares ... A lot of fishermen have been fishing for 40 years and they may not have inflated a life raft. Most people don’t read [the instructions] until you need it.

“And when you need it, you have a minute or two until the boat sinks.”

Avila is among the reform advocates in New Bedford, a city of 95,000 some 60 miles south of Boston founded by whalers. Fishing remains the city’s lifeblood and, occasionally, a cause of mourning.

A string of New Bedford fishing boats sank in frigid, rough waters beginning in 2004.

When the *Northern Edge* went down that winter, the sole survivor was a crew member who had taken safety training in Portugal. That survivor, Pedro Furtado, later filed a lawsuit and contended the boat operator improperly stored life safety suits in an engine room — where the crew couldn’t reach them in emergency.

In January 2007, New Bedford’s

75-foot Lady of Grace — battered by 40-knot gales, and taking on ice — went missing at sea as it staggered to escape the weighty chill and return safely to harbor.

On January 28, five days after Lady of Grace set out to lure fish and scallops, the Coast Guard found the vessel submerged in 56 feet of water at the bottom of Nantucket Sound. Like so many New England fishing boats, Lady of Grace was workman-like, not sleek, and aged — built 29 years earlier, its blue facade dotted with black marks.

Divers recovered the bodies of the captain, a fisherman for 25 years, and another crew member, in the business for 27 years. The bodies of the other two men did not surface. Heavy ice literally sank the boat, the Coast Guard concluded, drowning the men before they could reach port. Once more, the Catholic Church held solemn funerals, and the close-knit Portuguese community prayed for families left fatherless.

Avila knew everyone on that boat.

“I lost a lot of my friends that year, and it wasn’t a good feeling,” he said. “I was already into safety a little bit before that happened but that just confirmed it. I just dedicated myself to the safety program.”

A fisherman for more than five decades, Avila said he felt invulnerable to tragedy. After all, he reasoned, he always spent money for safety equipment.

“Even though I had all the best equipment, I didn’t know how to use it,” he told the NTSB forum in 2010. “And right then and there, a light bulb went off and I started looking at all my fellow fishermen in my port one by one, who had started fishing with me, and they were in the same boat — different vessels, but same boat. They had the best equipment, but they didn’t have the knowledge to use it.”

Avila got a wakeup call when he flew to Alaska for safety training himself. “I thought I knew everything there was to know about it until I sat in his class. And then I scratched my head the first, maybe the second day and I said, ‘Boy, I really know nothing about this,’” he told the NTSB.

Now, like his friend Mattera, he leads drills that prepare fishermen for the worst — and get them intimately acquainted with equipment that could save their lives. The best safety equipment is useless, he learned, unless you know how to operate it: How to quickly zip into a life suit. How to inflate a life raft,

send a mayday call, plug a gaping leak on a boat taking on water. With help miles away and unforgiving waves pounding, fishermen have scant moments to act.

“The problem with a boat, when something happens or breaks, you are out in the middle of the ocean,” said Mattera, the long-time fisherman from Rhode Island. “It’s not like you are out at the curb and can call AAA.”

Using the life-saving gear can mean the difference between death and survival.

Lincoln, the NIOSH official from Alaska, said getting into an immersion suit increases odds of survival by 7 percent. Getting into a life raft, she said, increases survival chances by 15 percent.

In Alaska, a safety campaign supported by industry helped lower the death totals. There, NIOSH studied the industry’s high fatality rate and focused on the sectors, such as the crab fishery, with the highest numbers. “NIOSH would look at the fishing data for the entire state, and we identified a hazardous fishery and then we worked with the Coast Guard and crab fishermen,” Lincoln explained. “What can we do to prevent these fatalities from happening?”

NIOSH intends to use the same targeted approach in the East Coast, Gulf Coast and West Coast, using its region-by-region breakdown as a guide. “What’s that one or two things we need to focus on to intervene so that fatalities start decreasing?” Lincoln asked.

Lasting reform, she said, requires industry buy in and a focused, not “one-size-fits-all mentality.” Having fishermen help lead safety drills is one piece of the puzzle. “If the training can be led by the fishermen, then they already have credibility by the people they are trying to train,” Lincoln said.

The potential for tragedy is compounded by the economics of an industry that experiences steep price swings — and feels the domino effect of a still-shaky economy. Looking to save money, some captains set out with fewer hands on deck, leading to fatigue during the long days on the water. They stay out in dangerous weather to lure the extra fish that will reel in a bigger bounty. And, they put off housekeeping.

“When you have economic hardship, a lot of times the first thing you neglect is the safety equipment,” Mattera said.

“Stretching it out,” he calls it. “It’s like having a home and knowing you

should paint your home every 10 years. And when 10 years comes it costs you \$10,000 to paint it and you already have a second mortgage. You either do it yourself, which ends up being half-ass, or you wait.”

Mattera said he and Avila had been complacent before tragedy spurred them to act. “Now we’re like pains in the asses to everybody because we’re so committed to this,” said Mattera, who until recently owned an 84-foot trawler, Travis & Natalie, named after his now-adult children.

After a boat goes down, Avila said, everyone starts pointing fingers. At the boat owner, the government, the regulations. His goal is to shift from the blame game to a culture where fishermen are prepared for chaos at sea. “If you go out fishing and you’re not prepared for any disaster, that’s like you going into a gunfight with a pea shooter.”

In Rhode Island this month, Mattera played the role of man overboard in another drill. Using their might and a yellow lifeline, two men pulled him back aboard. “Like a swordfish,” Mattera said, “235 pounds.”

One of the rescuers, Mike Galla-



**New England fisherman Mike Gallagher takes part in a safety drill in Rhode Island this month. A decade ago, Gallagher found a fishing friend, who had been missing at sea, dead on his boat. Jesse Costa/WBUR**

gher, recalled finding a friend dead on a boat in 2002. The man, fishing alone, had not returned at day’s end, and Gallagher searched for him the next morning. Trapped by equipment onboard, the fisherman was dead from head trauma.

“I used to fish alone back then,” said Gallagher. “I never went alone after that.” ■

**About this story:** *Our story about dangers in the commercial fishing industry was jointly reported by the Center for Public Integrity, WBUR in Boston and NPR News.*



# Worker suffocations persist as grain storage soars, employers flout safety rules

*By Jim Morris and Howard Berkes*

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**M**T. CARROLL, ILL.  
— Will Piper and Alex Pacas were being buried alive.

It was July 28, 2010, just before 10 a.m., and the young men strained to breathe as wet corn piled up around them in Bin No. 9 at the Haasbach LLC grain storage facility. A co-worker, Wyatt Whitebread, had already been pulled under.

The ordeal in Bin No. 9 played out over 13 hours as hundreds of townspeople maintained a vigil outside. In the end, Whitebread, 14, and Pacas, 19, were dead. Piper, 20, avoided suffocation by inches.

Whitebread, compact and athletic, was happy to have summer work. Pacas, slight and musical, was an aspiring electrical engineer just days away from re-



**Will Piper and Annette Pacas kneel at the grave of Pacas's son, Alex, one of two young workers who suffocated in a grain bin in Mt. Carroll, Ill., in July 2010. Piper narrowly avoided death in the same incident. John W. Poole/NPR**

turning to classes at Hamilton Technical College in Davenport, Iowa. He'd started at Haasbach the day before.

"He prayed for his life," survivor Piper said of Pacas's last moments. "He said all he wanted to do is see

his brothers graduate high school. And then he spouted off the Lord's Prayer very quickly, and shortly after that one last chunk of corn came flowing down and went around his face."

The three had been hired to keep

## Key Findings

- At least 179 grain entrapment deaths have occurred at U.S. commercial storage sites since 1984, a CPI-NPR analysis of Occupational Safety and Health Administration data shows.
- Initial OSHA fines imposed on employers in these cases totaled \$9.2 million but were reduced by almost 60 percent, to \$3.8 million, the analysis shows.
- The five largest fines, which ranged from \$530,000 to \$1.6 million, were cut by 50 to 97 percent.
- Since 2001, there have been at least 19 fatal and non-fatal grain entrapment incidents that drew "willful" OSHA citations, which trigger consideration of federal criminal charges. Eight of these cases were referred to prosecutors. Three resulted in charges and one is under review.
- At least 663 people have died in U.S. grain entrapment incidents since 1964, according to Purdue University professor William Field. Another 283 people were engulfed but survived. The worst year for fatal entrapments was 2010, when 26 people died.
- A re-analysis of entrapment data by Field — based on additional cases found by CPI and NPR — concluded that 52 percent of the 946 entrapments with known locations occurred on farms, most of which aren't regulated by OSHA, and 48 percent at commercial facilities, which are. Field, whose work is often referenced by OSHA and industry, had previously reported that 70 percent of the incidents occurred on farms.

corn flowing in the bin, one of 13 in the Haasbach complex on Mill Road in Mt. Carroll, population 1,700. They'd been sent in with pick axes and shovels that morning to break up corn piled 10 to 24 feet high in the bin and knock clumps from the walls. No one had told them they needed to wear safety harnesses — stored in a red shed nearby — to keep from sinking.

"I had no idea that someone could get trapped and die in the corn," Piper told investigators with the Department of Labor's Occupational Safety and Health Administration.

Grain storage in the United States is surging, in part because of the boom in biofuels. Yet at worksites, farmers and commercial operators keep making the same mistakes. Workers, some of them young, keep drowning in grain or getting hurt.

The practice known as "walking down grain" is illegal. Federal penalties for employers who permit or require it, however, are routinely pared. Since 1984, OSHA has cut initial fines for grain-entrapment deaths by nearly 60 percent overall, an analysis of enforcement data by the Center for Public Integrity and NPR shows. And even in the worst

instances of employer misconduct, no one has gone to jail.

Twenty-six people died in entrapments in 2010, the worst year in decades. At least 498 people have suffocated in grain bins since 1964, according to data analyzed for the Center and NPR by William Field, a professor of agricultural and biological engineering at Purdue University.

At least 165 more people drowned in wagons, trucks, rail cars or other grain storage structures. Almost 300 were engulfed but survived. Twenty percent of the 946 people caught in grain were under 18.

"At some point we're going to have to decide whether these incidents are just accidental ... [or] somebody's really making horrendous decisions that approach a criminal level," said Field, who has studied entrapments since 1978 and served as an expert witness in grain-death lawsuits and as an industry and OSHA consultant. "It's intentional risk-taking on the part of the managers or someone in a supervisory capacity that ends up in some horrific incidents. The bottom line is if you ask them why they did it, it was because it was more profitable to do it that way."

After the Mt. Carroll accident,

OSHA sought to make an example of the farming families that owned Haasbach by proposing a \$555,000 fine for 25 alleged safety violations.

The Labor Department's Wage and Hour Division tacked on a \$68,125 fine for the illegal employment of Wyatt Whitebread and three others who were too young to be working in a hazardous setting like a grain bin. OSHA sent its case to the Department of Justice and the state's attorney in Carroll County, Ill., for possible criminal prosecution.

Although Haasbach paid the full amount for the child labor violations, the OSHA fine was reduced to \$200,000. The Justice Department declined to prosecute, according to a Labor Department document provided to the Center in response to a Freedom of Information Act request. The state's attorney "indicated lack of interest" in pressing charges, the document says.

Haasbach has been dissolved. Its officers declined through their lawyer to comment.

In an interview at their home, Wyatt Whitebread's parents spoke of their lingering disquiet. They have brought a wrongful-death lawsuit against the principals of Haasbach and the company that leased the

facility at the time of the accident, Consolidated Grain and Barge Co.

"I guess I'm vengeful," said Gary Whitebread, a large-animal veterinarian. "I want [the defendants'] life to be affected like mine. I want them not to be able to go about their daily business like nothing happened."

"You know, if nothing happens of this, then boys that age are expendable," said Carla Whitebread, a high school Spanish teacher. "There's no recourse for it. It didn't hurt the company at all. And if nothing else happens, then why not hire 14-, 15, 16-year-old boys and just put them in there ... what's the difference? It's not going to cost you anything."

Wyatt Whitebread was 14 when he died inside Bin No. 9 at the Haasbach LLC grain storage facility in Mt. Carroll. John W. Poole/NPR

Bin No. 9 at Haasbach LLC, where two workers died and a third barely survived. John W. Poole/NPR

## **Panic in Bin No. 9**

Until Haasbach LLC acquired it in 2005, the grain-storage complex where Wyatt Whitebread and Alex Pacas died had been owned and operated by Consolidated Grain and Barge, a Louisiana firm with grain operations in 70 locations, mostly in



**Wyatt Whitebread was 14 when he died inside Bin No. 9 at the Haasbach LLC grain storage facility in Mt. Carroll.** John W. Poole/NPR

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the Midwest. The complex, about 10 miles east of the Iowa line, has a storage capacity of 2 million bushels.

Haasbach was formed by three farming families in northwestern Illinois; two of them, the Haases and the Harbachs, had operational control of the Mt. Carroll facility. After taking charge — “We purchased it for the storage of our grain rather than building more storage at home,” Willard Harbach explained in a deposition — Haasbach leased

it back to Consolidated, which handled the weighing and inspection of the corn and dictated its condition. Haasbach’s and Consolidated’s corn was intermingled.

The corn crop stored in the summer of 2010, harvested the year before, was unusually wet, making it prone to clumping. People had to be sent into the bins to break it up; the Haasbach manager, Matthew Schaffner, needed extra help.

That summer, Schaffner’s daugh-

ter, Marti Jean, loaded trucks and cleaned out bins at Haasbach for \$8 an hour. Then 15, M.J., as she was called, recruited her friend, Wyatt Whitebread, to work in the bins. He started July 19. Will Piper started the next day. At Piper's suggestion, Matt Schaffner brought on Alex Pacas — known to friends as Paco — on July 27.

“Our job was to break up the rotten chunks of corn that prevented the corn from flowing into the center of the bin,” Piper said in an interview. “The training I received was just from Wyatt, telling me how to break up the corn, the best way that he did it. Later that day Matt came up and just kind of expressed to stay away from the center hole in the bin so that we didn’t get sucked up into that.

“But there was no safety training or anything like that.”

On July 28, Piper, Pacas, Whitebread and a fourth worker, 15-year-old Chris Lawton, showed up around 7 a.m. and were sent into Bin No. 9. It was a hot, humid day. Conditions inside the bin were oppressive.

About 9:45 a.m., Matt Schaffner opened the second of three holes in

the bottom of the bin with the aim of improving the corn’s flow.

“It created kind of a quicksand effect,” Piper said. “So we worked around it and we were aware of it, and after a while ... Wyatt ended up



**Bin No. 9 at Haasbach LLC, where two workers died and a third barely survived.** John W. Poole/NPR

getting caught up in it and started screaming for help. Me and Alex went in after him, and we each grabbed one side of him under his armpits and started dragging him out, and got pretty close to the edge of the quicksand and then we started sinking in with him.”

Lawton scrambled out of the bin and went for help; he was so distraught he could barely speak. M.J. Schaffner turned off the conveyor

that was running under the bin and making matters worse by drawing down the corn. She told her father that Piper, Pacas and Whitebread were stuck.

“And it was just me and Alex standing there up to our chests completely, just trapped in the corn,” Piper said. “And Wyatt was underneath. I was hopeful that he was still alive, but at this point I’m pretty sure that he suffocated pretty quickly. The pressure underneath the corn was just too great.”

Matt Schaffner climbed into the bin and began digging frantically to reach Wyatt. “After, like, 30 seconds of digging he realized that he wasn’t getting anywhere and there was no hope,” Piper said. “So he set his shovel down and I told him to go back outside so that the rescuers knew what bin to go in.”

Schaffner climbed out of the bin. The corn kept flowing around Piper and Pacas. “After a little bit [Pacas’s] hand was sticking up above the grain and I could just see his scalp, and his hand stopped moving,” Piper said. “And the corn was up to my chin at that point. And it was slowly trickling down ... and I was about to be covered, too.”

Piper believes he was saved by the two inches of height he had

on Pacas and a bottomless plastic bucket a firefighter had jammed over his head to keep the corn away from his face. The rescuers began vacuuming away the corn, a process that took about six hours. They



**Lisa Jones, whose children were friends of the Mt. Carroll victims, says the 2010 accident still reverberates in the small town.** John W. Poole/NPR

were able to yank Piper out by the arms at about 4 p.m. He was put on stretcher and airlifted to a hospital in Rockford, 60 miles away.

Outside the Haasbach complex, a crowd was gathering. “We just sat on the grass, crying, and just waited and more people came,” said Lisa Jones, a mother of six who knew Whitebread, Pacas and Piper.

## “One of the things as a mom I’ve really struggled with is that my son died in terror. He didn’t die in peace.”

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“Church people came and brought food and water.”

Teenagers, many of them Whitebread’s classmates at West Carroll High School, filled the parking lot at the Land of Oz, a convenience store across the highway.

Jones stayed with Pacas’s mother, Annette, as the hours passed. Jones’s husband, Matt, a funeral home owner and the Carroll County coroner, was getting regular updates on the rescue effort and relayed the information to his wife by cell phone. “We knew it wasn’t good,” Lisa Jones said. Rescuers cut a series of triangular-shaped holes into the side of the steel bin, near the bottom, to help drain the corn. As it spilled out onto the ground, volunteers shoveled it away.

Word came that one of the workers was alive, though “they didn’t know which one,” Jones said. “And so all of the families were just sitting there, waiting, and then, finally, we knew Will was alive. And then they brought Will out and ... he had, like,

indentations all over his skin from corn.”

“The chaplain called us over and he said they got Will out and he was face to face with Alex and Alex is deceased,” Annette Pacas said. It took another six hours for Alex’s and Wyatt’s bodies to be recovered.

“One of the things as a mom I’ve really struggled with is that my son died in terror,” Pacas said. “He didn’t die in peace.”

Gary Whitebread fixates on a detail he missed in the days prior to his son’s death.

After Wyatt broached the idea of working at Haasbach, Gary drove to the site. He saw workers sweeping corn from a near-empty bin; that, he understood, was what Wyatt would be doing. He allowed Wyatt to take the job.

In the Whitebread household, Gary did the laundry. During the brief period Wyatt worked at Haasbach, “my washer would be full of corn,” Gary said. “And I’d reach in his pockets and there’d be corn in



his pockets. And that should have been a red light to me. I mean, if you're sweeping an empty bin out or standing in corn maybe up to your knees, you're not going to have corn in your pockets."

Piper, the survivor, continues to struggle. "I guess the incident itself wasn't the worst part about it," he said. "It was the fact that I lost Wyatt and Alex. ... They were both like family, like brothers, to me."

Tall and thin, with close-cropped red hair, Piper was a self-described "band geek" in high school who held jobs at the Dairy Queen in Mt. Carroll, the Metform Machine Components factory in nearby Savanna and a Minnesota ski resort before signing on at Haasbach. He and the dark-haired Pacas, also a musician, were inseparable.

"He was the one person I shared everything with," Piper said. His goal is to raise money for a permanent headstone for Pacas's grave at the Oak Hill Cemetery; a teetering, weather-beaten plastic marker stands there today.

Wyatt Whitebread, younger and sandy-haired, was a mischievous charmer. "He would gather people to play baseball or soccer or blow up my backyard," Lisa Jones said, laughing. "I spent a lot of time say-

ing, 'Wyatt!' And he'd just smile real big and then you weren't mad anymore."

The OSHA investigation into the Mt. Carroll accident began the evening of July 28 and culminated not quite six months later with the issuance of three citations alleging 25 violations by Haasbach, including failing to train the four young workers in Bin No. 9 in "safe work practices" and failing to turn off the conveyor under the bin.

Twelve violations were classified as willful, suggesting Haasbach either disregarded or was "plainly indifferent" to the law. An internal OSHA document obtained by the Center and NPR offered justification for the willful violations: The people in charge of Haasbach had worked around grain for 30-plus years, the document says, and had heard about grain entrapments.

All told, OSHA wanted Haasbach to pay \$555,000 in penalties. As often happens, the final amount was whittled down.

A Center-NPR analysis of OSHA data shows that 179 people died in grain entrapments at commercial facilities — bins, rail cars, etc. — from 1984 through 2012. The fines initially proposed in these cases totaled \$9.2 million but were cut to

\$3.8 million, a reduction of 59 percent. Given that some of these cases are still open, the fines could drop lower still.

The five largest fines, which ranged from \$530,000 to \$1.6 million, were cut by 50 to 97 percent.

Haasbach wound up paying \$200,000 for the violations in Mt. Carroll, a 64-percent discount.

In an interview, OSHA chief David Michaels explained: “We had them open their books and we determined that \$200,000 was the appropriate fine. The company also agreed to go out of business and to notify OSHA if they ever went back into business, so we could conduct very strict oversight of them.”

Carla Whitebread was unimpressed.

“I mean, for the company, that amount of money doesn’t make any difference at all,” she said. Indeed, data compiled by the Environmental Working Group, a nonprofit research organization, show that the seven-member Har-



## ‘Buried in Grain’

**Nearly 180 people — including 18 teenagers — have been killed in grain-related entrapments at federally regulated facilities across 34 states since 1984, records show. Their employers were issued a total of \$9.2 million in fines, though regulators later reduced the penalties overall by 59 percent.**

**See the details and fine for each incident at:**  
<http://apps.npr.org/buried-in-grain/>

bach Family Partnership received \$6.5 million in federal farm subsidies from 1995 through 2011, Haas and his son \$1.4 million.

“When I first saw the fine of

half a million, I bawled,” Annette Pacas said. “A half a million dollars and you killed two kids and ruined a third. And now it’s down to [\$200,000] ... It’s disgusting.”

The Whitebreads, Annette Pacas and Will Piper have lawsuits pending against Haasbach and its lessee, Consolidated Grain and Barge. In court documents, each defendant blames the other for the accident.

Haasbach partner Robert Haas faulted Consolidated for storing corn with a moisture content exceeding 15 percent.

“They would always put grain in the bins in Mt. Carroll at 16 percent,” Haas told Kevin Durkin, lawyer for the Whitebread and Pacas families, in a deposition. “You get over 15 you almost know you’re going to have problems. [The corn] starts to rot. It will mold. It will stand up. It will just, you know, do everything that you don’t want it to do.”

Haas said he considered the facility a “farm entity,” beyond OSHA’s jurisdiction. Under questioning by Department of Labor lawyer Denise Hockley-Cann, however, he acknowledged that no crops or livestock had ever been raised on the property.

In the Labor Department deposition, Haas described Consolidated

as “a commercial grain buyer” and suggested that it bore responsibility for the job site. “Whatever has got to be done with the grain, Consolidated calls the shots,” he said.

Another partner, Willard Harbach, testified that he knew safety harnesses were kept on site but thought they were used to protect workers from falls, not to keep them from sinking into piles of corn. Both he and Haas said they were unaware that teenagers, some underage, worked in the bins.

“I now know that it’s illegal” to allow a 14-year-old to work in a commercial bin, Harbach said in a deposition taken by Durkin. Harbach added, incorrectly, that if Haasbach were a farm entity — which, in his eyes, it was — employing a 14-year-old “would not be illegal.” The Fair Labor Standards Act prohibits children younger than 16 from working in hazardous settings on farms.

Haasbach maintains that the families of Whitebread and Pacas are entitled only to workers’ compensation, not damages, because comp is the exclusive remedy for employees under Illinois law. Should this argument prevail, each family would receive only funeral expenses, capped at a certain amount. Gary Whitebread said he understood that Wy-

## “The harnesses that would have saved these kids were in a shed on the property, collecting dust and cobwebs.”

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att's death would be worth \$5,000 under workers' comp — not enough to pay for the funeral.

In its answer to the lawsuits, Consolidated — whose representatives declined to be interviewed for this story — denied that it managed the Mt. Carroll facility, although it kept a small office there and had employees on site.

“The danger of ‘walking down grain’ without employing proper safety precautions was known to Consolidated Grain and Barge and its employees involved in grain handling and grain storage,” the company stated in a court document. “However, Consolidated Grain and Barge was not involved in grain handling in the operation of Bin No. 9 on the date of the occurrence.”

Consolidated contended that Whitebread's and Pacas's negligence contributed to their deaths, Piper's negligence to his near-suffocation.

In his own deposition, Will Piper said there was no way the Consolidated employees could have missed

what was happening: He and other workers were entering bins without harnesses. “They're not stupid,” Piper said. “They watch us climb the ladders. What else would we be doing?”

Matt Schaffner told the Labor Department's Hockley-Cann that he did the hiring and handed out work assignments at Haasbach. He testified that he cautioned Wyatt Whitebread, Alex Pacas, Will Piper and Chris Lawton to stay away from the center of the inverted cone inside any of the bins and to wear dust masks.

Schaffner spent about five minutes on safety training for each of the workers, he said: “It was a pretty straightforward job.” The harnesses hanging in the nearby shed weren't discussed, Schaffner said.

Annette Pacas finds this inexcusable. “The harnesses that would have saved these kids were in a shed on the property, collecting dust and cobwebs,” she said.

Pacas's sister, Catherine Rylatt, was so shaken by the accident that



**Alex Pacas's aunt, Catherine Rylatt, became a grain-safety advocate after the accident in Mt. Carroll.** John W. Poole/NPR

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she formed the Grain Handling Safety Coalition and speaks regularly at agricultural conferences. She believes the Haasbach partners got off lightly.

"If the criminal case is gone, I think it's a missed opportunity and it pisses me off," said Rylatt, who lives near Dallas.

Carla Whitebread, a retired Army major and helicopter pilot, said she understood that when Consolidated owned the operation, prior to selling it to Haasbach in 2005, the company used its safety equipment. "And to the best of my knowledge, on the day that Haasbach took over

they just quit doing it. I don't know why they wouldn't have done it," she said. "And I can't believe that they put the boys in there, being so young."

Said her husband: "Anybody that worked in that office that knew kids were going into that bin without safety equipment should be held responsible. This is a multi-, multi-failure thing."

Alex Pacas's aunt, Catherine Rylatt, became a grain-safety advocate after the accident in Mt. Carroll. John W. Poole/NPR

Lisa Jones, whose children were friends of the Mt. Carroll victims,

says the 2010 accident still reverberates in the small town. John W. Poole/NPR

## **‘Cost of Doing Business’**

OSHA’s Michaels says the grain storage industry was on the agency’s radar even before Mt. Carroll. “We’ve been very, very hard on this industry,” he said. “We now do triple the number of inspections that we were doing four years ago. We continue to issue fines in excess of \$100,000 over and over again.”

On May 29, 2009, 14 months before the Haasbach accident, 17-year-old Cody Rigsby suffocated in a grain bin in Haswell, Colo. Like Wyatt Whitebread and Alex Pacas, Rigsby became entrapped while walking down the grain; three other teenagers, exposed to the same hazard, made it out alive.

OSHA proposed a \$1.6 million fine against the bin’s owner, Tempel Grain Elevators LLC of Wiley, Colo. The U.S. attorney’s office in Denver brought criminal charges against Tempel, and a plea agreement was reached in 2011: the company would pay \$50,000 to settle the OSHA case and another \$500,000 — all of which would go to Rigsby’s family — to close out the criminal case.

It would serve five years’ probation.

OSHA characterized the case as a victory.

Victim advocate Ron Hayes, who believes the criminal case against Tempel should have resulted in jail time, sees it as a failure. Authorities “had the perfect opportunity to send a clear message out to the grain facilities and CEOs of this country that we will not stand by and let you continue to kill our workers,” he said.

For Hayes, it’s personal. Around 1:30 p.m. on Oct. 22, 1993, he got a call at the X-ray clinic he managed in Mobile, Ala. His 19-year-old son, Patrick, had suffocated in a Florida grain bin. When Hayes and his wife, Dot, arrived at the scene, around 5 p.m., “they had just taken Pat’s body to the morgue,” Hayes said. “And, you know, I was really surprised because the company was still working. And I felt like this was a major disaster and I couldn’t understand why they were still working and didn’t feel like there was anything wrong.”

Pat Hayes had been sent into the bin, operated by Showell Farms Inc., with two other men to “walk down” the corn — keep it flowing. A screw-like device known as an auger, used to move corn out of the bin and into trucks, was running at the time, loosening the pile. Pat Hayes sank

in up to his knees, and his co-workers weren't able to pull him out as the corn began to cover him.

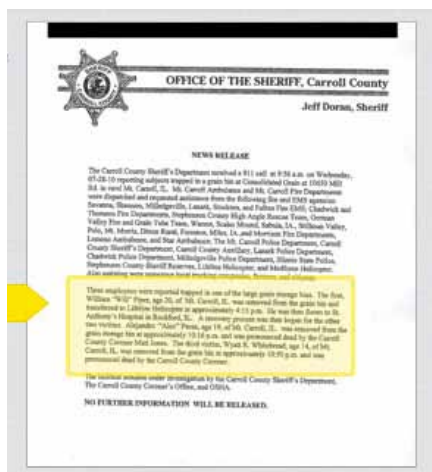
Showell Farms paid a \$42,000 fine for Pat Hayes's death, 92 percent less than the \$530,000 recommended by the OSHA inspector in the case. What began as willful violations were downgraded to "serious" ones, a move an OSHA reviewer later deemed inappropriate.

"After a careful in-depth review of this case," the agency's William Mason wrote in a confidential 1994 memorandum, "it is my strong belief that willful violations occurred." The Labor secretary at the time, Robert Reich, publicly apologized to Ron Hayes.

Hayes left the X-ray clinic and became a full-time advocate for families of workers killed on the job. In that capacity he met with Michaels and three other top OSHA officials in October 2010, three months after the Mt. Carroll accident.

"And in that meeting, [OSHA chief of staff] Deb Berkowitz says, 'Ronnie, can you help us figure out how we can stop these workplace deaths and injuries?'" Hayes recalled. "I said, 'The only way you're going to fix this is to put somebody in prison.'"

That has proven difficult. Under



**See more than 100 documents relating to the grain bin accident on the Center's website.**

the Occupational Safety and Health Act of 1970, an employer who commits flagrant violations that cause or contribute to a worker's death faces at most six months behind bars, a misdemeanor. By comparison, some environmental crimes — polluting a river or killing an endangered animal, for instance — are felonies.

"Sending a 14-year-old into a grain bin without proper safety equipment should be as unacceptable as discharging a pollutant into a waterway that kills fish," said Jane

Barrett, a former federal prosecutor who now teaches at the University of Maryland School of Law.

Labor Department data show that there have been at least 19 fatal and non-fatal grain entrapment incidents since 2001 that drew willful citations, which trigger consideration of federal charges. Eight of these cases were referred to federal prosecutors. Three resulted in charges and guilty pleas, though no jail time; one is still under review.

Gary Shapiro, the acting U.S. attorney for the Northern District of Il-

linois, had no comment on the Haasbach case, a spokesman said. Carroll County State's Attorney Scott Brinkmeier declined to be interviewed.

Brinkmeier could have sought involuntary manslaughter charges against the Haasbach partners, said J. Steven Beckett, a professor at the University of Illinois College of Law.

"I think it's a case that should have been prosecuted," Beckett said. "Somehow, these deaths are just a cost of doing business." ■

*Chris Hamby contributed to this story.*

## FOLLOW-UPS

# Rethinking OSHA exemption for farms

*By Jim Morris and Howard Berkes*

Published Online: March 24, 2013

**S**HOULD FARMS be regulated?

Corn storage on farms and in commercial structures doubled between 1978 and 2010, climbing from 5.4 billion bushels to a record 10.93 billion bushels, according to the U.S. Department of Agriculture.

With growth has come tragedy: worker entrapment deaths in corn or other grains — wheat, barley, soybeans — hit a recent peak in 2010, a Center for Public Integrity-NPR investigation found. In at least 51



incidents that year, 26 bodies were recovered. More than two-thirds of the entrapments occurred on farms, as did four of six incidents involving workers under 16.

Commercial operations are overseen by the U.S. Occupational Safety and Health Administration. Most farms aren't — but perhaps should be, some say.

"We've got farmers who are building more space and bigger space, and it's going to cause more issues," Jeff Adkisson, executive vice president of the Grain and Feed Association of Illinois, which represents commercial operators, said at a grain bin safety conference in Cedar Rapids, Iowa, last fall. "I think it's time for industry, for government, for all of us to pause and have the conversation again about who is exempt and who is not exempt from some of the standards."

Adkisson and others in the grain-storage industry have said for years that the bulk of entrapments occur on farms. This is based largely on the work of Purdue University professor William Field, who has put 70 percent of the incidents with reported locations on farms, 30 percent at commercial facilities.

But the Center and NPR found 60 fatal and five non-fatal cases in an OSHA enforcement database that were not included in Field's studies. All occurred at commercial operations.

In response, Field redid his numbers. He found that 52 percent of the entrapments with known locations took place on farms, 48 percent at commercial facilities.

The number of commercial grain bins in the U.S. has plummeted, from a peak of 15,305 in 1979 to 8,801 at the end of 2012, according to records kept since 1978. Commercial storage capacity rose from 6.99 billion bushels to 10.2 billion bushels during the same period.

On-farm grain storage increased from a low of 10.9 billion bushels in 1997 to 13 billion bushels today, according to records kept since 1987. USDA data show that about 306,000 farms have one or more storage structures, Field said. "Some of those may have 20 structures," he said. "So we're talking about several million facilities."

Randy Gordon, president of the National Grain and Feed Association, said his group and its state affiliates have redoubled safety efforts. “The OSHA standards, we think, are very adequate to address this danger,” he said. “There was an unfortunate spike [in deaths] that occurred but we have hopefully turned that corner now and we’re on the downward trend.”

Farms — most of which are unregulated by OSHA — remain the great unknown: Are their owners doing enough to prevent grain entrapments? Do they know how?

Bringing them into the fold wouldn’t be easy.

During a question-and-answer session at the Cedar Rapids conference, Tiffin, Iowa, farmer James Meade rose.

“The bottom line to me is, don’t pass a law that I won’t obey because I won’t obey it,” Meade said, clearly exercised. “I’ll tell anybody that. I’ll tell the OSHA guy that comes up to my place I’m not going to do it.” The statement drew murmurs of disapproval — and no applause — from the audience.

Meade’s sentiment was echoed by thousands of farmers in 2011 and 2012 in response to a proposed Department of Labor rule that would have limited the work activities of children on farms beyond existing restrictions on hazardous jobs — no driving tractors, for example. Federal law already includes age restrictions for grain-bin work on farms (no one younger than 16) and at commercial sites (no one younger than 18 for certain tasks).

The rulemaking, according to the department’s Wage and Hour Division, was driven by studies showing that “children are significantly more likely to be killed while performing agricultural work than while working in all other industries combined.”

This written comment was typical: “From your bureaucratic overreach in an area of family farming life that the government has NO business being in, you are trampling my rights ... YOU don’t love my child any more than I do ... You people are nuts!”

Chastened, the department announced the withdrawal of the rule

last April. “To be clear,” it said in a statement, “this regulation will not be pursued for the duration of the Obama administration.”

Catherine Rylatt, who became a well-traveled grain-safety advocate after her 19-year-old nephew, Alex Pacas, died in an Illinois bin in 2010, has grown weary of employer rationalization and resistance.

At a conference in St. Louis last month, Rylatt tried to impart her safety message to an 18-year-old member of the Future Farmers of America. The young man pushed back, saying he didn’t think farmers would follow even the simplest of rules imposed by government.

“The kid is 18, and he’s already got the attitude of a 60-year-old farmer,” Rylatt said. “It’s scary, is what it is.” ■

## New federal scrutiny in wake of Center and NPR grain bin ‘drownings’ report

*By Howard Berkes*

Published Online: March 29, 2013

**C**ONGRESS, the Occupational Safety and Health Administration and the Justice Department are beginning to respond to the NPR-Center for Public Integrity Series on hundreds of persistent and preventable deaths in grain storage bins and weak enforcement by federal agencies.

Two federal officials familiar with the case say that the Justice Department is again considering criminal charges in the incident in Mt. Carroll, Ill., in 2010, in which 14-year-old Wyatt Whitebread and 19-year-old Alex Pacas suffocated in thousands of bushels of corn. Will Piper, 20, survived but was unable to save his friends and co-workers. The owner of the grain bin, Haasbach LLC, was initially fined \$555,000 but OSHA cut the fine by more than 60 percent.

NPR/CPI obtained Labor Department documents that showed the Justice Department initially declined to file criminal charges in the case, despite multiple willful violations and what one former OSHA official called “the worst of the worst” cases.

The officials now tell NPR that the Justice Department asked the Labor Department to again provide the Mt. Carroll case files. The request was made in January when NPR and CPI were pressing the agency to respond to questions about the case.

“They’re taking another look” at the Mt. Carroll incident, one source said.

“They should reconsider,” says Annette Pacas, Alex’s mother. “It was a crime. They killed two kids. It should be prosecuted as a crime.”

Wyatt Whitebread’s mother Carla is hoping criminal charges will follow.

“Unless that happens this kind of thing is not going to stop,” Whitebread says.

Haasbach LLC has declined comment given wrongful death and injury lawsuits filed by Piper, the Whitebreads and Annette Pacas.

A spokesman for Gary Shapiro, the acting U.S. attorney in the Northern District of Illinois, said he couldn’t comment, citing agency policy.

Another source briefed about OSHA’s response says the NPR/CPI series prompted an internal warning to agency officials. NPR/CPI reported that OSHA has routinely slashed fines and erased its most serious citations even when willful violations of law result in worker deaths.

Senior agency staffers were told this week that the NPR/CPI series has put grain bin violations under scrutiny and requires more “thinking” about penalty reductions in cases with willful citations and fatalities. An OSHA spokesman declined comment.

Congress is also beginning to respond to the NPR/CPI series. Three Democratic senators cited the NPR/CPI findings in announcing their support for the newly-reintroduced Protecting America’s Workers Act (PAWA).

“Whether working on a factory floor, on an oil rig, or in a grain bin, our workers and their families need to know that they will be safe and protected at the workplace,” said Sen. Tom Harkin (D-Iowa), chair of the Senate Health, Education, Labor and Pensions committee. “And when violations do occur — especially those leading to injury and death — our laws need to be enforced, with lawbreakers held responsible.”

Sen. Bob Casey (D-Pa.), chair of the Senate Employment and Workplace Safety subcommittee, said, “Updating our workplace safety laws and enforcement tools will reduce the number of work related injuries and deaths.”

PAWA makes felony charges possible when repeated and willful violations result in a worker’s death or serious injury. The bill also calls for tougher penalties.

“No worker should be put in a position of mortal danger, especially those who are untrained and ill-equipped,” said Sen. Patty Murray (D-Wash.), the chief sponsor of PAWA. “The evidence is clear that neither current criminal penalties, nor the paltry level of civil penalties allowed for under law, are sufficient to stop those employers who repeatedly violate the law and put workers in danger that leads to their death.”

Under current law, workplace deaths are misdemeanors with convictions bringing no more than six months in prison. NPR/CPI reported that criminal prosecutions are rare in grain bin deaths and no one has gone to jail. Federal prosecutors decline worker death cases because they have felony crimes with more serious punishment competing for their attention.

Finally, NPR and CPI have been inundated with responses from listeners and readers. Many offered to respond to the plea of Mt. Carroll survivor Will Piper, who said he wanted to raise money for a headstone for his friend, Alex Pacas.

One anonymous donor pledged to pay the entire costs of a headstone. There’s also a newly announced effort in Mt. Carroll to erect a memorial to Pacas and Whitebread in their favorite city park. ■



Alan White, a 47-year-old foundry worker from Buffalo, N.Y., suffers from silicosis, a debilitating lung disease caused by exposure to silica dust. Harry Scull

# OSHA rules on workplace toxics stalled

*By Jim Morris*

Published Online: June 4, 2012

**A**T 58, retired machinist Bruce Revers is tethered to his oxygen machines — a wall unit when he's at home, a portable tank when he's out. The simple act of walking to the curb to

pick up his newspaper is a grind.

"This is a hell of a thing to live with," Revers, of Orange, Calif., said of his worsening lung disease. "There's nothing I can do without my air."

His undoing was beryllium, a light and versatile metal to which he was exposed in a Southern California factory that makes high-tech ceramics for the space, defense and automotive industries. His bosses tried to keep the place clean and well-ventilated, Revers says, and he wore a respirator to shield his lungs from the fine metallic dust. Nonetheless, he was diagnosed with chronic beryllium disease in 2009.

He will not recover.

The federal standard in place to protect workers like Revers from beryllium is based on an Atomic Energy Commission calculation crafted by an industrial hygienist and a physician in the back of a taxi in 1949. For the last 12 years, an effort to update that standard has been mired in delay. A plan to address another toxic hazard — silica, a mineral that also damages the lungs — has been tied up even longer: 15 years.

The sluggishness is symptomatic of a bigger problem: the Occupational Safety and Health Administration's inability to act with urgency on well-known workplace hazards.

Beryllium, used in everything from missiles to golf clubs, threatens as many as 134,000 workers in

the United States, according to government estimates. Silica, pulverized and inhaled by construction workers, foundry workers and miners, threatens more than 2 million. Obsolete exposure limits, dating to the early 1970s, are on the books for both substances.

Apart from the suffocating, chronic lung ailments they cause — berylliosis and silicosis — beryllium and silica are classified as “known human carcinogens” by the International Agency for Research on Cancer.

“Shameful,” Dr. Cecile Rose, a physician with National Jewish Health in Denver who treats silicosis victims, said of OSHA's silica limit.

“Woefully outdated,” her colleague, Dr. Lisa Maier, who sees Revers and other berylliosis patients, said of the beryllium cap.

Revers, who worked around beryllium from 1983 to 1995, recalls hearing warnings about the metal's potency but said, “I didn't really worry about it. Back then, I just cared about the job.” He learned he had berylliosis only after he had his gall bladder removed in 2009.

“I've gotten progressively worse,” Revers said. “I'm on oxygen 24-7.”

OSHA officials declined inter-

view requests from the Center for Public Integrity. In a written statement, the agency said it remains “committed to protecting workers” from beryllium and silica. “However, numerous steps in the regulatory process mean OSHA cannot issue standards as quickly as it would like.”

“These days the backlash against even the simplest efforts to protect workers is withering,” said Rena Steinzor, a professor at the University of Maryland School of Law and president of the Center for Progressive Reform, a left-leaning think tank. “OSHA hasn’t made a serious run at regulating chemicals in the workplace in a couple of decades.”

## ‘Broken’ process

The Government Accountability Office reported in April that it takes OSHA nearly eight years, on average, to issue a health or safety standard. After issuing 47 significant rules, covering threats as diverse as asbestos and logging, in the 1980s and ‘90s, the agency has produced only 11 since 2000, the GAO found. Some of these aren’t new rules at all but tweaks to existing rules, known as technical amendments.

“The standard-setting process at

OSHA is broken,” Sen. Tom Harkin, an Iowa Democrat who chairs the Senate Committee on Health, Education, Labor and Pensions, said at a hearing on the GAO audit.

It takes OSHA twice as long as the Department of Transportation and five times as long as the Securities and Exchange Commission to put out a rule, Harkin said. “The Reagan administration issued new [worker health and safety] rules at a rate four times faster than the current administration,” he said.

To be sure, OSHA has hurdles to clear. Court decisions in industry lawsuits say the agency must prove significant risk before adopting costly rules. The White House Office of Management and Budget often serves as a bottleneck; the silica rule, for example, can’t be formally proposed until it’s extricated from OMB’s Office of Information and Regulatory Affairs, where it’s been under review for more than 15 months instead of the 90 days allowed by executive order. Given industry objections, it stands little chance of being dislodged before the presidential election.

The beryllium rule has yet to make it to OMB.

The day of the Harkin hearing, four workers, eight worker advocates





**An unprotected restoration worker generates a cloud of silica dust while cutting masonry on a school in Michigan.** Tom Ward

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and seven relatives of people killed on the job had a one-hour meeting with Cass Sunstein, director of the Office of Information and Regulatory Affairs, and other White House officials. The visitors' aim was to put a human face on the sterile process of rulemaking.

It seemed to work. One OMB staffer started crying after hearing the family members' stories, several attendees said. Sunstein shook the hand of Alan White, a 47-year-old foundry worker from Buffalo, N.Y.,

who suffers from silicosis. "He said, 'I'm so sorry,' " White recounted a few days later.

Still, no one expects the process to change anytime soon. Chuck Gordon, a lawyer who retired from the Department of Labor in 2008 after spending 32 years in the solicitor's office, believes OSHA isn't pushing hard enough.

"People say OMB holds things up, and sometimes they do, but the fact is you can fight OMB," Gordon said. "We did it all the time in the

Reagan and Clinton years. We'd negotiate and make a few compromises, but we'd often win on the major issues. You can put pressure on them if the assistant secretary [of labor for occupational safety and health] is willing to take them on."

An OMB spokeswoman did not respond to interview requests.

Crackdowns on silica and beryllium could cost the affected industries hundreds of millions of dollars. Companies would have to pay for respirators, health screenings, exposure assessments and dust-control equipment.

But the price of inaction on these and other workplace toxics is staggering. A recent study put the cost of fatal and non-fatal workplace illnesses in the U.S. at \$58 billion for a single year.

The human costs are higher still. Each year, an estimated 50,000 people die from occupational diseases. That's roughly 10 times the number of workers who die from traumatic injuries. More than 400,000 people a year get sick from on-the-job exposures.

"The government — of course they're going to drag their feet," Revers said. "That's a given."

It's worse than Revers knows. In 1978 alone, OSHA issued standards

for six workplace poisons: benzene, arsenic, cotton dust, lead, a pesticide known as DBCP and acrylonitrile, an industrial chemical. In 1989 the agency ambitiously sought to update exposure limits for 428 air contaminants at once, only to have a court strike down the rule three years later.

Today? Paralysis.

## 'Stop Silicosis'

Alan White's pique was aroused recently when he viewed, on YouTube, a 1938 Labor Department film called "Stop Silicosis." The grainy, black-and-white video features Frances Perkins, Franklin D. Roosevelt's secretary of labor, who says silicosis can be prevented if safety measures are "conscientiously adopted." It shows how dust from tools like jackhammers — "widow-makers" — can be controlled with water.

The film was made in the wake of the Hawk's Nest Tunnel disaster, in which hundreds of mostly African-American workers died of silicosis in short order after drilling through silica-laden rock near Gauley Bridge, W.Va.

White hadn't heard about Hawk's Nest when he took a job as a general helper at the Buffalo foundry

in 1995. He was happy to have the work; a single parent, he'd been laid off from a food packaging plant the year before and had been on public assistance for nine months.

The foundry, where molten copper and brass are poured into molds, was full of dust. Silica was routinely knocked loose from brick furnace linings and other equipment; clouds of it hung in the air. Dust masks were available but the workers almost never used them. "You didn't wear masks," White said. "You either took the heat and the dust, or you didn't work there."

He took it for 16 years. He took it even after he grew short of breath and a doctor told him an X-ray showed "something fuzzy" in his lungs. He didn't want to forego wages that once reached \$92,000 a year with overtime.

In 2011, White reluctantly absorbed a pay cut and transferred to a less dusty part of the plant. Asked why he stays at all, he replied, "I have two mortgages."

Easily winded and unable to exercise, White, a new grandfather, won't get better. The best he can hope for is a gradual loss of lung function, as opposed to the rapid deterioration experienced by the Hawk's Nest workers. "I'm going to



**Online Video:** 'Stop Silicosis,' a 1938 Dept. of Labor film.

do my best to refrain from getting mad," he said, knowing now that his disease was probably preventable.

White attended the Senate hearing in April and put a written statement into the record. "If there were better OSHA rules for silica," he wrote, "I may not be sick today."

Silicosis is hardly a new phenomenon. It was documented by the Greeks and the Romans centuries ago. The National Institute for Occupational Safety and Health, NIOSH, warned in 1974 that the silica exposure limit was too high and recommended that sandblasting, which can lead to prodigious silica exposures, be banned.

Industry demurred. A group calling itself the Silica Safety Association formed in Houston; its purpose, according to internal documents, was to prevent a "crip-

pling restriction” on sandblasting, used in the petrochemical industry to treat storage tanks and other equipment prior to painting.

No ban was imposed. In fact, OSHA made no attempt to adjust its silica regulations until 1997, when it floated an “advance notice of proposed rulemaking” that would cut the exposure limit in half and require that controls such as water be used to quell dust. This triggered more objections from industry, which maintained that silicosis was no longer a significant threat to American workers.

The proposal stayed within the Labor Department until February 2011, when it was sent to OMB’s Office of Information and Regulatory Affairs. It was the subject of nine meetings there last year, seven of which included representatives of industry groups. Two included labor or public health officials.

In a statement to the Center for Public Integrity, OSHA called silica “one of the most pervasive hazards found in the workplace” and said it “anticipates that the proposed rule will be published soon.”

In April, NIOSH researchers reported that almost half the air samples they took in 2010 and 2011 at 11 oil and natural gas drilling sites

that used hydraulic fracturing, or fracking, exceeded the current — lenient — silica limit. The drillers pump sand, which is virtually 100 percent silica, along with fluids, into dense shale formations to create fissures and get at oil or gas deposits. Dust ensues.

Industry isn’t giving in. In a statement, the American Chemistry Council called a new silica rule “unnecessary,” saying it “could threaten tens of thousands of jobs. We believe the right approach is to improve enforcement and ensure that the current standard is met, not to cut the standard in half.”

The National Stone, Sand & Gravel Association concurred, saying “the scientific evidence is clear that the existing [exposure limit] is protective of health.”

Not true, says Dr. Kathleen Kreiss, a physician with the NIOSH Division of Respiratory Disease Studies. The new limit OSHA is considering — 50 micrograms of silica per cubic meter of air, half of what’s allowed now — has itself been shown “not to be protective over a lifetime of exposure,” Kreiss said in an interview.

While the number of silicosis cases has declined in recent decades, the Centers for Disease Con-

trol and Prevention estimated in 2008 that between 3,600 and 7,300 cases still occur each year. The decline has been less pronounced among workers 15 to 44 years old, suggesting that “intense overexposures” to silica are still occurring, the CDC said.

“Now, it seems like the highest exposures are in construction,” said Pam Susi, a program director with the union-affiliated Center for Construction Research and Training. Many contractors still don’t use water or exhaust systems to suppress silica-rich dust, Susi said.

Tom Ward sees this firsthand.

Ward, 43, of Woodhaven, Mich., became a union bricklayer 22 years ago and a training director for his local in 2010. At construction sites throughout Michigan he sees workers cutting or grinding masonry and concrete with no respiratory protection and no engineered controls, generating huge dust clouds. The dust could be knocked down with water or sucked up with vacuums, Ward said, but almost no one bothers.

Ward, whose father died of silicosis at 39 after sandblasting for several years, fears he’ll contract the disease. “It’s my generation that’s going to come down with it,”

he said. “There will be a surge in it among masons in this country.”

Silicosis isn’t the only worry. Dr. Ian Greaves, a physician and professor of public health at Temple University, said recent studies show that even modest silica exposures heighten the risk of lung cancer. “It appears that any degree of lung fibrosis increases the risk,” Greaves said.

### ‘Try to breathe through a straw’

Glenn Bell, 64, was diagnosed with chronic beryllium disease in 1993 after working 25 years as a machinist at the Department of Energy’s Y-12 nuclear weapons production plant in Oak Ridge, Tenn. He’d developed breathing problems in the 1980s but was treated as an asthmatic for years before getting the correct diagnosis.

Having berylliosis, Bell said recently, is “like being on a roller coaster. On a good day I still have quite a bit of difficulty breathing. A bad day would be when my breathing gets a lot worse. As a friend of mine described it, go outside in cold weather and run around your house eight times, as fast as you can. Then try to breathe through a straw.”

Recognizing beryllium's extreme toxicity, even in tiny doses, the DOE in 1999 lowered the exposure limit for government and contract workers by 90 percent.

OSHA didn't force private-sector employers to do the same, despite ample evidence that its exposure ceiling was too high and was making workers sick.

"Today the federal government finds itself in the somewhat embarrassing position of explaining why the employees of DOE and its contractors are now protected by a workplace rule ten times more restrictive than the one covering workers in the private sector," former DOE assistant secretary David Michaels, then with George Washington University, wrote in his 2008 book about corporate influence on science, *Doubt is Their Product*..

Now head of OSHA, Michaels declined to talk about beryllium, which is used to make cell phones, scientific equipment, airplane brakes and many other products. Not everyone blames him for the rulemaking snag. "He's tried hard to make changes," said Steinzor, of the University of Maryland. Citing OMB's glacial review pace, she said: "He's been shut down by the White House."

OSHA acknowledged in a statement that its existing regulations "may not be adequate to prevent the occurrence of chronic beryllium disease." The agency said it is "hopeful" it can push through a beryllium rule mirroring the one adopted by the DOE 13 years ago.

Such a rule has the backing of both the United Steelworkers union, which represents several thousand beryllium-exposed workers, and Ohio-based Materion Brush, the nation's only producer of pure beryllium. Known until recently as Brush Wellman, the company for years denied that beryllium posed any significant risk and fought OSHA's attempts to tighten the standard in the late 1970s.

Now, even Materion Brush agrees that the standard is too weak. "We are hopeful OSHA's proposed standard will reflect the collective expertise of organized labor and the beryllium industry," the company said in a statement.

"Beryllium is no longer controversial," said Gordon, the retired Labor Department lawyer. "If you move quickly, industry will become more cooperative because they see you moving forward. You get into the rhythm of doing things as opposed to not doing things." ■

# Landmark worker death case continues against UCLA chemistry professor

*By Jim Morris*

Published Online: July 27, 2012

**L**OS ANGELES — Sheri Sangji is on fire.

The 23-year-old research associate, a Pomona College graduate raised in Pakistan, has accidentally pulled the plunger out of a syringe while conducting an experiment in the Molecular Sciences Building at UCLA. The syringe contains a solution that combusts upon contact with air.

The solution spills onto Sangji's hands and torso, and she is instantly aflame. She isn't wearing a lab coat; no one told her she has to. Her synthetic rubber gloves provide no protection as the fire burns through her hands to the tendons. She inhales toxic,



**Sheri Sangji at her graduation from Pomona College in May 2008.** Courtesy of the Sangji family

superheated gases given off by her burning polyester sweater, a process that accelerates as she runs and screams.

It's December 29, 2008, mid-afternoon. The UCLA campus is mostly quiet for the holidays, but chemistry professor Patrick Harran's team is working. Harran is in his office, one floor up from Room 4221, where at his direction Sheharbano "Sheri" Sangji has been trying to produce a chemical that holds promise as an appetite suppressant. She is unsupervised.

Two postdoctoral fellows from China are nearby when Sangji catches fire. One runs upstairs to summon Harran, the other tries to smother the fire with his lab coat. He doesn't think to put Sangji under an emergency shower a few feet away. By now, deep burns cover almost half her body.

Harran finds Sangji "sitting on the floor," her clothes "either caked to her or burned off," he later tells an investigator.

After 18 days, on January 16, 2009, Sangji succumbs to her wounds at the Grossman Burn Center in Sherman Oaks, Calif.

Harran and the University of

California's Board of Regents will be prosecuted for the fire in Room 4221. Harran will be the first American university professor to be accused of a felony in connection with the death of a worker. Poor lab safety practices at UCLA will be



**A photo of the accident scene in Room 4221 of UCLA's Molecular Sciences Building.**

brought to light, and researchers around the world will take notice.

"Sheri was a young girl who was working in a laboratory in one of the largest and most prestigious universities in the world," says Sangji's older sister, Naveen, a surgical resident in Boston. "There



should be no safer place for someone to go to work. Instead, she never got to come back home.”

\* \* \*

Sangji's death and the prosecution of Harran and the UC regents have had far-reaching effects. Faculty members, department heads and deans at research institutions have followed the developments with consternation: Might they, too, be criminally liable if something happened in one of their labs? A federal investigation revealed that there had been at least 120 lab accidents at universities between 2001 and 2011.

On Friday, the criminal case against the regents was dropped after they agreed to adopt a lengthy list of safety measures and establish a \$500,000 scholarship in Sangji's name. The case against Harran, who faces up to 4½ years in jail, continues. His arraignment was postponed until September 5.

Naveen Sangji wants to see Harran behind bars. “If this were a regular person out on the street who got drunk and killed someone,” she says, “he would be going to jail.”

At the time of Sheri Sangji's death, California's Division of Occupational Safety and Health, Cal/OSHA, already had begun an inquiry into the accident at UCLA. That May the university was cited for four violations; it paid a \$31,875 fine.

In December 2009, Cal/OSHA's Bureau of Investigations, which looks into all worker fatalities in the state, recommended that Patrick Harran and UCLA be charged with involuntary manslaughter and felony labor code violations. “Dr.



[Online Video: 'Tragedy at UCLA'](#)

Harran,” investigator Brian Baudendistel concluded in a 95-page report, “permitted Victim Sangji to work in a manner that knowingly caused her to be exposed to a serious and foreseeable risk of serious injury or death.”

Harran, 42, did not respond to interview requests from the Center for Public Integrity and the Center for Investigative Reporting. In a 2009 statement to the Los Angeles Times, he called Sangji's death a "tragic accident" and explained, "Sheri was an experienced chemist and published researcher who exuded confidence and had performed this experiment before in my lab. Sheri had previous experience handling pyrophorics, chemicals that burn upon exposure to air, even before she arrived at UCLA.... However, it seems evident, based on mistakes investigators tell us were made that day, I underestimated her understanding of the care necessary when working with such materials."

UCLA officials declined interview requests, pointing to a written statement issued by university Chancellor Gene Block in January. "Sheri Sangji's death was strongly felt by everyone at UCLA, and we were deeply saddened by the loss of a member of our community," Block wrote. "I made a pledge then that we would go above and beyond existing policies and regulations to become a model of campus safety. And we have."

Baudendistel referred the Harran case to the Los Angeles County dis-

trict attorney's office for prosecution, as is Cal/OSHA's practice when it believes it has evidence of gross employer misconduct. The DA filed a felony complaint in December 2011, focusing on the labor code violations. Chemists and safety consultants were stunned.

"The district attorney got the attention of every research institution in the United States," says Harry Elston, editor of the Journal of Chemical Health and Safety.

### **'A scientist's scientist'**

Sheri Sangji was raised in Karachi, Pakistan, and graduated from Pomona College in California in May 2008. A superior student and athlete, she earned a degree in chemistry but had no plans to enter the field. "She was a very dynamic person with lots of interests, a lot of spark," says her sister Naveen, 29, also a Pomona graduate. "She was interested in the environment, women's rights, minorities' rights."

Sheri took a job with a pharmaceutical company in Pasadena, hoping to save money for law school. She was intrigued by an ad Harran placed for a research associate at UCLA. The idea of moving to Los Angeles and working for a "rising

star” in organic chemistry appealed to her, Naveen says.

The job interview took place in September 2008. Harran was impressed. Sangji “was very familiar with analytical instrumentation of the type that I really wanted her to focus on, which was great,” he told investigator Baudendistel. “I asked her if she was comfortable with general techniques and properties of organic chemistry. And I asked her if she worked with air-sensitive materials.... Just how generally comfortable she was in the laboratory. That’s what we spent most of our time on, and she left. And, you know, I loved her. I thought she was fabulous.”

Sangji began work in the UCLA Molecular Sciences Building on October 13. Four days later, Harran watched her perform a small-scale experiment using tert-Butyllithium solution, a chemical its manufacturer, Sigma-Aldrich, describes as follows: “Reacts violently with water. Contact with water liberates extremely flammable gases. Spontaneously flammable in air. Causes burns.”

Sangji did a “great job” on the experiment, Harran told Baudendistel, and had knowledge of chemistry beyond her years. “She had published in top peer-reviewed

journals with very well-known researchers.... She stood out.” Harran acknowledged, however, that Sangji did not receive “generalized safety training. I believe my assistant told me that it was not offered for her category per se, although we were going to follow up on that.” He also said that no fire-resistant clothing was available to lab employees at the time of the accident.

Harran had come to UCLA as a tenured professor the previous July, having been recruited from the University of Texas Southwestern Medical Center in Dallas, where he’d spent nearly 11 years and won a number of honors, including the AstraZeneca Excellence in Chemistry Award and the Pfizer Award for Creativity in Organic Synthesis.

“He was literally the first chemist we succeeded in hiring,” says Steven McKnight, chairman of the biochemistry department at UT Southwestern. “He was articulate and personable and easy to communicate with, unlike many of the candidates. Most of the equivalent scientists didn’t have the fearlessness or fortitude to go to a department that had no history in chemistry.”

Harran “built a very strong laboratory and proceeded to make a number of really nice discoveries

in the field of synthetic chemistry,” McKnight says. Harran and a colleague, Xiaodong Wang, developed a chemical that causes cancer cells to kill themselves. They published a paper on the breakthrough in *Science* magazine.

A graduate of Skidmore College and Yale, Harran was “a scientist’s scientist,” McKnight says. “He really wanted to dig in and make discoveries of consequence. When he went to UCLA it was a heartbreaker.”

In a 2006 interview with the *Proceedings of the National Academy of Sciences*, Wang, who has since returned to his native China, offered a glimpse of life at UT Southwestern. “Nothing is ever good enough, and you’re only as good as your last paper, which I think is great,” Wang was quoted as saying.

## A violent reaction

UCLA pursued Harran aggressively, offering him a budget of \$3.2 million to set up a state-of-the-art organic chemistry lab on the fifth floor of the Molecular Sciences Building. He and his team were given temporary space on the fourth floor while renovations were made upstairs.

On October 30, 2008, UCLA chemical safety officer Michael

Wheatley conducted an annual inspection of the fourth-floor labs. Wheatley found a number of deficiencies, one particularly relevant to events that would soon unfold: “Eye protection, nitrile [synthetic rubber] gloves and lab coats were not worn by laboratory personnel.”

In an email on November 5, Wheatley asked Harran when they could meet to discuss the findings. “Is it possible to wait until we get settled on the 5th floor?” Harran replied a week later. “That would make for a better meeting — our labs on 4 are overcrowded and disorganized. I wasn’t planning to be in temporary space for this long.” Wheatley agreed to the postponement.

On December 29, a Monday, Sheri Sangji reported for work in Room 4221. Harran wanted her to replicate the chemical reaction she’d performed on October 17, but on a scale three times larger. Around 3 p.m., Sangji was using a 60-millileter plastic syringe with a 2-inch needle to transfer tert-Butyllithium from a 100-ml bottle to a glass flask.

The needle was too short; Sigma-Aldrich recommends using one at least a foot long. This, investigator Baudendistel theorized, forced Sangji to tilt the bottle of tert-Butyl-

lithium or lay it on its side, awkwardly withdrawing the liquid with one hand while holding the bottle with the other. Had the needle been long enough, she could have clamped the bottle, upright, to the workbench, a less risky procedure. Safer still would have been the “cannula transfer” method, in which a liquid is pushed by an inert gas like nitrogen from one container to another through a tube.

Sangji inadvertently pulled out the plunger of the syringe, spilling the solution and triggering a flash fire. Had she been wearing a fire-resistant lab coat, her burns might have been less severe. In fact, she was wearing no lab coat, not even a cotton one.

At the time there was no university policy requiring such protection. “That policy has been put in place since the accident,” Harran told Baudendistel. Requisition forms from the UCLA Department of Chemistry and Biochemistry show that fire-resistant lab coats were, in fact, ordered, at a cost of \$45.05 each.

In an interview with a deputy UCLA fire marshal, Harran described what he saw in Room 4221 before the paramedics arrived.

“Sheri was, you know, she was in shock ... she was shaking. I asked her what happened. She didn’t tell me much. She just said there was a fire,



**An investigator holds a melted syringe after a fire that severely burned UCLA lab worker Sheri Sangji.**

and she just kept asking, ‘Where are they, where are they, where are they?’ ... She wanted water on her arms, and she was holding her hands out like this, and the skin was separating. It was awful.”

Sangji was taken to Ronald Reagan UCLA Medical Center. Harran

finished the experiment she had started — at the request of the Los Angeles and UCLA fire departments, which feared another conflagration, he said. Shortly after 4 p.m. Pacific time, Naveen Sangji's cellphone rang in Boston. Then a medical student at Harvard, she recognized Sheri's number and assumed her sister was calling to tell her about another law school acceptance letter. They had been coming regularly.

It was a hospital social worker, using Sheri's phone. "She told me Sheri had been in an accident and described what happened," Naveen says. "As a medical student I could understand the gravity of what she was saying." She caught a flight to Los Angeles early the next morning.

Naveen went straight from the airport to the Grossman Burn Center, to which Sheri had been transferred. "Her arms were suspended from the ceiling to keep them in a certain position, all wrapped with bandages," Naveen says. "The only part of her that I could see was her face, which was unwrapped."

Naveen encountered Harran at the burn center on New Year's Eve. "He came to the hospital and spoke with me and my uncle, who is a structural engineer," Naveen says. "[Harran] explained some of the

details of the experiment Sheri was doing that day. We obviously asked him questions about why she was doing this experiment, this dangerous experiment, without supervision. My uncle, because of his engineering background, asked specifically about training and about why she wasn't given fire-resistant protective equipment before doing this experiment. Harran refused to answer."

Sheri's friends began a vigil. "I had thought she would survive," says Aakash Kishore, a lab assistant in the UCLA psychology department at the time and now a graduate student. "I remember reassuring Naveen." Kishore and others showed up at the burn center almost every day during the 18 days Sheri was there. About two dozen of her friends and relatives were waiting in the parking lot the day she died. "Her dad came outside and let us know that she was gone," Kishore says. "He looked very weak."

## Willful violations

In the months to follow, Naveen pressed UCLA officials for details on the accident. She found the responses wanting. The university, she felt, was trying to make it appear that Sheri was an experienced chemist,

and that the fire was her fault. On June 17, 2009, replying to an email Naveen had sent two days earlier, Chancellor Block recalled “the elegant and successful way” Sheri had performed the tert-Butyllithium experiment the previous October.

Although Cal/OSHA had issued four citations to UCLA in May, Block wrote, “The campus believes ... that many corrective measures ordered by our inspectors were taken before the tragic accident, though they were not properly documented.” Cal/OSHA, he noted, “found no willful violations of regulations or laws by UCLA personnel. Neither [chemistry department chair Al] Courey nor Dr. Harran were in the lab the day of the tragedy and did not have the opportunity to remind Sheri to put on her lab coat.”

In his interview with the deputy fire marshal, however, Harran — the lab’s principal investigator, or PI — admitted that his safety policies were less than rigid. Harran said he “never explicitly” told his senior employees, such as postdoctoral fellows, to make sure subordinates were wearing protective equipment. In the same interview, Harran said that he and the fellows erred by cleaning up potentially dangerous items in Room 4221 immediately after the accident, before

investigators returned to gather evidence. “We shouldn’t have touched anything,” he said.

In November 2007 — 13 months before Sangji was hurt and eight months before Harran came to UCLA — a graduate chemistry student named Matthew Graf spilled a bottle of ethanol near an open flame; some of the alcohol splashed on his shirt and he caught fire. Graf wasn’t wearing a lab coat and sustained second-degree burns to his hands and torso. He spent a week at the Grossman Burn Center, the same place Sangji died, and underwent surgery to repair his hands. Cal/OSHA learned about the accident nearly two years after the fact and cited UCLA for failing to report it; the university is contesting the citation.

In Naveen Sangji’s view, the fine UCLA paid for her sister’s death was insufficient. She was relieved and gratified when Cal/OSHA’s Baudendistel issued his report in December 2009, recommending that Harran and UCLA be charged with felonies.

Baudendistel concluded that “the laboratory safety policies and practices utilized by UCLA prior to Victim Sangji’s death were so defective as to render the University’s required Chemical Hygiene Plan

**486****Referrals to district attorneys****174****Resulted in criminal charges**

and Injury and Illness Prevention Program essentially non-existent.” There had been “a systemic breakdown of overall laboratory safety practices at UCLA,” he wrote.

Indeed, on Dec. 22, 2008, one week before Sangji was burned, another graduate chemistry student, Jonah Chung, was completing a reaction when “the reaction pot detonated, causing glass, hot oil, and chemicals to strike his face and torso,” Baudendistel wrote. Chung, who sustained burns to his torso, arms and face and cuts to his neck and forehead, “was not wearing a lab coat, gloves, nor appropriate eye protection ... at the time of the incident.”

Baudendistel sent the Harran case to the Los Angeles County district attorney. This was not unprecedented: from 2001 through 2011, Cal/OSHA made 486 such referrals statewide, mostly in worker death cases; 174 resulted in criminal charges.

“You know, we have put owners of companies, supervisors, foremen in jail,” says Cal/OSHA chief Ellen Widess. “That is noticed. We’re definitely looking for these cases to make ... an impression, leave nothing unspoken and unclear about the severity of the punishment that will be meted out.”

Still, Harran wasn’t a foreman on a trenching job or the owner of a roofing company. He was an award-winning chemistry professor with the backing of a powerful university.

It took two years. On Dec. 27, 2011, the DA filed a felony complaint against Harran and the UC regents. The allegation: “willful violation of an occupational safety and health standard causing the death of an employee.”

## **Hard questions**

Chemists in academia and private industry already had been debat-



ing the Sangji case; bloggers and journal editors had written about it. The filing of the complaint took the discussion to another level.

Uncomfortable questions followed: Why were academic labs more dangerous than those in industry? Were some principal investigators so obsessed with publishing papers, securing grants and winning prizes that they'd lost sight of their responsibility to keep employees and students from being hurt?

"Each lab is like an island where the PI is king," says Paul Bracher, a postdoctoral researcher in chemistry at Caltech who writes a blog called ChemBark. "He provides for the lab, brings in grants, decides how the money is spent. There are a lot of demands on their time, and the safety stuff a lot of times gets lost in the shuffle. I've never heard of anyone getting fired for being unsafe."

Bracher — whose trachea was pierced by flying glass 12 years ago after a fellow undergraduate at New York University mishandled a reactive chemical — says he's surprised UCLA has stood by Harran so steadfastly, given the evidence that's come out. "When something like this happens, much like a drunk driver when someone loses

their life, there should be consequences," he says. "UCLA has doubled down. It sends an incredibly disconcerting message."

"The PI has to be actively involved in safety, as does the president of the university, the provost, the dean — everyone who supervises other people," says James Kaufman, a former Dow Chemical researcher who runs the nonprofit Laboratory Safety Institute, a training organization near Boston. "The dog sled can't go any faster than the lead dog."

Following the Sangji accident, and another at Texas Tech University that badly injured a graduate chemistry student in January 2010, the U.S. Chemical Safety Board began an investigation of lab safety at academic institutions. In a report last fall, the board, which can make recommendations but can't regulate, said it had documented 120 incidents at university labs since 2001 and identified "safety gaps" that threatened more than 110,000 graduate students and postdoctoral researchers in the U.S.

"Fiefdoms" in academia were partly to blame, the board found.

"At some academic institutions, PIs may view laboratory inspections by an outside entity as infringing upon their academic freedom." At

Texas Tech, “some PIs saw the notification of safety violations to the [department] Chair as ‘building a case’ against them, felt that the safety inspections inhibited their research, and considered recommended safety changes outside their control because they could not ‘babysit’ their students.”

The board recommended that the U.S. Occupational Safety and Health Administration — whose 1990 lab standard emphasizes the need to protect researchers from carcinogens and other health hazards — make clear that physical hazards also must be controlled. And it urged Texas Tech to revamp its lab safety program by documenting and acting on near-misses that could portend more serious accidents.

Board officials believe the message is getting out — not only to universities but also to grant-makers such as the Department of Homeland Security, which funded the work on explosive materials that led to the Texas Tech accident. “DHS changed its requirements after this incident,” says board investigator Cheryl MacKenzie, demanding that grantees’ labs undergo independent safety audits before funds are released.

The American Chemical Society, a professional association for chemists, assembled a task force after the Texas Tech blast and recently unveiled a draft report that recommends ways to change the “safety culture” in academia. The study, its authors wrote, was prompted by “devastating incidents in academic laboratories and observations, by many, that university and college graduates do not have strong safety skills.”

UCLA, for its part, has created a Center for Laboratory Safety which, Chancellor Block said in his January statement, will “identify and institute best practices in safety, going beyond the minimum requirements of outside agencies so that we can hold our laboratories to even higher standards. We also dramatically increased the number of lab inspections, strengthened our policy on the required use of personal protective equipment and developed a hazard-assessment tool that labs must update annually or whenever conditions change.”

The real-world impacts of these changes remain to be seen. “I think the university is trying,” says Rita Kern, a staff research associate in the UCLA Department of Medicine who sits on the health and safety

committee of University Professional & Technical Employees — Communications Workers of America Local 9119, the union to which Sheri Sangji belonged at the time of her death. “Some things have changed, but it’s like turning a big boat in the middle of the ocean. It doesn’t turn very fast.”

Indeed, following inspections in August 2009 and February 2010 — eight and 14 months, respectively, after the fire that killed Sangji — Cal/OSHA cited UCLA for 16 lab safety violations, five classified as “serious” and one as “repeat serious.” The university paid a \$36,690 fine.

Ryan Marcheschi, a postdoctoral fellow in the UCLA chemical engineering department who works with flammable and explosive compounds, says the university has “tightened up” on safety since the Sangji accident, though much of this has come in the form of increased paperwork.

When he learned that the criminal complaint had been filed against Harran, “I thought it was extreme,” Marcheschi says. “But then I thought, maybe that’s what’s needed to make policies change.”

\* \* \*

Despite her grueling schedule as a

resident at Massachusetts General Hospital, Naveen Sangji remains an advocate for her younger sister, now 3½ years departed. “My sister had her whole life ahead of her,” Naveen says. “She would be graduating from law school right now.”

Her parents live in Toronto. Her father, a small businessman, “has almost completely stopped socializing,” Naveen says. Her mother, a Montessori teacher, was “completely destroyed” by the accident and immerses herself in her work. They go to the cemetery on Sundays.

“Sheri was a very brave person,” Naveen says, a trait that became evident at the burn center.

“Before my parents came into the room, she asked me to cover her up with the sheets so that they wouldn’t be distressed at seeing all the bandages; her concern was for them. When my dad arrived, he put his hand on hers lightly through the sheet and she screamed because it was so painful. And we couldn’t touch her anywhere except her face. But her thoughts were, even as she lay critically injured, for other people.” ■

*This story was produced in collaboration with the Center for Investigative Reporting.*



Breast cancer victim Carol Bristow, 54, has worked as a machine operator in a plastic auto parts factory in Windsor, Ontario, for 23 years.

# Study spotlights high breast cancer risk for plastics workers

*By Jim Morris*

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**W**INDSOR, Ontario — For more than three decades, workers, most of them women, have complained of dreadful conditions in many of this city's plastic automotive parts factories:

Pungent fumes and dust that caused nosebleeds, headaches, nausea and dizziness. Blobs of smelly, smoldering plastic dumped directly onto the floor. "It was like hell," says one woman who still works in the industry.

The women fretted, usually in private, about what seemed to be an excess of cancer and other diseases in the factories across the river from Detroit. “People were getting sick, but you never really thought about the plastic itself,” said Gina DeSantis, who has worked at a plant near Windsor for 25 years.

Now, workers like DeSantis are the focal point of a new study that appears to strengthen the tie between breast cancer and toxic exposures.

The six-year study, conducted by a team of researchers from Canada, the United States and the United Kingdom, examined the occupational histories of 1,006 women from Ontario’s Essex and Kent counties who had the disease and 1,146 who didn’t. Adjustments were made for smoking, weight, alcohol use and other lifestyle and reproductive factors.

The results, published online today in the journal *Environmental Health*, are striking: Women employed in the automotive plastics industry were almost five times as likely to develop breast cancer, prior to menopause, as women in the control group.

These workers may handle an array of carcinogenic and endocrine-disrupting chemicals. They include the hardening agent bisphenol A (BPA) — whose presence in poly-

carbonate water bottles and other products has unnerved some consumers — plus solvents, heavy metals and flame retardants.

Sandy Knight, who worked at two Windsor plastics plants from 1978 to 1998, had a breast cancer scare in 2000, when she was 41. The cancer was at Stage III — “invasive and fast-growing,” said Knight, 53, who now works at a Ford parts distribution center near Toronto. She had a single mastectomy and, following 10 years of hormonal treatment, is in remission.

Asked if she believed her disease was work-related, Knight said, “I’m suspicious of it because of all the exposures we had.” She remembers the “nauseating kind of odor,” the burning eyes and headaches, all the women with cancer, sterility and miscarriages. She’s upset that little seems to have changed at some plants.

“Why am I speaking to people today, in 2012, who are doing the same processes I did in 1980?” Knight asked. “It just seems like we’re fighting the same battle. A lot of these chemicals should be removed from the workplace.”

The study population included women who had worked at more than 40 plastics factories in the Windsor area. But the implications are broad-

er: Workers in similar plants around the world are exposed to many of the same chemicals. So are members of the public, who encounter the substances — albeit in lower doses — in the course of their daily lives.

“These workplace chemicals are now present in our air, water, food and consumer products,” said one of the two principal investigators, James Brophy, an adjunct faculty member at the University of Windsor and a former occupational health clinic director. “If we fail to take heed then we are doing so at our own peril.”

Jeanne Rizzo, president of the Breast Cancer Fund, a San Francisco-based group that has pressed for more research into environmental causes of a disease that claimed nearly 40,000 lives in the United States last year, called the Windsor study “a very powerful piece of work. The piece that’s really been missing for female breast cancer is occupation.”

In the United States, an estimated 150,000 female workers in the plastics and synthetic rubber industries are likely exposed to many of the same chemicals as the women in Windsor, including polyvinyl chloride, or PVC, plastic; acrylonitrile; formaldehyde and styrene.

“I think the findings, although

they’re clearly based on Canadian groups, go well beyond Canada,” said another of the Windsor study’s co-authors, Andrew Watterson, director of the Centre for Public Health and Population Health Research at the University of Stirling in Scotland. “They’re going to be significant for plastics workers in Europe, India, China, Africa, the United States. The chemicals will have the same toxic effects. The same diseases will develop.”

Even minuscule amounts of endocrine-disrupting chemicals like BPA can be worrisome, Watterson said. “This research is raising big questions both about what the [workplace] standards are and even about what happens if conditions are very good, with low-level exposures,” he said.

In a written statement, a spokeswoman for the U.S. Occupational Safety and Health Administration, said, “We look forward to reading this paper ... and plan to explore how we may use the findings in protecting workers from hazardous exposures.”

The American Chemistry Council, the main chemical industry trade association in the United States, questioned the study’s conclusions, saying it includes “no actual determination of [worker] exposures.” The study’s estimates of risk seem

to be based on a small sample and are “statistically very uncertain,” the council said in its statement.

“The well-established risk factors for breast cancer are not chemical exposures, but rather a combination of lifestyle and genetic factors,” the council wrote.

Barry Eisenberg, a spokesman for another U.S. trade group, the Society of the Plastics Industry, declined to comment on the study, saying, “We don’t have the expertise.” Eisenberg declined to answer general questions about worker and consumer health, although his group has had an Occupational Health and Environmental Issues Committee since 1985.

The Canadian Plastics Industry Association did not respond to requests for comment. The president of the Canadian Automotive Parts Manufacturers’ Association declined to comment.

## Life in the factories

Modern cars and trucks are loaded with plastics: bumpers, door panels, license-plate brackets. Dozens of factories in and around Windsor make these parts from plastic pellets melted and shaped in injection molding machines. The parts are then shipped to auto manufacturers.



**The General Motors building in downtown Detroit was wrapped in pink in recognition of National Breast Cancer Awareness Month in October. Health questions are being raised about toxic chemicals used by suppliers of plastic parts to GM and other automakers.**

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The Big Three U.S. automakers expressed varying degrees of concern about conditions in the parts plants.

General Motors said its suppliers are “independent businesses which must meet the Health and Safety legislation in the jurisdictions in which they operate.” Ford said it “requires suppliers to ensure that our products — no matter where they are made — are manufactured under conditions that demonstrate respect for the people who make them.” And Chrysler said that while its suppliers are “responsible for

their own legal compliance,” its policies “restrict us from using suppliers who we learn do not comply with our requirements or environmental and health and safety laws.”

Conditions in some of the Windsor plants have improved, workers say. In years past, for example, hot plastic would be removed from the molding machines and dumped on the floor, where it might lie for up to an hour. Some companies have altered this process, known as purging, requiring that the reeking muck be put into covered barrels.

Others have relocated grinding machines — bladed devices that chew up scrap plastic and spit out huge quantities of dust — to isolated areas to reduce worker exposures.

Workers say, however, that a lack of local ventilation — vacuums that can suck up fumes and dust straight from the molding and grinding machines and direct them outside — is still the norm at many facilities.

The machines disgorge “pretty toxic stuff — either carcinogenic or endocrine-disrupting chemicals,” said Robert DeMatteo, a retired health and safety director for the Ontario Public Service Employees Union and lead author of an article on the plastics industry scheduled for publication early next year in the

journal *New Solutions*. “All you’re going to do with general ventilation is just dilute it.”

Carol Bristow got into the industry in 1989, having grown impatient with a dead-end cashier’s job at the A&P. “I never felt working in a factory would be my calling,” Bristow said. “The first six months I would come home in tears and in pain, almost praying to God that I wouldn’t get my seniority because it seemed like the wrong place to be. But the money kept coming in, and you just adjusted.”

In 1992, when she was 34, Bristow was diagnosed with cancer in her right breast, which was removed along with about 20 lymph nodes. She kept working and developed endometriosis, a painful condition in which cells from the lining of the uterus grow outside the uterine cavity. Some studies have linked endometriosis with exposure to chemicals such as dioxin, a byproduct of PVC incineration and chlorine production. Bristow underwent a hysterectomy in 2001.

As all of this was going on, Bristow was being tormented by bladder infections. Benign tumors were removed from her bladder in 2010 and again in August of this year. “I’ll have to be scoped every three months for



the rest of my life,” she said, referring to a procedure called cystoscopy, in which a tube-like viewing device is inserted through the urethra into the bladder. One study found that women who had worked in the plastics industry had a more than threefold risk of developing bladder cancer.

Why does Bristow stay?

The pay, she explained, is a respectable \$22 an hour, with benefits, in a tough economy. “Who’s going to hire me?” she asked.

The owner of Bristow’s factory, which bought the facility in 2001, says it is unaware of any worker health concerns and has a “consistently strong track record — recognized by workers and regulators — of protecting its employees’ health and safety.”

## ‘Horrifying’ symptoms

James Brophy and his partner, Margaret Keith, both PhDs with backgrounds in occupational health, began studying Ontario plastics workers in the late 1970s.

“It wasn’t something we chose to be interested in,” Keith said. “We had people come to us” — notably, a union official from a Windsor plant concerned about what seemed to be an abundance of disease among female workers.

Keith, Brophy and a physician put together a health questionnaire, which was circulated at five plants. Reports of nosebleeds, headaches and nausea came back. Some operators said the fumes had made them pass out at their machines. “The level of symptoms was pretty horrifying,” Brophy said.

In 1981, the CBC broadcast a documentary, “Dying for Work,” which highlighted conditions in the Windsor plants. “We thought that would really start the ball rolling” toward better ventilation and other improvements, Keith said. “Absolutely nothing happened.”

Keith and Brophy lost contact with the plastics workers for more than a decade, until several turned up at their occupational health clinic in 1993 to report that they had had miscarriages or difficulty conceiving. Keith, Brophy and clinic staff developed a second questionnaire for circulation in the plants. “We found a lot of acute symptoms as well as reproductive problems and some cancers,” Keith said.

Around the same time, Keith and Brophy convinced officials at the Windsor Regional Cancer Center to begin collecting work histories of cancer patients. This led to an initial study, completed in 1999,



**Canadian James Brophy is among a dozen co-authors of a new study that found strikingly high risks of breast cancer among female workers in the automotive plastics industry in Windsor, Ontario.**

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which found an increased risk of breast cancer among women who farmed. A subsequent study, finished in 2002, looked at the work histories of 564 women with breast cancer and 599 who didn't have the disease. Again, a strong association between farming and breast cancer was noted; an even stronger link was found among women who'd farmed and then gone to work in the auto industry.

The new study, funded by groups including the Canadian Breast Can-

cer Foundation-Ontario Region, examined a population twice as large and featured a more detailed questionnaire. Workers in the plastics industry, it found, are exposed to a brew of carcinogenic and estrogenic chemicals, also known as endocrine disruptors, which interfere with the hormone system and can cause tumors, birth defects and developmental disorders. This complex mixture, Brophy said, may be more dangerous than any one compound.

The study found that, in addition

to the plastic workers, women who worked in food canning and agriculture and at bars, casinos and racetracks had elevated breast cancer risks. The highest risk for pre-menopausal women — nearly six times that of the controls — was found in canning, an industry in which workers may be exposed to BPA in epoxy can linings and pesticides released from food during cooking.

The primary risk factor associated with agriculture is pesticide exposure, the study found. Women who work at bars, casinos and racetracks are exposed to tobacco smoke, it noted, and also subjected to “disruption of circadian rhythms and decreased melatonin production resulting from night work,” which other research has shown to be associated with breast cancer.

In general, breast cancer is an older woman’s disease; a 60-year-old has a greater chance of developing the disease than does a 30-year-old. Many of the victims in the Windsor plastics factories are in their 30s, 40s and 50s, say six current and former workers, from multiple plants, interviewed by the Center for Public Integrity.

“We’re sitting here after three decades, and you see the weight of the evidence that these substances pose

serious health problems, yet there’s nary a mention of the risk that blue-collar workers bear, particularly women,” Brophy said. “They’re just not on the radar. Had we paid more attention to them, the harm these substances cause would have been seen much sooner and we might have prevented them from becoming so ubiquitous in the environment.”

The President’s Cancer Panel, an advisory committee in the United States attached to the National Cancer Institute, reported in 2010 that “the true burden of environmentally induced cancer has been grossly underestimated.” The panel singled out BPA as one of the chemicals that may be causing “grievous harm.”

The research in Windsor buttresses other recent work on breast cancer and chemicals. A French study in 2011, for example, found elevated risks among women who worked in plastics, rubber and textile manufacturing. A study from Mexico in 2010 found that the presence of metabolites of phthalates — softening agents for plastics that have endocrine-disrupting properties — in urine was “positively associated” with the disease. A 2007 paper from U.S. researchers identified 216 chemicals that had been associ-

ated with mammary gland tumors in animals.

The lone American co-author of the Windsor study, Robert Park of the National Institute for Occupational Safety and Health, said he was “surprised by how strong the findings were. There was a lot of confirmation of prior concerns, which is always the goal but not always achieved by these kinds of studies.”

### ‘Race to the bottom’

The Canadian plastics workers say they have little faith in their country’s system of workplace regulation. Factory inspections are haphazard, they say, and chemical standards in many cases are weak, meaning few overexposures — by the legal definition, anyway — are cited. Conditions improve incrementally, if at all.

“It’s a race to the bottom,” said Sari Sairanen, national health and safety director for the Canadian Auto Workers union, which represents about 4,000 workers in parts plants, some of which make plastics. “For the worker, there’s the fear of losing your job or the fear of retribution from your employer if issues are raised.”

Bristow, a union member, said

that many workers seem unwilling to confront their bosses with health questions. Too often, she said, a woman disappears from the factory floor and her co-workers don’t learn until much later that another case of breast cancer has been diagnosed.

The Ontario Ministry of Labor is committed to the prevention of work-related diseases, a spokesman said in a statement. The ministry uses a multifaceted approach that includes health and safety inspection “blitzes” and the updating of exposure limits, the spokesman wrote. “We make decisions on the latest science and we welcome any report that will bring a better understanding of occupational exposures to ensure that workers are protected from unsafe exposure levels.”

There is also deep dissatisfaction with workplace regulation in the United States. Adam Finkel, former director of health standards programs for OSHA, said the vast majority of exposure limits enforced by the agency in American workplaces are based on scientific data from the 1960s or earlier, even though an estimated 150 workers die each day of work-related diseases.

Limits for only 16 substances have been updated, a consequence of industry challenges and hesitancy



**Sari Sairanen, national health and safety director for the Canadian Auto Workers union, says workers in some plastics factories are reluctant to raise health concerns, fearing retaliation. “It’s a race to the bottom,” Sairanen says of conditions inside some of the plants.**

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on OSHA’s part. There are no limits for BPA. The limits that do exist for chemicals used in plastics — say, vinyl chloride, an ingredient in PVC — were designed to address cancer and acute symptoms, not the sort of hormonal damage that can occur when women of childbearing age receive low-level exposures. Only 18 percent of OSHA inspections last year focused on potential health, as opposed to safety, hazards.

“It’s a terrible record, and I’m get-

ting more pessimistic as the years go by,” said Finkel, who runs the Penn Program on Regulation, a research center at the University of Pennsylvania Law School.

In its statement, OSHA acknowledged, “Many of our current Permissible Exposure Limits are out of date and inadequately protective, and we do not have limits for many other chemicals. OSHA is currently examining ways to strengthen our efforts related to workplace chemi-

cal exposures, as well as ways to respond to the identification of new, emerging hazards.”

The U.S. Environmental Protection Agency’s record on chemicals — like OSHA’s — is thin.

Chemicals found in the workplace — among them BPA and phthalates — also may pose health risks to the general public. Of the more than 80,000 chemicals registered for use today, however, the EPA has required only about 2 percent to undergo even basic testing. At the root of the problem is the Toxic Substances Control Act of 1976, which puts the onus on the EPA to prove that a chemical is harmful before it can be banned or its use restricted. This burden is almost insurmountably high; the EPA has banned narrow uses of only five chemicals since the law was passed.

The Obama EPA has begun to disallow claims of “confidential business information” that for decades enabled companies to conceal the identities of chemicals when they submitted health and safety data, even if significant risks had been flagged.

Industry, however, is fighting an attempt by the EPA to extend its anti-secrecy policy to new chemicals; a proposed rule has been under review

by the White House Office of Management and Budget for nearly a year.

A proposal to add BPA, phthalates and a certain class of flame retardants to an EPA “chemicals of concern” list has been at the OMB for more than 900 days. The EPA says that these chemicals “may present an unreasonable risk to human health and/or the environment” and wants to use its authority under the law to list them, a step that would, among other things, require producers to notify the EPA when they exported the chemicals, and the EPA to notify the recipient governments.

Industry groups such as the U.S. Chamber of Commerce oppose the action, saying it amounts to an unwarranted blacklisting.

An EPA spokesman did not respond to requests for comment. An OMB spokesman declined to comment.

The U.S. Food and Drug Administration no longer allows the use of BPA in baby bottles or infant-training cups. The FDA acted, however, only after receiving a petition from the American Chemistry Council, which said that manufacturers of these products had already abandoned the chemical to meet consumer preference. “The agency continues to support the safety of BPA

for use in products that hold food,” an FDA spokeswoman said in a written statement.

The Canadian government didn’t wait for an industry petition. It banned BPA in baby bottles two years ago, based on concerns about the chemical’s toxicity.

Brophy, one of the researchers in Windsor, approves of the ban. But

he worries about the women in the plastics plants, who soak up BPA and other chemicals on the job.

“There seems to be widespread concern about consumer exposures but almost no concern for the most highly exposed population — the blue-collar workers,” he said. “These women remain invisible and their cancer risk largely ignored.” ■

## FOLLOW-UPS

# Union demands protection for workers, after breast cancer linked to auto plastics industry

*By Jennifer Quinn, Robert Cribb, Julian Sher and Jim Morris*

Published Online: November 20, 2012

**W**INDSOR, Ontario — When some women walk onto a factory floor, punch their time card at a food processing facility, or start their shift at the foundry, they are literally dying to go to work, union members and health care advocates say.

A study that showed women working in those industries have a higher risk for breast cancer raised calls for protection of those workers.

And after the study’s principal researchers presented the results of their work to about 40 people here Monday, the reaction was anger, rather than fear.

“We have to say enough is enough,” said Terry Weymouth, a skills co-ordinator with the Canadian Auto Workers. “We are not dying because we need jobs.

“It’s time we stand up and say this is not right,” she said. “We should be mad. One in nine women are diagnosed with breast cancer.”

The six-year study, published Monday in the journal *Environmental Health*, examined the occupational histories of 1,006 women in Essex and Kent counties who had breast cancer, and another 1,146 who did not.

The researchers, who came from Canada, the U.S., and the U.K., took into account factors like smoking, weight, alcohol use and other lifestyle and reproductive factors. The women in the study worked in auto parts plants, casinos, food canning factories, on farms, and in metal-working plants.

The researchers found that women who work in the automotive plastics industry were almost five times as likely to develop breast cancer, prior to menopause, as women in a control group.

Lead researcher James Brophy called the work “a local study that has far-reaching implications.”

Margaret Keith, another of the principal researchers, said the issue of women’s health in industry is “a no-go area,” and said that more



**Margaret Keith, a researcher behind a study that linked breast cancer to the auto plastics industry, called the issue of women’s health in industry “a no-go area.” She said that more work needs to be done to ensure parity with their male counterparts.**

James Fassinger for the *Toronto Star*



work needs to be done to ensure parity with their male counterparts.

The story has prompted concern that the rights of women in some industries are taken less seriously than their male counterparts

Advocates for women working in auto parts plants say this study will have an impact far beyond the science it presents: it will break the silence on an issue that has long been the subject of uneasy whispers.

“There’s the fear of losing your job or the fear of retribution from your employer if issues are raised,” said Sari Sairanen, national health and safety director for the CAW, which represents about 4,000 workers in parts plants, some of which make plastics.

About 91,000 Canadians work in the plastics trade, according to Industry Canada and — with a 37 per cent female workforce — it has the highest proportion of women of any other manufacturing sector.

Sandra Palmaro, the CEO of the Ontario wing of the Ontario Breast Cancer Foundation — a funder of the study — was in Windsor for the presentation and said the next step is for the research community to accept, and endorse, the findings.

The Ontario Ministry of Labour has 430 inspectors who conduct health and safety inspection blitzes and provides an annual update of exposure limits that restrict the amount and duration of a worker’s exposure to approximately 725 chemical and biological agents.

A ministry spokesperson said companies are obliged to do their own monitoring of toxic chemical levels to ensure the levels fall within safety standards.

In some cases, the ministry conducts its own testing to ensure compliance.

But even minuscule amounts of endocrine-disrupting chemicals can be worrisome, said Andrew Watterson, director of the Centre for Public Health and Population Health Research at the University of Stirling in Scotland.

“This research is raising big questions both about what the [work-place] standards are and even about what happens if conditions are very good, with low-level exposures,” he said.

Bob DeMatteo, health and safety director at the Ontario Public Service Employees Union for 30 years, questions whether ministry oversight protects workers from toxic chemicals that can wreak havoc even at low levels in the body.

“You can’t control it with a threshold,” he said. “You have to regulate it like asbestos — either substitute it or completely control and contain it.”

There is also deep dissatisfaction with workplace regulation in the United States where regulation takes place at the federal level.

Adam Finkel, former director of health standards programs for the U.S. Occupational Safety and Health Administration, said the vast majority of exposure limits enforced by the agency in American workplaces are based on scientific data from the 1960s or earlier, even though an estimated 150 workers die each day of work-related diseases.

“It’s a terrible record, and I’m getting more pessimistic as the years go by,” said Finkel, who runs the Penn Program on Regulation, a research center at the University of Pennsylvania Law School.

Limits for chemicals used in plastics are typically designed to address cancer and acute symptoms, not the sort of hormonal damage that can occur when women of childbearing age receive low-level exposures.

In its statement, OSHA acknowledged, “Many of our current Permissible Exposure Limits are out of date and inadequately protective, and we do not have limits for many other chemicals. OSHA is currently examining ways to strengthen our efforts related to workplace chemical exposures, as well as ways to respond to the identification of new, emerging hazards.”

In both Ontario and the U.S., there are no occupational exposure limits for BPA — the controversial chemical banned by Health Canada for use in baby bottles in 2010. The chemical is seen to have a negligible risk for adults.

A Statistics Canada survey two years ago found that 91 per cent of Canadians had the substance in their bodies. ■

# U.S. report urges deeper look into breast cancer's environmental links

*By Jim Morris*

Published Online: February 12, 2013

**A** **NEW FEDERAL** advisory panel report makes a forceful case for more research into environmental causes of breast cancer, which was diagnosed in 227,000 women, killed 40,000 and cost more than \$17 billion to treat in the United States last year.

Compiled by the congressionally mandated Interagency Breast Cancer and Environmental Research Coordinating Committee, the report notes that most cases of breast cancer “occur in people with no family history,” suggesting that “environmental factors — broadly defined — must play a major role in the etiology of the disease.”

Yet only a fraction of federal research funding has gone toward examining links between breast cancer and ubiquitous chemicals such as the plastic hardening agent bisphenol A; the herbicide atrazine; and dioxin, a byproduct of plastics manufacturing and burning, says the report, prepared for Health and Human Services Secretary Kathleen Sebelius and released today.

“Prevention needs to be as important as other investments that are made in screening, treatment and access to care,” Jeanne Rizzo, co-chair of the committee and president of the San Francisco-based Breast Cancer Fund, said in an interview. “There really is a problem, and until we address it we’re going to continue to have a quarter of a million new cases every year.”

The report’s release comes three months after a Center for Public Integrity article detailing a study of female plastic automotive parts workers in Windsor, Ontario. That study found that women employed in the chemical-intensive industry were nearly five times as likely to de-



**Breast cancer kills 40,000 women in the United States each year. A new federal report urges that more funding go toward research into environmental causes of the disease.** Kevin Wolf/AP

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velop breast cancer, prior to menopause, as women in a control group.

“That was essentially an uncontrolled human study,” Rizzo said of the Windsor workers. “We can’t do that. We need to learn from animal studies.”

Asked to comment Monday, a spokesman for the Department of Health and Human Services said, “We look forward to reviewing the report.”

At least 216 chemicals, including endocrine-disrupting substances like bisphenol A, have been associated with mammary gland tumors in animals. Endocrine-disrupting chemicals, or EDCs, are used to make plastics and pesticides and found in products such as furniture, metal food cans and cosmetics.

“National survey data show that many of these chemicals are pres-

ent in the blood or urine of children and adults in the United States,” the committee’s report says, “and some EDCs are present in 100 percent of the people sampled.” Exposure to such compounds early in life can be especially dangerous, the report says

All told, some 84,000 chemicals are registered for use in the United States. But complete toxicological screening data are available for only 7 percent of these substances, says the report, which calls for “enhanced testing of chemicals, especially classes of chemicals combined together as a mixture, for effects on the mammary gland and breast ...”

Environmental exposures, moreover, have gotten relatively little attention from researchers.

The National Institutes of Health spent almost \$2.4 billion on 2,910 breast cancer research projects from fiscal year 2008 through fiscal year 2010, the report says. But only about 27 percent of these projects had to do with prevention, and just 10 percent could be considered “environmental health research.”

Of the \$2.8 billion appropriated by Congress from 1992 through 2012 for the Department of Defense Breast Cancer Research Program, 75 percent went toward “basic biology and treatment research, with only 3 percent for prevention and cancer control projects,” the report says.

The committee recommends that researchers prioritize “chemicals that are produced in high volumes for which there is biologically plausible evidence of their role in the development of breast cancer.”

It also suggests that regulators improve oversight of “cosmetics and personal care products as well as household cleaning and food containment products,” and step up environmental monitoring, especially of “underserved and under-researched groups as well as ‘fenceline’ communities that are in close proximity to industry or waste sites.”

Spokespeople for the Environmental Protection Agency and the American Chemistry Council, the chemical industry’s main trade association, did not respond to requests for comment Monday. ■



Farmworkers pick tomatoes in Immokalee, Fla. during the 2006 spring season.  
Luis M. Alvarez/AP

# Farmworkers plagued by pesticides, red tape

*By Ronnie Greene*

Published Online: June 25, 2012

**N**ASHVILLE, Tenn. — Laboring in the blackberry fields of central Arkansas, the 18-year-old Mexican immi-

grant suddenly turned ill. Her nose began to bleed, her skin developed a rash, and she vomited.

The doctor told her it was most

likely flu or bacterial infection, but farmworker Tania Banda-Rodriguez suspected pesticides. Under federal law, growers must promptly report the chemicals they spray.

It took the worker, and a Tennessee legal services lawyer helping her, six months to learn precisely what chemical doused those blackberry fields. The company ignored her requests for the information. The Arkansas State Plant Board initially refused to provide records to her lawyer, saying it didn't respond to out-of-state requests. An Arkansas inspector, dispatched after the complaint, didn't initially discern what pesticides were used the day the worker became ill, records show.

When answers finally arrived — the fungicide was Switch 62.5WG, a chemical that can irritate the eyes and skin — Banda-Rodriguez had already left Arkansas to follow the season to Virginia and ultimately returned to Mexico. She never learned whether the pesticide sickened her.

The episode is as telling a snapshot today as it was six years ago for one of America's most grueling and lowest-paying vocations. Pesticides can endanger farmworkers, but thin layers of government protect them and no one knows the full

scope of the environmental perils in the fields.

The Environmental Protection Agency administers a Worker Protection Standard meant to regulate pesticides and protect workers and handlers. Yet the agency maintains no comprehensive database to track pesticide exposure incidents nationwide.

In 1993, the Government Accountability Office (then called the General Accounting Office) warned that the lack of data could lead to a "significant underestimation of both the frequency and the severity of pesticide illnesses."

Nearly 20 years later, the EPA can still only guess at the scope of pesticide-related ailments in an industry where many workers, toiling in the shadows, are reluctant to speak up. The EPA often hands enforcement of pesticide regulations to states, which receive and investigate few formal complaints each year, federal records show.

"The system in place to address pesticide exposure is horrible. It's dysfunctional," said Caitlin Berberich, an attorney with Southern Migrant Legal Services, a Nashville nonprofit that provides free legal services to farmworkers in six southern states. "It just doesn't work at all."

## The EPA “estimates that 10,000-20,000 physician-diagnosed pesticide poisonings occur each year among the approximately 2 million U.S. agricultural workers.”

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Some top state regulators agree the full toll of pesticides on farmworkers is not documented. Yet reforms requiring more complete disclosure of pesticide use have been caught up in EPA red tape.

The EPA did not respond to repeated requests for comment and written questions, sent by the Center for Public Integrity over the last month, about its pesticide oversight. The EPA “estimates that 10,000-20,000 physician-diagnosed pesticide poisonings occur each year among the approximately 2 million U.S. agricultural workers,” federal records show.

Yet when workers do complain — as in the case in Arkansas — securing hard information can be daunting.

Sometimes, workers say, they pay a price for speaking up.

When pesticides were sprayed near them in 2010 in the tomato fields outside the city of Newport, in a patch of east Tennessee where

the mountains touch the clouds and road signs warn of falling rock, the migrant farmworkers complained to state regulators. When it happened again, they say, they snapped videos with their cell phones.

The tomato farm’s response, the workers say in an ongoing federal lawsuit: to fire them on the spot, pile them on a bus and route them back to Mexico. The company denies any wrongdoing or retaliation.

In Florida in late 2009, farmworker Jovita Alfau, working in an open-air plant nursery in a rural swath of south Miami-Dade County, said she became dizzy and weak, with numbness in her mouth, and vomited.

Alfau said she had been told to tend to hibiscus plants at the Homestead nursery less than 24 hours after they had been sprayed with the pesticide endosulfan. The grower sent workers out too soon after the spraying, Alfau said in a



lawsuit, violating the Worker Protection Standard, and did not tell her when pesticides were applied, provide protective gear or tell her how to protect herself.

Endosulfan is so toxic that, by summer 2010, the EPA banned its use, saying the pesticide “poses unacceptable risks to agricultural workers and wildlife.”

Several days after falling ill, Alfau went to the doctor but was not asked about pesticides, said her lawyer, Karla Martinez of the Migrant Farmworker Justice Project. Alfau, a legal U.S. resident and Mexican native, said she has been unable to work regularly since.

Power Bloom Farms and Growers denies wrongdoing, but agreed this month to settle Alfau’s case for \$100,000, court records show. Under terms of the settlement, the company could also pay up to \$75,000 total to other affected workers in a case that also included wage abuse allegations. The company did not respond to an interview request.

Farmworkers who have spent decades in the fields say one constant remains: Workers have little voice when it comes to pesticides.

“We have to run to the cars and close the windows because the plane

is putting pesticides in the fields. After that happens, people feel sick,” said Yolanda Gomez, who began picking Florida oranges when she was nine and spent more than 30 years following the harvest from Florida to Washington State. “When you go to the field you go clean, and when you come out of the field you can see your eyes are very red.”

Raised in a family of farmworkers, with a father who once carried signs for Cesar Chavez, Gomez is now a community organizer for the Farmworker Association of Florida, in Apopka near Orlando. Farmworkers frequently trek into the office complaining of pesticide-related illnesses, she said.

“When you tell them, ‘Let’s make this paper and put your name on it so we can make a difference,’ they just won’t do it,” Gomez said. “‘I don’t have any papers. I have to work. This is the only way I can feed my family.’ They don’t see another way out of the system.”

The system, she said, “should care about the human side of the worker.”

## **Bottom of the food chain**

The battle over pesticides is a microcosm of the larger struggle for

laborers at the bottom rung of the economic food chain.

“There’s this disenchantment,” said attorney Adriane Busby, who focuses on pesticide safety policy for the nonprofit Farmworker Justice in Washington, D.C. “They just don’t believe anything will happen if they go above and beyond in reporting things. They don’t believe in the system protecting them.”

For farmworkers, just getting clear answers about pesticides is a struggle. No one, the EPA included, has a full picture of the problem.

An EPA slideshow report in 2006, for instance, opened with a question: How many occupational pesticide incidents are there each year in the United States?

The slide listed multiple possibilities, from 1,300 to 300,000. Each number could be true, the report said — it just depends upon the source. One number came from the Poison Control Center, another from EPA estimates and yet another from the Council of State and Territorial Epidemiologists.

This uncertainty, even the EPA admits, can carry real consequences. As its slide noted, the lack of accurate information “inhibits clear problem identification.”

Advocates say the dearth of in-

formation triggers another problem: It’s hard to hold government and industry accountable when there is no benchmark from which to judge.

In its 2006 report, the EPA set goals of gathering more complete information and creating a more consistent means of tracking incidents. Among its recommendations: To “prepare a report on occupational incidents.”

Six years later, asked whether such a report has been prepared, the EPA did not respond.

Instead of maintaining its own database, the EPA depends on states to report complaints. But those annual reports list minuscule numbers. In 2011, for instance, North Carolina listed a total of five investigations based on complaints — for the entire state. South Carolina, another major agricultural producer, reported zero. Tennessee: 3.

Florida, the nation’s second-biggest agricultural state after California, reported 61 complaint-based investigations that year.

But Gregory Schell, managing attorney with the Migrant Farmworker Justice Project in Lake Worth, near West Palm Beach, Fla., said just a fraction of the pesticide incidents are reported.

## “Workers view these exposures as an occupational hazard. Even when they do complain, there’s an unwillingness to come forward.”

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His guess: “One-tenth of 1 percent, in Florida.”

In 2005, Schell surveyed laborers who worked for a grape tomato grower in northern Florida that season. Nearly one in four said they had been directly sprayed with pesticides or other chemicals. Just under half said they had encountered drift from nearby fields. Thirty-six percent said they had become sick or nauseous from pesticides, and more than four of 10 said they developed skin rashes or irritation.

Had those numbers been extrapolated out for a state with 200,000 farmworkers, there would have been thousands of complaints, not dozens.

“Workers view these exposures as an occupational hazard. Even when they do complain, there’s an unwillingness to come forward,” Schell said. “One [reason] is their immigration status. The other is the employer can and will fire them.

“It is like pulling teeth for us to get people to file pesticide complaints.”

The official count doesn’t reflect reality, agrees Andy Rackley, director of agricultural environmental services for Florida’s Department of Agriculture and Consumer Services. “I would say we probably don’t have a good handle on it,” Rackley said. “It’s probably not as big as some people say it is but it’s probably bigger than what our complaint investigation files would indicate.”

Rackley believes growers should be required to more fully disclose where farmworkers are when pesticides are being sprayed. “Where were the workers at the same time, were they harvesting in the same fields?” he asked. “That won’t keep anybody who’s intent on hiding something from doing something, but it certainly raises the stakes.”

Growers log their pesticide use, and many track workers’ activities — but there’s no rule requiring one report tying the two, Rackley said. “EPA has been working on a rule to do that for at least eight years,

maybe longer,” he said, “but we still don’t have it.”

Language barriers add another hurdle.

Pesticide warning labels are not required to be in Spanish, though eight of every 10 farmworkers are foreign born and most of the nation’s agricultural workforce comes from Mexico.

On average, according to the U.S. Department of Labor’s National Agricultural Workers Survey, crop workers had not advanced beyond the seventh grade. Forty-four percent said they could not speak English and 53 percent could not read the language. When farmworkers can’t read safety instructions, they face higher risks of exposure, say advocates who have pushed the EPA to require bilingual labeling.

With a scarcity of hard data, advocates are sometimes left to cite decades-old reports as proof of pesticide’s perils. One report, from the U.S. Bureau of Labor Statistics, said farmworkers suffer the highest rate of chemical-related illness of any occupational group, at 5.5 per 1,000. The report date: 1987

Florida’s Rackley believes the EPA should more fully fund qualified advocacy groups to train work-

ers on pesticide safety — empowering workers, giving growers a level of comfort, and building trust between the two. “Listen, the growers need the workers and the workers need the growers, that’s the bottom line,” he said. In recent years, records show, the EPA has provided funding from \$25,000 to a nonprofit to help reduce farmworker pesticide exposures in New Jersey to up to \$1.2 million over five years to help train clinicians working with farmworkers.

## A conflict in Tennessee

Workers who speak up sometimes find themselves immersed in conflict.

In Newport, Tenn., tomato grower Fish Farms hired workers under the federal government’s H-2A temporary agricultural program, in which legal foreign workers can be brought in when industry lacks local laborers for the job.

At Fish Farms, 15 workers contend in an ongoing lawsuit, pesticides were sprayed in the fields while they worked and close to their trailer homes, in a secluded stretch of a city of almost 7,000 whose commercial strip includes Debbie’s Drive Inn, For Heaven’s

## Some laborers told the state they had lost fingernails that season, and said pesticides were sprayed 30 feet away from them.

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Cake & Bakery and the Newport Plain Talk newspaper.

In July 2010, aided by Southern Migrant Legal Services, the laborers complained to the pesticides administrator of the Tennessee Department of Agriculture, “citing frequent exposure to pesticides while working at Fish Farms, physical symptoms, and the absence of medical care,” according to the lawsuit. Some laborers told the state they had lost fingernails that season, and said pesticides were sprayed 30 feet away from them.

That August, the workers turned to the Knoxville Area Office of the Wage and Hour Division of the U.S. Department of Labor, contending the company skirted federal and state pay and housing laws. The workers said they had to wash their clothes in a nearby river, and that their trailers were insect-infested and overcrowded, with holes in the walls. The company said the housing met federal standards, and any violations were caused by the workers.

On August 23, 2010, the Labor Department conducted an on-site investigation — leading to a skirmish. Two Fish Farms bosses “impeded” the inspectors’ discussions with the workers, the federal lawsuit says, and two others “arrived brandishing firearms.”

Fish Farms disputes that account in its response to the lawsuit. Instead, the company said, one worker “held a knife in a threatening manner.” The company fired him and filed an aggravated assault charge. The worker said he had been using the knife to cook with and did not threaten anyone. The state dropped the charge.

On September 5, 2010, the workers said, pesticides were again sprayed close to their trailers. This time, they took out their cell phones and began taking video of tractors passing by. Fish Farms bosses again turned out.

Workers said they retreated to their trailers, but, according to their lawsuit, a Fish Farms boss kicked in

one door and two bosses yelled obscenities, including “f---ing Mexicans.” Farm bosses snatched their cell phones, loaded workers on a bus and arranged their return to Mexico, the suit said.

This May, Fish Farms referred a reporter’s inquiry to the company’s Knoxville attorney, Jay Mader. The lawyer did not respond to three interview requests, but the company challenges the workers’ account in a formal response to the lawsuit filed this month.

On the September day workers began taking video footage, Fish Farms said, the laborers were actually trying to “fabricate evidence of improper pesticide spraying.” The decision to fire them was warranted for “excessive absences,” the company wrote, and because the farmworkers “knowingly engaged in behavior that falsely portrayed Fish Farms as being out of compliance with local, state, and federal law.”

A Fish Farms boss “may have briefly removed” cell phones in his face, but returned them. The company said it paid for lodging and bus tickets for the workers to return to Mexico. There were “heated exchanges,” the company admitted, but executives said they could not recall the exact words.

After the lawsuit was filed, Fish Farms tried to get the case dismissed, saying the former H-2A workers lacked legal standing. A judge denied the farm’s request last month, calling its argument “completely unsubstantiated and devoid of merit.” The company continues to seek the case’s dismissal.

Ultimately, the Tennessee Department of Agriculture investigated the pesticide complaints. In November 2010, months after the workers had returned to Mexico, the state cited Fish Farms for using pesticides inconsistent with labeling, and for not displaying specific information about pesticides used.

The civil fine imposed: \$425, which Fish Farms paid that same month. “The department considers this matter to be closed,” the state wrote.

## Maze of red tape

The case in Arkansas opens a window into the maze farmworkers enter when they think they’ve been poisoned by pesticides.

Banda-Rodriguez, the 18-year-old farmworker toiling in the blackberry fields in Judsonia, Ark., said she started getting sick one day in June 2006. A short time later, she

reached out to attorney Melody Fowler-Green of Southern Migrant Legal Services about another matter, involving immigration. Later, the worker mentioned her sickness.

In October 2006, Fowler-Green sent a certified letter asking the grower, Gillam Farms, to tell her what pesticides were used the day the woman became ill. She cited the EPA's Worker Protection Standard, which mandates disclosure. Gillam Farms did not respond, the lawyer said in a letter to the EPA the following year.

Gillam Farms did not respond to two interview requests from the Center for Public Integrity.

In Arkansas, the EPA defers regulation to the state Plant Board. In November 2006, after not hearing back from the grower, Fowler-Green contacted the state and said she was told her phone call constituted a complaint.

In January 2007, a state official told her an investigator had visited the farm "but failed to gather information regarding the pesticide used on the fields when my client became ill," Fowler-Green wrote the EPA. "I was not offered any coherent explanation for this failure."

She followed up again in February 2007, when the Plant Board

faxed to her a complaint form to fill out. Fowler-Green said it was the first time she was told she had to submit that paperwork.

Along with a complaint, the lawyer filed an open records request to obtain the Plant Board's investigative file.

That same month, a lawyer for Gillam Farms questioned the pesticides inquiry in a letter to the state. "My client intends to cooperate with any legitimate investigation by the Plant Board," wrote attorney Byron Freeland. "However, we are concerned that the Plant Board is being used by a former Gillam Farms employee and her attorney to harass Gillam in an attempt to gain information for a spurious claim."

That April, Fowler-Green said, the Plant Board finally told her the pesticide that had been used: Switch 62.5WG, a fungicide made by the Swiss conglomerate Syngenta that kills diseases on crops ranging from blackberries to turnip greens.

But the agency still hadn't turned over its investigative case file.

"It is the opinion of the Arkansas Attorney General's Office that the state FOIA [Freedom of Information Act] does not apply to persons

outside the state,” Plant Board Director Darryl Little wrote the Nashville attorney that July.

Only when she threatened to sue did the board provide the information.

All told, it took the lawyer six months to learn the name of the pesticide Banda-Rodriguez encountered — and 10 months to get a copy of the state’s investigative file. By that time, the farmworker was back in Mexico.

In an interview, Plant Board Director Little said the agency was hamstrung because the initial complaint did not arrive until months after the worker became sick. Normally, he said, the department aims to move as quickly as possible to gather evidence.

“It was frustrating figuring out what we could do to help this lady since it had been such a long time since this incident occurred,” Little said.

Yet the director acknowledged that his office, once contacted, moved slowly.

“We were extremely short-handed in that division at the time and I am sure we were slow — there’s no question about that,” he said. “We were struggling in our division at that time to keep our nose above

water.” He said the Plant Board is back to full staffing.

Asked about his initial records response, Little said he was simply applying the law. “The way it’s written states that the records are open to the citizens of the state,” Little said. “But my take on it is, the only thing you’re going to do is make somebody mad and they’re going to call someone they know in Arkansas and they are going to get the records.”

His ultimate call, he said: “Give them the records. And that’s what we did.”

In the end, the Plant Board concluded it had insufficient evidence to determine whether the worker had been exposed to pesticides, or whether the Worker Protection Standard had been violated.

When Fowler-Green complained to the EPA, the federal agency replied that Arkansas’ review was proper. The EPA does not meddle in state public records disputes, an official said — and, if anything, the worker should have filed her complaint sooner.

If it took a lawyer this long to obtain basic information, Fowler-Green thought, imagine the difficulty farmworkers face.

“Yes, of course complaints



should be made right away,” said Fowler-Green, who recently took a job with another law firm. “But whether it’s a month, two months or three months, the worker still should have a right to the name of the pesticide that was applied.”

Advocates wage longshot campaigns. Southern Migrant Legal Services has four lawyers handling farmworker cases in six states.

Yet the federal Worker Protection Standard meant to protect laborers has gone 20 years since a thorough revamping.

Farmworker Justice and the nonprofit environmental law firm Earthjustice are pressing for upgrades, writing to EPA Administra-

tor Lisa Jackson last November and calling for reforms, including:

- Expanded training requirements for agricultural workers and pesticide handlers;
- Strict limits on when workers can re-enter the fields after spraying, and more complete information provided about the pesticides they encounter;
- Rules mandating special areas for workers to change into their work clothes, store clean clothing, and shower at day’s end, so they don’t carry pesticide residues home.

Asked about the suggestions, the EPA did not respond. ■

## FOLLOW-UP

# Farmworker advocates press EPA to update pesticide rules

*By Ronnie Greene*

Published Online: July 17, 2013

**S**AYING they are plagued by pesticides but protected by only a thin layer of government regulation, farmworkers and their advocates are pressing the Environmental Protection Agency to update rules that are two decades old, and, critics say, dangerously dated.

Farmworker advocates from Florida to California were in Wash-

ington Monday and Tuesday to press the EPA and members of Congress to tighten rules meant to protect agricultural laborers from pesticides in the fields.

Their target: The Worker Protection Standard, a set of EPA rules meant to reduce the risk of pesticide-related injuries for some 2.5 million agricultural workers and pesticide handlers at 600,000 agricultural establishments nationwide.

Yet, even as the perils of pesticides have become better known, EPA protections have not been seriously updated in 20 years.

And, the Center for Public Integrity reported last year, the federal agency can only guess at the number of pesticide-related injuries for workers who often toil in the shadows. In addition, the Center found, the EPA often hands off pesticide enforcement to the states — which receive and investigate modest numbers of complaints each year.

The mix of old regulations and thin enforcement leads to tangible problems for laborers in the fields, advocates say.

“For me it’s gut-wrenching to sit across from someone, look at their face, hear their stories, and what can we do? It’s terrible,” said Jeannie Economos, Pesticide Safety and Environmental Health Project Coordinator for the Farmworker Association of Florida.

Recently, Economos said, an undocumented worker — a woman about 30 years old and employed by a Florida plant nursery — came to complain about verbal abuse by her boss. As they talked, she said, the worker said she had trouble breathing for days after working near pesticides. “She sat in front of me and she shook the whole time, and she said she shakes all the time because she is exposed to pesticides,” Economos said.

Citing such cases, worker rights and pesticide safety groups are pressing the EPA to enhance protections. Among their suggestions, they are asking the EPA to:

- Provide more frequent and thorough pesticide safety training for farmworkers;

- Ensure that agricultural laborers receive information about specific pesticides they handle, and protective equipment limiting exposure;
- Mandate medical monitoring of workers handling pesticides that affect the nervous system.

“Farmworker families are exposed to pesticides in the form of residues on workers’ tools, clothes, shoes, and skin. The close proximity of agricultural fields to residential areas also results in aerial drift of pesticides into farmworkers’ homes, schools, and playgrounds,” Earthjustice, a nonprofit public interest law organization, said in a statement this week. “Research shows that children are especially vulnerable to harms from these exposures, even at very low levels.”

Such groups have long pressed for reform. In 2011, for instance, Earthjustice and Farmworker Justice sent then-EPA Administrator Lisa Jackson a 31-page letter seeking “long-overdue revisions” to rules.

Now, farmworker advocates say they expect the EPA to soon issue recommended updates to the Worker Protection Standard. Anticipating that, the advocates are pressing the agency and members of Congress for substantive changes.

“We feel it’s about time that they do this, and we’re really concerned that what the EPA has proposed does not get watered down in the process,” Economos said.

In a statement to the Center Wednesday afternoon, the EPA confirmed it is revamping the Worker Protection Standard. Among other areas, the EPA said it is examining the minimum age for handlers, personal protective equipment and ways to “improve enforcement capability.”

“The proposed rule intends to reduce the risk of adverse effects to worker health from the use of agricultural pesticides,” the agency said, adding that it intends to release proposed amendments in the spring of 2014. ■



A fire smokes near a Texas fertilizer plant that exploded Wednesday. LM Otero/AP

# As critics press for action, Chemical Safety Board investigations languish

*By Jim Morris and Chris Hamby*

Published Online: April 17, 2013

*Editor's note, April 18: An explosion Wednesday at a fertilizer plant north of Waco, Texas, killed between five and 15 people, authorities say, and injured more than 160. The U.S. Chemical Safety Board, an independent agency that investigates chemical accidents*

*and issues safety recommendations, says it expects a "large investigative team" to arrive at the scene this afternoon. As the Center for Public Integrity reported Wednesday, the board has been criticized for failing to complete investigations in a timely manner.*

**O**N APRIL 2, 2010, an explosion at the Tesoro Corp. oil refinery in Anacortes, Wash., killed five workers instantly and severely burned two others, who succumbed to their wounds.

Eighteen days later, the Deepwater Horizon drilling rig blew up in the Gulf of Mexico, killing 11 workers and unleashing a massive oil spill.

In both cases, the U.S. Chemi-

cal Safety Board — an independent agency modeled after the National Transportation Safety Board — launched investigations. Like the NTSB, the Chemical Safety Board is supposed to follow such probes with recommendations aimed at preventing similar tragedies.

Yet three years after Tesoro and Deepwater Horizon, both inquiries remain open — exemplars of a chemical board under attack for



The section of the Tesoro refinery in Anacortes, Wash., where a heat exchanger blew up on April 2, 2010, killing seven workers. The U.S. Chemical Safety Board has been criticized for failing to finish its investigation of the accident. U.S. Chemical Safety Board

what critics call its sluggish investigative pace and short attention span. A former board member calls the agency “grossly mismanaged.”

The number of board accident reports, case studies and safety bulletins has fallen precipitously since 2006, an analysis by the Center for Public Integrity found. Thirteen board investigations — one more than five years old — are incomplete.

As members of Congress raise questions, the Environmental Protection Agency’s inspector general is auditing the board’s investigative process.

“It is unacceptable that after three long years, the CSB has failed to complete its investigation of the tragic Tesoro refinery accident,” Sen. Patty Murray, D-Wash., said in a written statement to the Center. “The families of the seven victims and the Anacortes community deserve better, and the CSB must be held accountable for this ridiculous delay.”

At Tesoro, a tube-like device called a heat exchanger came apart, triggering an inferno that melted aluminum 100 feet away. Shauna Gumbel, whose son, Matt, died 22 days after being burned in the blast, said the victims’ families

were told to expect news from the CSB on the tragedy’s second anniversary. The date came and went. “Then we were told, ‘Six more months,’” she said.

In a recent conference call with the families, board officials pledged to finish the Tesoro report by the end of 2013 — more than 3 ½ years after the accident, Gumbel said.

“I think they’re making excuses,” she said. “Why aren’t they assigning more people so they can get the investigation done in a timely manner and the families can move forward?”

Chairman Rafael Moure-Eraso and managing director Daniel Horowitz say the board, which has a \$10.55 million annual budget, is stretched thin and must decide which of the 200 or so “high-consequence” accidents that take place in the United States each year merit its attention.

“We’ve made innumerable proposals over the years ... pointing out the significant discrepancy between the number of serious accidents and the ones that we can handle from a practical standpoint,” Horowitz said in an interview with the Center. “We’ve asked for a Houston office. We’ve asked for

additional investigators for many years.”

Congress, he said, has been unwilling to come up with more money.

Moure-Eraso, chairman since June 2010, said the Tesoro investigation was sidetracked by an explosion at the Chevron refinery in Richmond, Calif., last August that created a towering black cloud and prompted about 15,000 people in surrounding neighborhoods to seek medical evaluation. No one was killed but 19 workers were exposed to noxious hydrocarbon vapors.

“We have to make decisions,” Moure-Eraso said. “Here we were, running along, working on Tesoro, and then this accident happened at Chevron. We decided that it was important to deploy [to Richmond] because the issues that were raised were issues that affect the whole refinery industry.”

Current and former board members and staffers, however, contend the agency’s investigations are poorly managed — an allegation the EPA’s inspector general is exploring.

“They were jumping from one investigation to another, and when a new accident occurred they would pull people off an existing investigation to go investigate that one,”

said former CSB board member William Wark, whose five-year term ended in September 2011. Wark, who accompanied investigators dispatched to the Tesoro accident, said it’s “embarrassing” that the investigation has not been finished.

“The basic, bottom line is the agency is grossly mismanaged,” he said.

The board has 20 investigators — four more than it had in 2008. Adjusted for inflation, its budget has been essentially flat over the past five years. Yet earlier investigations were often completed more quickly.

The deadliest accident the board has investigated was the March 2005 explosion at the BP refinery in Texas City, Texas. Fifteen workers were killed and 180 injured. The board’s final report was issued just under two years after the accident.

A February 2008 blast at the Imperial Sugar plant near Savannah, Ga., killed 14 and injured 36. The final report was issued in 19 months.

Gerald Poje, a Bill Clinton appointee who served on the board from 1998 to 2004, finds it “painful” that more recent investigations have stagnated. He worries that an “erosion of the reputation of the in-

stitution” could cause Congress to question its value.

“I always considered the board to be in a race against time,” Poje said. “When an event occurs, people want to know instantaneously why it happened, how it happened and what can be done to prevent it from happening again. Unfortunately, over time, people begin to forget and feel less obligated to pay attention to recommendations.”

## Falling productivity

The Chemical Safety Board had a rocky start.

Created by Congress in amendments to the Clean Air Act in 1990, the board wasn’t up and running until 1998. It was a relative weakling among government agencies, starved of funding and mistrusted by industry.

“Upon reflection as a former board member, it appears that neither administration nor Congressional support for the CSB has ever been very strong,” Andrea Kidd Taylor, now a lecturer at Morgan State University in Baltimore, wrote in the journal *New Solutions* in 2006. “[F]unding for this small agency has been limited ... So the agency’s growth and the number of

investigations it can conduct and complete in a year are minimal.”

Still, Taylor wrote, “Given the CSB’s current budget [then about \$9 million], the average number of four root-cause investigations completed per year is exceptional.”

Authorized for five members, the board currently has three, with a fourth awaiting confirmation. Its staff numbers 39. The NTSB, by comparison, had more than 400 people and a budget of \$102 million in fiscal year 2012.

The chemical board appeared to hit its stride under Carolyn Merritt, a George W. Bush appointee who served as chair from 2002 to 2007 and died of cancer in 2008.

In 2006 the board released nine products — three full reports, three case studies and three safety bulletins. In 2007 it put out eight, including a widely praised, 341-page report on the BP-Texas City explosion.

Production has trended down ever since. Last year, the board released two case studies. So far this year, it has issued one full report and one case study. On Monday, it released an interim report on the August 2012 Chevron accident.

“It depends, ultimately, what Congress expects the agency to do,” the board’s Horowitz said. “If



they expect us to look at all 200 of these high-consequence accidents, then that's a larger problem. With the resources that we have — which, like every other agency, are finite — we do tremendous good.

“Would we like to do more? Would we like to do it faster? Sure.”

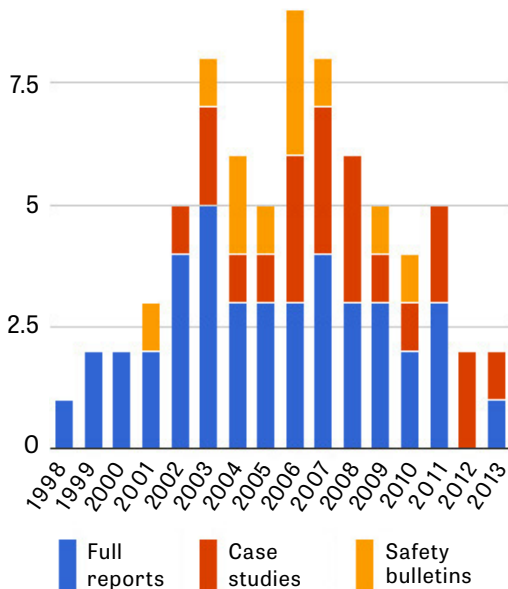
Horowitz and Moure-Eraso say they are eager to complete the Tesoro investigation, which has consumed about 7,100 hours of staff time and \$700,000 over the past three years. But, they say, Deepwater Horizon, an inquiry requested by two members of Congress that has cost nearly \$4 million to date, required a diversion of staff.

“We’ve spent \$4 million that we really didn’t have, and we’ve committed, at times, over half our investigative staff,” Horowitz said. Investigators, he said, have prepared a 400-page draft report that’s “the most comprehensive we’ve ever done.”

The Tesoro inquiry progressed in fits and starts. Within a few months

of the accident in April 2010, investigators had drafted urgent recommendations for the company as well as a refining industry trade group and the Occupational Safety and Health Administration. Those recommendations were never issued.

## Dwindling Productivity



The number of Chemical Safety Board products — full reports, case studies and safety bulletins — has fallen steeply since 2006.

Source: Center for Public Integrity analysis.

“The board at that time didn’t feel that they went far enough,” Horowitz said. “They were company-specific. We didn’t feel they went to the real heart of the problems, which are broader than Tesoro and reflect aging infrastructure in refineries [and] use of antiquated materials and systems.”

A year earlier, however, the board had issued urgent recommendations stemming from a release of potentially lethal hydrofluoric acid from the Citgo refinery in Corpus Christi, Texas. They were no broader than the draft Tesoro recommendations.

“Well, look, it was a different board, and they make their decisions on what recommendations they want to ultimately issue,” Horowitz said.

The board’s investigation of the Citgo accident, which occurred in July 2009, is unfinished. “That’s a case we hope to get back to,” Horowitz said.

Soon after the draft Tesoro recommendations were shelved, several experienced investigators — including Rob Hall, who was leading the Tesoro team — left the board. In the fall of 2011, an almost entirely new team essentially had to start over.

Team members have since been pulled into the Deepwater Horizon and Chevron investigations, among others. The current leader, Dan Tillema, spent months examining the failed blowout preventer implicated in the Gulf oil spill, a process that has cost about \$1 million.

When the Tesoro report finally comes out, Horowitz said, it will reflect an exhaustive inquiry.

“We engaged top metallurgists from the National Institute of Standards and Technology and we are undertaking complex modeling to understand process conditions inside the heat exchanger,” he said. “The investigative team has been continuing to obtain documents and interviews from Tesoro.”

## **‘Management problem’**

The United Steelworkers union, which represents workers in refineries, chemical plants and other hazardous settings, has been among the board’s more vocal critics.

At a public meeting in January, on an explosion that killed five at a Hawaii fireworks storage facility, Steelworkers official Mike Wright observed that “our workplaces have been the subject of more CSB investigations than any other union or



**The Deepwater Horizon drilling rig on fire in the Gulf of Mexico in April 2010. Some question the U.S. Chemical Safety Board's decision to investigate the accident in light of other federal inquiries and a lengthy case backlog at the CSB. Still incomplete, the investigation has cost about \$4 million. U.S. Coast Guard**

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corporation. We are your biggest stakeholder and, perhaps, your biggest fan."

Investigative delays "severely compromise the board's mission," said Wright, the union's director of health, safety and environment.

"Perhaps even worse is the hu-

man cost of the delays," he said. "Families and co-workers feel abandoned by the board, and even abandoned by their government."

The union didn't blame the board's investigators, Wright said. "This is a management problem."

The EPA's inspector general is

looking into this very subject. In May 2012, the IG notified Moure-Eraso that it planned an audit “to determine whether CSB’s investigative process can be more efficient to enable more investigative work.”

Three months later the IG released the results of another audit, finding that the board did not press regulators, such as OSHA, and industry hard enough to make sure its recommendations were adopted. As of December 2010, the IG said, more than a third of the 588 recommendations issued by the board were still open; almost a quarter of these had been open more than five years. The board says 29 percent of its recommendations are open today.

“We are kind of full-time employment device for the IG,” Moure-Eraso said. “I don’t think that they are competent to basically understand how we work or understand how we conduct investigations.”

The board was dealt a substantial blow in 2011, when four investigators quit. Two of them, Hall and John Vorderbrueggen, had been team leaders; both, now with the NTSB, declined comment.

Asked if he thought the departures reflected dissatisfaction, Moure-Eraso said: “Investigator

is a very tough job. You are asking somebody to deploy for weeks at a time wherever the accident happened, to be away from their families, to deal with very unsavory situations. You have to deal with people getting killed, places destroyed. ... It’s not for weak hearts.”

## Where to deploy?

The board’s choice of investigative targets has been a point of contention.

Why, the Steelworkers ask, did the board follow up on an ink plant explosion in East Rutherford, N.J., that injured seven workers last October but not a hydrofluoric acid release that killed a union member in December at the Valero Energy Corp. refinery in Memphis?

Hydrofluoric acid, a toxic gas that can rapidly travel long distances in a ground-hugging cloud, is used at about 50 U.S. refineries. “We have been harping on how dangerous it is for quite some time,” said Kim Nibarger, a health and safety specialist with the Steelworkers.

The union thought the Valero accident afforded a “golden opportunity” for the board to reinforce the need for “inherently safer tech-

nologies,” Nibarger said. “They said they were too busy.”

Horowitz said the board was asked to go to New Jersey by one of the state’s senators, Frank Lautenberg. No one in the Tennessee congressional delegation urged the board to look into Valero.

“We screen [accidents] very carefully,” Horowitz said. “We look at the specific consequences — the number of deaths and injuries and things like that, the number of community evacuations. We look at qualitative factors, one of which is requests from Congress and from our authorizing committees to investigate these issues.”

Poje recalls fielding congressional requests when he was on the board. “Sometimes,” he said, “you have to answer back, ‘Thank you so much for your interest. We wish we were resourced to meet this priority for your community but we aren’t.’”

Debate continues over whether the board should have investigated the April 2010 Deepwater Horizon accident, already addressed in at least a half-dozen other federal inquiries, including one by a presidential commission.

Former board members Wark and William Wright, both appointed by George W. Bush, said they

argued against it. “It was offshore. It was something that we had absolutely no business being in,” Wark said. “They insisted on doing it anyway. They spent a lot of the agency’s budget on that.”

“I don’t think there’s anything they’re going to say that’s going to improve offshore drilling right now,” said Wright, whose term expired the same day as Wark’s in 2011. “Yet we have managed to invest \$4 million in as many years and I am at a loss as to what value will be added by continuing to look at this incident now, particularly when the Interior Department has changed a number of regulations already.”

Horowitz pointed out that the board, then chaired by John Bresland, was asked to investigate the disaster in early June 2010 by Reps. Henry Waxman, D-Calif., and Bart Stupak, D-Mich. Bresland agreed. Moure-Eraso assumed the chairmanship days later, having been handed a record-high caseload. Bresland declined to be interviewed.

“We told Congress at that time that we needed additional resources to conduct that work,” Horowitz said, referring to \$5.6 million in supplemental funding sought by Moure-Eraso. “Well, those resourc-

es were never provided.”

The investigation was slowed by rig owner Transocean’s refusal to comply with board subpoenas for records, lead investigator Cheryl MacKenzie said in a statement to the Center. “It took nearly two years of steady effort to get the issue before a federal court, and only this month did a decision finally come down in the CSB’s favor,” MacKenzie said.

Nonetheless, Horowitz said, the investigation, which should be completed this summer, was worth doing.

“We’re the agency that’s going to look in detail and depth at industry standards,” he said. “The presidential oil spill commission took the

30,000-foot view, wrote a good report, but looked in broad strokes. The regulators looked at technical issues. We are looking at the effectiveness of those standards, and we’ll have a lot of recommendations for improvement that we think will make a safer industry.”

William Wright said the board should have focused instead on finishing long-overdue reports, like Tesoro, and delving into more recent accidents, like Valero.

“That’s kind of why we were put in business in the first place,” he said. “The public’s not being well served by an agency that was created to improve chemical safety if it fails to put out timely reports on significant chemical incidents.” ■

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# Warehouse worker lawsuit targets Walmart

*By Jim Morris and Adithya Sambamurthy*

Published Online: November 30, 2012

**MIRA LOMA**, Calif. — Lawyers alleging wage theft from mostly immigrant Latino contract workers at a Southern California warehouse complex took steps today to add Walmart as a defendant in an ongoing federal lawsuit.

The move is expected to draw the nation's largest retailer into a case in which it had, heretofore, been tangentially involved — and raises questions about the human cost of Walmart's tightly controlled supply chain, which relies heavily on contractors and subcontractors.

"Walmart employs a network of contractors and subcontractors who have habitually broken the law to keep their labor costs low and profit margins high," Michael Rubin, a lawyer for the workers, contended in a written statement to the Center for Public Integrity and the Center for Investigative Reporting. "We believe

Walmart knows exactly what is happening and is ultimately responsible for stealing millions of dollars from the low-wage warehouse workers who move Walmart merchandise."

A court document filed today in Los Angeles claims, "Recent discovery has established that Walmart bears ultimate responsibility for the violations of state and federal law committed against plaintiff warehouse workers," who "perform hard physical labor for long hours with little pay under hot, hazardous, and dust-filled conditions, unloading and loading trucks destined for Walmart stores and distribution centers throughout the United States."

The class-action lawsuit, filed in October 2011, accuses the owner of the Mira Loma warehouse complex, Schneider Logistics Transloading and Distribution, and two staffing agencies of cheating contract workers out of pay.



**Walmart trailers parked outside the Schneider Logistics warehouse in Mira Loma, Calif. Lawyers alleging wage theft from mostly immigrant Latino contract workers at the Southern California warehouse complex took steps to add Walmart as a defendant in an ongoing federal lawsuit.** Adithya Sambamurthy/Center For Investigative Reporting

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In an email, Walmart spokesman Dan Fogleman said, “We disagree with [Rubin’s] characterization. While we have a set of quality standards that must be met, the third party service providers we utilize are responsible for running their day-to-day business. They manage their people completely independent of us.”

In a statement earlier this month, Fogleman said “some workers at

third party logistics facilities that we use have raised some concerns about their work environment.

“Even though the workers aren’t employed by us, we take these types of allegations very seriously,” the statement said. “The fact is, we hold our service providers to high standards and want to ensure that workers throughout our supply chain are treated with dignity and respect.”



Walmart officials planned to begin audits of warehouses such as Schneider “within days,” according to the statement. “In the meantime, company representatives have made multiple visits — including some that were unannounced — to the facilities where the bulk of the concerns have been raised.”

The lawsuit alleges that Schneider and staffing agencies Premier Warehousing Ventures LLC and Impact Logistics Inc. conspired to “cover up the extent of their wrongdoing by failing to keep mandatory payroll records, falsifying records of hours worked and compensation owed, and concealing, denying and/or misrepresenting to the workers the amount of their earnings and on what basis these earnings were calculated.”

The staffing agencies have agreed to pay a collective \$450,000 in fines and back wages to settle citations issued by California labor officials, who raided the warehouse the same month the lawsuit was filed last year. Schneider, which

was not cited by the state, said in a statement that it “played no role in determining the rate or method of pay” that led to the violations.

By adding Walmart — the warehouse’s only customer — to the lawsuit, lawyers for the workers are



**David Acosta is among more than 200 warehouse workers included in the class-action lawsuit.**

Adithya Sambamurthy/Center For Investigative Reporting

seeking to prove that the company pressured Schneider to hold down costs by underpaying subcontractors. As many as 1,800 workers in Southern California could receive back pay and damages as a result of the case, and the impacts could be felt in other warehouse centers as well.

Schneider employee David Acosta, among the more than 200 plaintiffs in the lawsuit, questions whether Walmart could have been oblivious to the problems in Mira Loma — which he and other workers describe as long, unpredictable hours and unpaid wages.

“Walmart is responsible,” Acosta said in an interview. “They want to wipe their hands clean of the situation. But they make or break contractors.”

One Walmart employee has an office in the Schneider warehouse and participates in daily operational meetings and audits, court documents allege.

### **‘Pervasive labor abuses’**

This is not the first time Walmart’s outsourcing has come under scrutiny. In a report last June, the National Employment Law Project, a New York-based legal and policy-analysis center, alleged “pervasive labor abuses” within Walmart’s supply chain.

“These worker rights violations are largely the product of Walmart’s signature and aggressive practice of ‘outsourcing’ elements of its warehousing, transportation, and goods-delivery systems to com-

panies that, in turn, often further subcontract the work to still other entities or individuals,” the report says.

The Mira Loma warehouse has been on regulators’ radar for more than a year.

Responding to worker complaints about inaccurate pay stubs, investigators with the California Division of Labor Standards Enforcement raided the complex Oct. 12, 2011. The agency cited Schneider’s two labor suppliers at the time, Premier and Impact, for failing to provide employees with statements detailing the hours they had logged, their hourly pay, deductions and other wage-related information. The state proposed a \$601,000 penalty against Premier, \$499,000 against Impact.

Premier and Impact were using an indecipherable “group piece-rate” system to compensate workers, investigators found. Workers say they virtually always lost money in the arrangement, compared to what they would have made had they been paid by the hour.

“We found that workers were being denied the very basic right to know what they had earned for the work that they were doing,” California Labor Commissioner Julie

Su, who ordered the raid, said in an interview. “We found that workers were being denied minimum wage, were not being paid overtime hours.”

Premier — which no longer contracts with Schneider — and Impact agreed to pay \$175,000 and \$140,000 in fines, respectively, to settle the cases. In addition, Premier will pay \$75,000 in back wages to 151 workers; Impact will pay \$60,000 to 283 workers.

Neither Premier nor Impact responded to emails and phone calls seeking comment. In its statement, Schneider said it was unaware of the violations prior to the raid.

“Our contracts clearly indicate that the vendors are exclusively responsible for the material aspects of the employment, including hiring, discipline, onsite management, training, determining rates of pay, timekeeping and compliance,” Schneider said.

California’s Su said she brooks no tolerance for employers who exploit low-wage, immigrant workers. Her views were hardened in the mid-1990s, when, while working as a lawyer with the Asian-Pacific American Legal Center in Los Angeles, she represented 72 garment workers from Thailand who had been

kept behind barbed wire and under armed guard at an apartment complex in suburban El Monte. She sued the shop owner and won more than \$4 million in back wages for the encaged Thai workers — as well as a group of Latino workers who sewed in a “front shop” and were being shorted on pay.

“We have seen in many industries that this type of subcontracting can give rise to really horrible labor abuses,” Su said. “There becomes a question about who’s ultimately responsible for the workers and who has the legal obligation to ensure that labor laws are complied with.”

The construction of mega-warehouses near Interstate 10, east of Los Angeles, began in the late 1990s. Today, similar clusters of blocks-long buildings anchor sections of Chicago, northern New Jersey and other urban areas. Some serve only Walmart; others have multiple customers.

Mistreatment of workers in these facilities is endemic, a product of fierce competition for contracts with Walmart and other retailers, said Juan De Lara, an assistant professor of American studies and ethnicity at the University of Southern California who has researched the industry. “Walmart essentially dis-

tances itself from conditions inside these warehouses,” De Lara said.

In interviews and written declarations, current and former workers at Schneider said they were required to perform various tasks for which they were not paid. They might be called to work and told to wait for hours in case they were needed, they said, only to be sent home without pay. Those who complained were told, “If you don’t like it you can hit the door,” Impact worker Juan Chavez said in a declaration.

Jesus Saucedo, 33, worked construction until the weak economy forced him out of a job. He went to work for Impact in Mira Loma in late 2011 and said he was surprised at the conditions in the Schneider warehouse. “Everything you do, they want more,” Saucedo said. “I’d rather work outside in the heat.”

Saucedo injured his shoulder while lifting a box — a warehouse worker might move as many as 4,000 a day, he says — and has seen co-workers get hurt as well because “they don’t have the time to work properly. One guy’s back is messed up; he’s always in pain, always taking painkillers.”

“When there’s a problem with pay or working conditions, a company like Schneider will hand it off

to the staffing agency,” said Guadalupe Palma, a director of Warehouse Workers United, an advocacy group funded largely by the labor consortium Change to Win. “The workers are bounced between the warehouse and the agencies and the problem never gets resolved. They get terminated if they’re injured or complain about hours missing from their paychecks.”

U.S. District Judge Christina Snyder, who is presiding over the lawsuit, has made several rulings favorable to the plaintiffs. In February, for example, Snyder blocked the termination of about 100 Premier workers, who were absorbed by Schneider.

The judge issued an order in December 2011 that effectively ended the piece-rate system and forced the two temp agencies to pay hourly wages, maintain accurate payroll records and disclose on each paystub how pay was calculated.

Neither of these rulings touched Walmart directly. But, lawyer Rubin asserts, the retailer “is responsible for the ultimate plight of the workers.” ■

*This story is a collaboration by the Center for Public Integrity and the Center for Investigative Reporting.*