

# Tank and Petroleum Use Mishaps

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**By learning about the misfortunes of others, it is STI's hope to educate the public by creating a greater awareness of the hazards with storage and use of petroleum and chemicals. Please refer to the many industry standards and to the fire and building codes for further guidance on the safe operating practices with hazardous liquids. Thanks and credit for content are given to Dangerous Goods-Hazmat Group Network.**

<http://groups.yahoo.com/group/DangerousGoods/>

**CANADA, B.C, SAANICH**

**NOVEMBER 15 2012.**

**VANCOUVER ISLAND HOME DESTROYED AFTER BOTCHED HEATING-OIL DELIVERY**

**AGING TANKS BRING A MESS OF TROUBLE**

*Judith Lavoie*

A Saanich home was reduced to rubble Tuesday after efforts to clean up a heating-oil spill failed, making demolition the only option.

The spill this year resulted from a misdelivery by an oil company, which means that - unlike most of the increasing number of home oil-tank and pipe failures in Greater Victoria - the homeowner won't be on the hook for the \$750,000 cost of demolition and rebuilding.

That cost will be picked up by the oil delivery company's insurer, said David Rogers, founder of B.C. Hazmat Management.

"The homeowner was renovating and had disconnected the oil tank, but 308 litres were delivered to the wrong house," Rogers said. "It went right into the perforated drains around the house and into the Saanich storm drain system."

B.C. Hazmat, a private company, has responded to 36 calls in Greater Victoria about heating-oil spills this year, about three times more than usual.

Most are because of aging oil tanks and lines, said Rogers, adding oil tanks last only about 15 years.

He said he can't understand why homeowners are not getting the message that they have to check and replace tanks and lines.

Few homeowners are insured for an oil leak, and the cheapest recent cleanup has cost \$48,000, while most are in the \$250,000 range, Rogers said. "That is straight out of the homeowner's pocket."

Many Victoria homes have oil tanks that were made by Victoria Machinery Depot, which went out of business 20 years ago, and those tanks are now failing, Rogers said.

Several insurance companies recently sent letters saying anyone with an oil tank more than 15 years old would not be insured for spills, Rogers said.

"The tank may have beautiful paint from 20 years ago, but they rust from the inside out," he said.

A new tank costs about \$1,500, so putting aside \$100 a year will avoid a catastrophic bill, said Rogers, who recommends double-walled tanks.

Possible legal changes and ways to stop tank leaks will be debated this evening at a public meeting at the University of Victoria.

Experts will discuss a report, prepared by the Environmental Law Centre for the Gorge Tillicum Community Association, that suggests B.C. should have mandatory tank inspections and a tag system to confirm tanks and pipes are in good shape. Companies should not be able to deliver to a tank without a valid tag, says the report.

A maximum lifespan should be set out and decommissioned tanks should be identified and inspected, says the study, written by Naomi Kovak and Trevor Johnson under the supervision of Environmental Law Clinic legal director Calvin Sandborn.

Learning the cost of cleaning up a spill should jolt people out of oil-tank complacency, Sandborn said. "We want to shock people into doing something before they get the big bill."

Many people do not realize leaking oil goes from perimeter drains into storm sewers and straight into salmon

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streams, Sandborn said.

There are more regulations around filling barbecue propane tanks than heating-oil tanks, Kovak said. "I think the province really needs to act on this."

One option is a fuel surcharge for homeowners. The money would go into a fund to pay for cleanups of registered tanks that leak. A similar system is in place in Washington, Kovak said.

That would mean people are not facing financial ruin, Sandborn said.

Tonight's meeting at UVic starts at 7, room 159, Fraser Building.

<http://www.timescolonist.com/Saanich+home+destroyed+botched+heating+delivery/7545313/story.html#ixzz2ErPVhG7P>

## USA, TX, GARLAND

NOVEMBER 17 2012.

### FIREFIGHTERS TO LET MASSIVE BLAZE AT GARLAND CHEMICAL PLANT BURN ITSELF OUT; EXPECT IT TO TAKE HOURS

Wayne Carter

**Update at 6:36 p.m.:** The Associated Press quotes company spokeswoman Christina Reynolds as saying all 41 employees who were present when the fire erupted are safe.

Also, fire Capt. Merrill Balanciere identified the chemicals fueling the blaze as toluene and methanol.

**Update at 6:13 p.m.:** Moments ago, Dallas Fire-Rescue spokesman Jason Evans sent a detailed timeline concerning the fire at the Nexeo plant. It reads, in full:

*At 15:33 Dallas Fire-Rescue was called out the Nexeo Chemical Plant to assist the Garland Fire Department with a fire at the location.*

*Responding companies could see a large plume of black smoke from miles on approach. Because of the plant's contents, firefighters staged a perimeter at half a mile in all directions, and ordered evacuations of all businesses within that perimeter.*

*In the meanwhile, Command formed a joint task force with Garland FD to formulate a plan of attack. DFR's HazMat Team and Garland Fire personnel went inside the plant and accessed shut-off valves controlling the flow of the chemicals feeding the fire, enabling Garland FD to move in for a defensive attack.*

*Despite the remaining plume of smoke, the fire is slowly decreasing in size and intensity as Garland FD continues to do an outstanding job in containing the fire.*

*There are no available details (from DFR) on how many people were at/in the facility at the time of the incident; and as of now there have been no reported injuries.*

*Currently, DFR is significantly scaling back its response as Garland FD takes sole command of the scene. DFR's HazMat (and a few other units for manpower) will remain on location to monitor for the possibility of run-off.*

**Update at 5:33 p.m.:** Staff writer Tasha Tsiaperas spoke with Garland Fire Department spokesman Merrill Balanciere, who says they expect this to last well into the night — several more hours, at least.

Right now, said Balanciere the main concern are tanks filled with methanol. Crews aren't spraying at the fire, out of fear they'll create a spillover, but rather at the surrounding tanks in an effort to keep them cool. Word is there's 80,000 gallons of flammable fluid in that "put" alone.

The spokesman said they're still not sure what cause the fire, only that a train was bringing in chemicals and attempting to "download them," per Balanciere, when the fire began, triggering an explosion that rattled surrounding businesses.

The Dallas County Health Department has just arrived on the scene to see treat firefighters — and anyone else — feeling the ill effects of the thick smoke that some observers believe is only getting darker the longer the blaze burns. News helicopters are also being ordered to leave the scene.

Besides, says Tasha, "The photos don't do it justice. And the smell is *awful*."

**Update: 5:07 p.m.:** Staff writer Tasha Tsiaperas reports that officials are evacuating the industrial area where the plant is located. Jupiter Road is shut down, and people whose cars are parked in the evacuation area are stuck for a while until officials start allowing people back in.

**Update, 4:50 p.m.:** The explosion reportedly occurred as a train was offloading methanol. A Garland fire captain tells Daniel Lathrop that the first call came in at 3:33 p.m. and that hazardous materials teams from Dallas and Garland are 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916

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on the scene. Earlier reports indicated that there were no injuries that required transportation to hospitals. Reports now are that no one was injured.

**Update at 4:40 p.m.:** Garland firefighters, who had been letting the blaze burn down, have begun to spray down the fire.

**Update at 4:34 p.m.:** As Twitter fills with photos of the Garland fire visible citywide, this update. Officials say that the first blast, about an hour ago, cracked windows near the chemical plant. Jupiter is closed at Kingsley; traffic in the area is stopped. And officials say no one has been taken to the hospital.

**Update at 4:05 p.m.:** Right now the fire's at two-alarm, and Dallas and Garland fire crews are at the scene. Dallas Fire-Rescue's public information office has no further information, given the fire's not yet at three alarms. Officials, who appear to be letting the fire burn out, are asking people within a quarter-mile of the fire to evacuate the area, fearing the flames will trigger further explosions. The area is predominantly industrial, and Jupiter Road near the plant has been shut down.

Garland rescue officials say they have not heard of any injuries.

According to the National Weather Service, the smoke plume is at 7,000 feet and moving southwest.

**Original post at 3:47 p.m.:** The video above from Channel 11 shows the scene at 3101 Wood Drive, off S. Jupiter Road, in Dallas, where Ashland Inc. — a chemical manufacturer — has triggered a huge blaze. The company's motto: "With good chemistry great things happen." They make, among other things, lubricants, paints and polymers. (**Update:** It's also known as the Nexeo Solutions plant, as Ashland sold to Nexeo last year.)

<http://thescoopblog.dallasnews.com/2012/11/firefighters-battling-huge-blaze-after-refinery-explosion-in-garland.html/>

## USA, ILL, WHEELING

NOVEMBER 30 2012.

### CICERO MAN DIES AFTER FALL INTO WHEELING CHEMICAL TANK

### FIRE CREWS COULD NOT SAVE A MAN WHO FELL TO THE BOTTOM OF A CHEMICAL TANK AT THE SUNNYSIDE CORPORATION

*Stan Golovchuk*

The man who fell into a Wheeling chemical tank on Thursday was Bernardo Martinez, 37, of Cicero, a foreman with the Bellwood-based Phoenix Industrial Cleaning company, the *Journal & Topics* reports.

"He meant a lot to our company and was loved and respected," Phoenix General Manager Jeff MacNerland told the *Journal & Topics*. "He was one of our top producers and will be sorely missed."

#### Original Story

Fire crews recovered the dead body of a man from the bottom of a chemical storage tank at the Sunnyside Corporation in Wheeling on Thursday, according to Wheeling fire chief Keith MacIsaac.

The man, whose identity has not been released, was cleaning the tank near an opening at the top before falling into the chemical "slime" at the bottom of the structure he died in, the fire chief said. The fire chief was unsure whether the unknown man fell accidentally or was overcome by fumes emitted by the chemical contents of the tank.

The man was part of a two-person cleaning crew contracted by Sunnyside, and a second man was at the scene of the accident when fire fighters arrived, according to the Daily Herald.

The dead man was found lying face down in methylene chloride, the Daily Herald reports. The liquid chemical is used in industrial operations such as paint stripping, pharmaceutical manufacturing, metal cleaning and adhesives manufacturing.

The 6,000 gallon tank, measures 50 feet high by 28 feet wide, NBC Chicago reports.

According to MacIsaac, it was clear to first responders that the man at the bottom of the tank could not be rescued. An oxygen meter used to measure conditions in the tank determined the bottom of the structure contained only 12 percent oxygen and the fire chief said the man could not have survived prolonged exposure to those conditions.

"There was not much we could do to save this individual," MacIsaac said. "So our operation became making sure no one else got injured or killed."

Hazardous material technicians and highly specialized firefighters trained to work in dangerous conditions then conducted a successful recovery operation to remove the man from the bottom of the tank, the fire chief said.

"There were no injuries on the scene," MacIsaac said.

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Recovery personnel and the dead man had to go through a decontamination process after exiting the tank to remove possibly dangerous, residual chemicals, Maclsaac said.

According to the fire chief, the investigation of the death was turned over to the Occupational Safety and Health Administration, a federal agency designed to oversee the safe working conditions.

Sunnyside makes wood care products, paint removers, thinners and solvents, according to its website.  
<http://northbrook.patch.com/articles/wheeling-fire-department-recovers-dead-man-from-chemical-tank>

## **USA, CA, LOST HILLS**

**DECEMBER 2 2012.**

### **BLAST AT CHEVRON FACILITY UNDER INVESTIGATION**

#### **EXPLOSION ROCKED PLANT THURSDAY AFTERNOON, DESTROYING ONE LARGE TANK**

The explosion at a Chevron facility in Lost Hills Thursday afternoon destroyed a 5,000 bbl. tank and damaged two others.

Chevron officials say they have no immediate estimate of the damage.

"Chevron is still in the process of assessing the property damage and this will not be determined right away," Chevron Public Affairs Manager Carla Musser said.

She said a \$10 million estimate from the Kern County Fire Department was premature.

There were no injuries.

The force of the explosion blew the lid from the large tank 150 feet, the Kern County Fire Department reported.

The explosion rocked the Chevron processing plant west of Lost Hills Road just south of the two of Lost Hills about 2 p.m.

Firefighters said it occurred in a large-diameter "wash tank" used to process oil.

The fire initially sent up a large column of black smoke but it was quickly extinguished.

Two other tanks were threatened for a time until the fire was knocked down.

About 40 firefighters responded to the incident in six engines, two ladder trucks and foam equipment.

No cause for the blast has been determined.

<http://www.mtshastanews.com/article/20121130/NEWS/121139975>

## **USA, WA, ORTING**

**DECEMBER 2 2012.**

### **WAX TANK CATCHES FIRE AT ORTING CARDBOARD PLANT**

Fire damaged a wax-storage tank at a cardboard plant in Orting late Thursday, firefighters said Friday. The blaze broke out about 11:45 p.m. in the 10,000-gallon tank at Commencement Bay Corrugated, Orting Valley Fire & Rescue said. Workers at the plant use the wax to manufacture water-resistant cardboard. Nearly 20 firefighters from three departments brought the blaze under control about 16 minutes after arriving, the agency said. Damage was estimated at \$3,000. Cause of the blaze was under investigation. No injuries were reported.

<http://www.thenewstribune.com/2012/12/01/2386541/orting-wax-tank-catches-fire-at.html>

## **USA, NORTH DAKOTA, DORE**

**DECEMBER 9 2012.**

### **NO DEATHS IN DORE OIL TANK INCIDENT**

No one died the night of Nov. 29 when two men were reported to have died inside an oil tank at Dore, N.D. McKenzie County Sheriff Ron Rankin told the Herald on Thursday – after requests for comment – that McKenzie County Sheriff's deputies responded to a call from Circuit Trucking employees who said two men appeared to be unconscious, and they were not able to free them from the tank.

Deputies arrived on scene and found the men were actually trapped inside a semi-truck's oil tank. Rankin said the men were drilling holes in the tank, but the fumes were too strong, even though it was recently cleaned.

"They were just so disoriented," and they weren't able to respond to coworkers who checked on them and to get out, Rankin said.

Fairview firefighters cut the side of the tank open with torches and freed the men who were treated at Sidney Health Center and later released.

Fairview and Sidney ambulance crews also responded.

[http://www.sidneyherald.com/news/article\\_afd8cc34-416f-11e2-8373-0019bb2963f4.html](http://www.sidneyherald.com/news/article_afd8cc34-416f-11e2-8373-0019bb2963f4.html)

## **CANADA, ALB, EDMONTON**

906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916

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**DECEMBER 13 2012.**

## **NORTHEAST EDMONTON ACID SPILL NEARLY CLEANED UP**

About 152,000 litres of hydrochloric acid that leaked from a large holding tank in northeast Edmonton is expected to be completely cleaned up by Thursday, and the potential environmental impact will be monitored.

Most of the acid was contained to the Panther Industries site at 2061 32nd Street N.E., but the company says about 5,000 litres entered a nearby creek through a City of Edmonton stormwater sewer drain. The leak into the creek was discovered at about 4 p.m. on Sunday, and was contained with a dam made of earth, the company says.

The leak into the creek was discovered several hours after the initial leak was discovered at about 10:30 a.m. on Sunday by an employee arriving to work. The employee called the fire department, police, the City of Edmonton, Alberta Environment and Panther Industries' emergency response team.

According to the company, the leak occurred after cold temperatures caused a sealed window on the side of a large holding tank to pop loose.

Panther Industries president Jack Schneider travelled to Edmonton from the company's Saskatchewan headquarters to supervise the cleanup, the company said.

Spokesman Godfrey Huybregts said 75 per cent to 80 per cent of the acid that leaked from the tank had been cleaned up by Tuesday morning. The rest is expected to be cleaned up by Thursday. Huybregts said the cleanup has gone smoothly, with "a lot of late hours put in by everybody involved."

Huybregts said the company will continue to work closely with agencies like Alberta Environment, Environment Canada and the City of Edmonton, and will continue to monitor the impact on plants and water in the area.

"Panther is very interested in making sure we continue to track what's going on, and do what's necessary to make sure there are no long-term effects on plants and water," he said.

The company says about one kilometre of the creek bed may be monitored and tested for up to a year, and that Stantec Engineering has been hired to help oversee the cleanup.

The site is in an industrial area north of Sherwood Park, north of the Yellowhead Highway.

Businesses within two blocks were evacuated after the leak, and no one was injured.

According to the Panther Industries website, the company has served the oil and gas industry in North America and overseas for more than 30 years. Panther Industries was named one of Saskatchewan's top 100 companies in 2007, with gross sales of \$23,600,000.

Hydrochloric acid has many industrial uses, including being used in the production of fertilizer, dyes and chlorides, and in the photographic, textile, and rubber industries.

<http://www.edmontonjournal.com/news/edmonton/Acid%20spill%20nearly%20cleaned/7682403/story.html>

## **USA, N.Y, MASTIC BEACH**

**DECEMBER 14 2012**

### **MAN CRITICALLY BURNED IN FUEL TANK EXPLOSION**

A worker cutting up a fuel tank with a gas-powered demolition saw was critically burned in a Mastic Beach explosion Tuesday when the fumes or fuel remnants ignited, Suffolk police said. Patrick Rooney, 21, was taken to Stony Brook University Hospital, where he underwent surgery at night and was in critical condition, police said. The explosion happened at the East End Environmental Services, located at 123 Whittier Drive, where Rooney was in the rear yard disposing of an old, oil tank that was larger than ones used for homes, police said. Several 911 calls about 1:15 p.m. alerted officers to the fire and explosion, police said. Seventh Precinct detectives are investigating. Officials notified the Occupational Safety and Health Administration, part of the U.S. Labor Department.

<http://www.newsday.com/news/cops-man-critically-burned-in-fuel-tank-explosion-1.4319325>

## **USA, ILL, CHICAGO**

**DECEMBER 21 2012.**

### **'THEY WERE NOT THINKING OF HIM AS A HUMAN BEING'**

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 citric 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-gallon 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.

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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 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 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," 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 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 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916

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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 after 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 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 before 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 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, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916

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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.”



## Tank and Petroleum Use Mishaps

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 revision. 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 Centeno’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

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those above him had “no respect for the hazards of the chemicals on site or human life.”

<http://www.publicintegrity.org/2012/12/20/11925/they-were-not-thinking-him-human-being>