

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/>

USA, OK, OKLAHOMA CITY

NOVEMBER 20 2013.

CREWS CONTAIN 2,500 GALLONS OF KEROSENE ON FIRE IN S.E. OKLAHOMA CITY

A. Edwards

Crews have contained a fire at a warehouse in southeast Oklahoma City Tuesday morning. Authorities said a significant amount of kerosene, a 2,500 gallon vat, somehow caught fire just before 8 a.m. near S.E. 44th St. and S. Eastern Ave. Officials have not said how the fire started on the 1800 block of S.E. 40th St. So far, no serious injuries have been reported.

<http://kfor.com/2013/11/19/crews-working-to-contain-kerosene-fire-in-southeast-oklahoma-city/>

USA, N.C, LONG VIEW

NOVEMBER 20 2013.

FUEL LEAK INTO FRYE CREEK CONTAINED CREWS WORK TO CONTROL FUEL OIL SPIL

John Tinkelenberg

Environmental and emergency crews worked Tuesday morning to prevent further contamination from fuel oil that leaked into Frye Creek and a nearby tributary.

Workers at the Century Furniture warehouse near 21st Street NW and 2nd Avenue NW called authorities about 8:30 a.m. after they found an in-ground fuel oil tank leaking.

Long View and Hickory fire departments and environmental cleanup agency STAT Inc., of Lenoir, were on scene.

Emergency crews built earthen dams in the creek to contain the flow of the oil, both at the original site and further down the creek. They also used absorbent booms.

Long View Fire Chief Eric Shepherd said STAT began pumping some of the spilled oil at 9:30 a.m. He said the tank appeared to have leaked for a while, and a pocket of oil was exposed when dirt was disturbed.

Shepherd said there was a low impact to the environment and it was contained to the immediate area. He said the crews dammed near where the creek crosses 2nd Avenue NW.

"There was not a tremendous runaway from the area because they notified us in time," Shepherd said. "We got it dammed and backed up real quick."

Shepherd said he expected STAT to begin digging out the tank and the contaminated soil immediately.

A report was made with the National Response Center. Once a report is made with the National Response Center, that report is disseminated to federal, state and local responders and agencies. From

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there, it is decided which agencies respond, according to Stephen Ball, duty officer for EPA Region 4.

There will be inspections by the N.C. Department of Environmental and Natural Resources Division of Water Resources, according to Andrew Pitner, environmental regional supervisor. He said, in situations such as this, the division will work concurrently with the emergency management team and shortly thereafter.

He said oftentimes, the Division of Waste Management will respond as well, because of the involvement of a fuel oil tank.

"When something is seeping into the soil, there's typically additional soil that needs to be excavated," Pitner said.

http://www.hickoryrecord.com/news/article_bea44688-512e-11e3-a64f-0019bb30f31a.html

USA, CO, COMMERCE CITY

NOVEMBER 20 2013.

REFINER TO PAY \$1.9 MILLION TO SETTLE OIL LAWSUIT

Suncor oil refinery operators have agreed to pay \$1.9 million to settle a lawsuit by federal and state authorities over a toxic spill that contaminated Sand Creek and the South Platte River. A consent decree filed in U.S. District Court says government authorities agree to drop further legal action unless the spill worsens. The settlement requires court approval after at least 30 days for public notice and comment. According to the Denver Post, Colorado Attorney General John Suthers and U.S. Department of Justice attorneys filed a civil lawsuit against Suncor seeking remedies for harm caused initial by a 2011 spill from a broken underground pipe beneath storage tanks.

<http://fuelfix.com/blog/2013/11/19/refiner-to-pay-1-9-million-to-settle-oil-lawsuit/>

SAUDI ARABIA, JEDDAH

NOVEMBER 21 2013.

FUEL TANK FIRE PUT OUT

Md Al-Sulami

Civil Defense firefighters contained a major fire that gutted three diesel tanks northeast of Jeddah on Tuesday, stopping the blaze from spreading to nearby buildings. Col. Saeed Sarhan, spokesman of the department in the Makkah region, said the firefighters moved to the area soon after receiving information about the fire. "Five firefighting teams, a rescue team and an ambulance were immediately mobilized," the spokesman said. A snorkel truck was also sent to the site. He said that Civil Defense teams used foam to fight the fire from three sides. Sarhan said nobody was injured in the accident. "We have launched an investigation to determine the cause of the blaze," Sarhan said.

<http://www.arabnews.com/news/480761>

CHINA, SHANDONG PROVINCE, QINGDAO, HUANGDAO

NOVEMBER 22 2013.

QINGDAO PIPELINE EXPLOSION DEATH TOLL SURGES TO 22

At least 47 people were killed and 166 injured when a leak in an underground oil pipeline triggered an explosion in the eastern port of Qingdao.

The force of the blast ripped apart roads, leaving cracks up to 1.5 kilometres long, Xinhua said.

A photo posted on the internet taken by an airline passenger showed plumes of dark smoke rising through clouds over the city in Shandong province.

The Xinhua report comes an hour after Qingdao authorities raised the death toll on Saturday morning to 44, adding that rescue efforts were still ongoing. 65 of the injured were in serious condition, authorities said on Friday evening.

Caixin magazine reported online that at least six firemen died, citing a source close to Sinopec, which owns the 176-kilometre pipeline.

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An initial investigation said a leak at an underground oil pipeline in the Huangdao district caused an oil spill contaminating an area of 1,000 square metres, the city government said. Some crude oil was collected by rainwater drainage channels and discharged into Jiaozhou Bay, causing a further oil spill covering 3,000 square metres of sea area.

But as workers fought to contain the spill at sea and fix the leaking underground pipeline inland, there was an explosion in both areas at 10.30am.

Qingdao authorities said late last night they believed the crude oil in the drains set off the explosion. Caixin said there was a series of blasts along the drainage network in the city.

A man who gave his surname as Jiang, a resident in the road where the explosion took place, said cars in the street were damaged and all the windows in his apartment shattered. "The air smelled of gas," Jiang said.

Photos taken by other witnesses showed the injured lying in the road. "The street was like it had been cut open," he said.

China News Service reported that a bus passing by the junction was blown over and all the passengers on board were injured.

A rescuer at the scene told Xinhua he saw another bus stuck between huge cracks in the street while the passengers were trapped inside. "I've only seen this in a disaster film," he said.

The city's official news portal said hospitals were overwhelmed and were running out of beds for the injured. People living in the area were warned to avoid outdoor activities in the southern part of Huangdao because of the smoke and air pollution.

The Qingdao Environmental Protection Bureau said barriers had been set up to contain the oil slick as it spread into the sea.

The pipeline links oil depots in Huangdao to Weifang, which is home to several petrochemical plants.

Sinopec issued a statement online, offering its condolences to victims. "We will investigate the incident with responsibility and give timely reports," it said.

The central government has sent a team led by State Councillor Wang Yong, together with another team from the State Administration of Work Safety, to investigate the incident. The national health commission also sent a team of specialists.

<http://www.scmp.com/news/china-insider/article/1362729/three-dead-48-injured-explosion-qingdao-industrial-area>

USA, N.D, POWERS LAKE

NOVEMBER 23 2013.

TANK OVERFLOWS AND SPILLS OIL, BRINE NEAR POWERS LAKE

About 20 barrels of oil and 680 barrels of saltwater spilled near here today after a tank overflowed at a saltwater disposal well, the North Dakota Department of Mineral Resources, Oil and Gas Division said. The spill, reported by Oasis Petroleum, was contained on site, about six miles north of Powers Lake. The initial report says 20 barrels of oil and 660 barrels of saltwater have been recovered. The Oil and Gas Division has a state inspector traveling to the site.

<http://www.inforum.com/event/article/id/419109/group/News/>

USA, WYO, PINEDALE

NOVEMBER 23 2013.

5 ENCANA WORKERS INJURED IN JONAH FIELD FIRE

Benjamin Storrow

Five workers were injured when a tank exploded in the Jonah natural gas field near Pinedale on Friday morning.

One worker was listed in critical condition while two others were said to be in serious condition,

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according to the Sublette County Sheriff's Department. A fourth worker was listed in stable condition, while the fifth was treated and released from a Pinedale clinic.

The explosion took place by a battery of six condensate tanks at an Encana drilling site, said Doug Hock, a company spokesman. Three of the workers were employed by ASAP Construction of Boulder in Sublette County. The two others were contract welders.

"This appears to be related to the welding they were doing," Hock said. "That was the ignition source."

The exact cause of the explosion remains under investigation.

Emergency officials responded to a report that a tank exploded at Encana's Antelope 91-29H facility, some 35 miles south of Pinedale, around 10:15 a.m., the Sheriff's Department said. A fire on the site was not put out until shortly after 1 p.m.

Sublette County EMS, the Boulder and Big Piney volunteer fire departments and sheriff's deputies responded to the explosion.

Encana said it activated its emergency response plan in response to the explosion. Of the six condensate tanks, five were affected by the blaze. Hock described them as charred, torn and knocked over.

"They were on fire," he said.

Condensate is a byproduct of natural gas production. A nearby drilling rig was unaffected, Hock said.

Two workers were flown to the University of Utah Medical Center. Another was flown to Eastern Idaho Regional Medical Center, while a fourth worker was transported to Memorial Hospital of Sweetwater County in Rock Springs.

The incident will be investigated by the Occupational Safety and Health Administration.

"This has been a difficult and sad day, and our friends and co-workers that were hurt are in our thoughts and prayers," Encana spokeswoman Bridget Ford said.

http://trib.com/business/energy/encana-workers-injured-in-jonah-field/article_deaedce9-be1f-592e-9426-d4cc777ad961.html

USA, FLA, RIVERVIEW

NOVEMBER 24 2013.

EXPLOSION ROCKS RIVERVIEW PHOSPHATE PLANT, 2 INJURED

An empty acid tank exploded during routine maintenance, causing the top to fly approximately 100 feet in the air and come crashing to the ground, officials said. Two Mosaic Co. employees were injured when an explosion rocked the phosphate company's Riverview plant off of Highway 41 this afternoon, Hillsborough County Fire Rescue spokesman Ronnie Rivera said. An empty acid tank exploded during routine maintenance, causing the top to fly approximately 100 feet in the air and come crashing to the ground, Rivera said. The explosion also sent up a cloud 100 feet above the plant. The two employees were taken to the hospital with what were deemed non-life threatening injuries, Rivera said. According to The Associated Press, one worker who had been standing on the structure was struck in the chest by shrapnel. The other injured worker was on the ground. Hillsborough County Fire Rescue's Hazardous Incident Team was on the scene after the explosion, metering the air for safety.

<http://tbo.com/Local/CommunityNews/explosion-rocks-mosaic-phosphate-plant-in-riverview-20131123>

NIGERIA, LAGOS, BADA

NOVEMBER 24 2013.

YEM-KEM FACTORY BURNS TO ASHES IN LAGOS

Leading herbal products manufacturing company YemKem office suffered a massive loss today after its factory, located in Bada, Ayobo area of Lagos got burnt down to ashes in a fire explosion that started sometime around 6:30 pm today. According to workers, the fire reportedly started when a drum full of ethanol, exploded. The company had taken delivery of 520 tanks of ethanol today. The YemKem Office,

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two other houses and a local primary school (Liberty Primary School) got burnt. Fortunately, no life was reported lost.

<http://www.nigerianbulletin.com/threads/explosions-fire-guts-yemkem-herbal-factory-in-lagos.22193/>

USA, TX, DALLAS

NOVEMBER 25 2013.

OSHA NO MATCH FOR WORKPLACE DANGERS THAT KILL THOUSANDS

Randy Lee Loftis

One day El Campeón took on his last challenge.

The Champion — that's what people at work called Adan Juan Padron. In good shape at 41, he seemed willing to face any danger to feed his family.

Dangers were plentiful. Southeast Texas is refinery and chemical-plant territory, with fuming, square-mile mazes of pipes and towers and flares blazing through humid nights. Their output fuels the nation.

Their thousands of tanks hold contents that can and often do burn, corrode, poison or explode. Somebody has to clean them, from the inside, by hand.

An oxygen line might fail with no escape. A high-pressure hose might turn on its user. Stuff might crush a skull. A faulty work light might fill a tank with fire.

But Padron and his wife, Herlinda, had three children and another on the way.

So on Feb. 22, 2005, at a Houston methane plant, he crawled through an 18-inch hatch into the bottom of V321B, an empty, waste-encrusted, vertical tank.

For days the crust had resisted hydroblasting. Padron swung his brass pick.

Seconds later, Padron became one of 5,734 U.S. workers killed on the job that year. Hidden in cases like his — and the April 17 fertilizer explosion in West — is a neglected reality of work in America.

Many workers climb, rappel or reach into daily dangers but draw federal notice only by dying. Given limited budgets and frequent political attempts at reducing enforcement even more, inspectors might be absent until a calamity occurs.

The case in West

At West Fertilizer Co., no federal workplace safety inspector had shown up for 28 years before tons of ammonium nitrate blew up and killed 15 people, including a dozen volunteer firefighters.

Among them was company foreman Cody Dragoo, 50. He had rushed back to the plant that evening to battle the blaze just before the explosion.

Padron never saw a federal inspector while he worked for CES Environmental Services in Houston. The Occupational Safety and Health Administration opened its first inspection of the Houston company the day after he died. It was an investigation into his death.

CES had been in business for six years, cleaning tanks for some of the biggest corporate names on the chemical coast.

A slab of waste broke loose from 18 feet above Padron. A "hangman's fracture" his injury is called, in grim homage to the snap of the executioner's rope. In modern times, trauma crews know it mostly from head-on collisions.

CES and sister company Port Arthur Chemical and Environmental Services eventually became symbols of criminal risk to workers. Within four years, three more men died — two poisoned and one burned and blasted. OSHA and other enforcers cracked down.

The companies are now bankrupt and shuttered. On Dec. 12, their former president is to report to a federal prison.

A plea bargain on workplace safety and hazardous chemicals charges got Matthew L. Bowman a one-year sentence and a \$5,000 fine — coincidentally, the same amount as the OSHA fine for Padron's death.

His criminal defense attorney, Dan Cogdell, said Bowman pleaded guilty to put it all behind him.

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“He does certainly regret that some lives were lost,” Cogdell said, but is not convinced that his companies were wholly to blame.

“He thinks that the sentence, under the circumstances, is a bit excessive.”

Bowman did not respond to an interview request mailed to his last available address in Houston.

Families of the men who died working for his companies either chose not to comment or could not be located.

Houston personal-injury lawyer Donald H. Kidd, who represented Padron’s family after his death, found in the case both private tragedy and a public problem. Big companies tend to get safety scrutiny, he said.

“But what about the CES’s of the world and the Bowmans of the world? They’re under the radar until they kill someone,” Kidd said.

Deaths from big industrial accidents like West Fertilizer or the 2005 BP Texas City explosion, which also killed 15, generate headlines and sympathetic profiles of the dead.

But most workplace victims die in the way of CES-PACES employees Padron, Joey Wayne Sutter, Charles Brent Sittig and Bruce Clayton Howard: mutilated, poisoned, burned, severed or suffocated one at a time.

They rarely make the front page. Some do not make the news at all, and if they do, might not receive even the dignity of a name — just “a worker,” “an employee.”

Still, a common factor links many visible and hidden catastrophes: Inspections to catch a wobbly walkway, a malfunctioning air tank or an exposed electrical panel might never happen.

Just in Padron’s line of work, tank and spill cleanup, the list of dead is long.

David Lee Ingram, 53, of Charlotte, N.C., lost his oxygen hood inside a tanker in South Carolina in 2007.

Dannye R. Allen, 53, was hit by a truck at a highway spill near Warsaw, Ky., in 2011. A volunteer firefighter, he left behind his father, sons, brothers, sisters and grandson.

Alton Charles Washington, 46, inhaled hydrogen sulfide gas at a Louisiana refinery in 2007.

Henry Arnoldo Flores, 28, was in a rail tank car in Commerce City, Colo., in 2010. A flash fire started. It took him 85 days to die.

Jose Francisco Fuentes, 21, was cleaning a polymer tank in Odessa in 2002. An 8,000-psi water jet cut a 4-inch-wide, V-shaped channel through his chest, his right lung and his left ventricle. He left behind a wife and daughter, parents, sisters and grandparents.

OSHA investigates

OSHA investigated each death. But before the accidents, records show, each company had been in business for at least three years with no checks of conditions, training or equipment.

Fuentes’ employer, Total Jetting Inc., had been operating the longest with no inspections, nine years and eight months.

Many companies willingly spend time and money to protect their people. But OSHA, labor organizations and safety advocates say workers cannot count on government inspections to make up for private negligence or greed.

“We’re a small agency with a big job,” OSHA spokesman Jesse Lawder said. “We can’t be in every company every day.”

Some administrations have stressed workplace enforcement, and others have pulled back. But presidents and Congresses of both parties have consistently kept OSHA as one of the smallest of the regulatory agencies with broad responsibilities.

OSHA standards cover about 100 million people in as many as 8 million workplaces. Its entire staff in fiscal 2014 is 2,258 — smaller than the enrollment of a typical suburban high school. Of those, 1,539 are designated for enforcement.

The Dallas Police Department, by comparison, has about 3,500 officers.

In 22 states, state agencies cover OSHA’s duties as partners. Their inspectors plus OSHA put the

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national enforcement force at 2,000 to 2,200.

Grants to states take up about 20 percent of OSHA's budget. In April, the Government Accountability Office called for better OSHA oversight of state programs.

Texas is not an OSHA partner. The Texas Department of Insurance's voluntary inspection program is designed to educate employers and has no enforcement powers.

By longstanding state law, the Texas Commission on Environmental Quality cannot regulate anything, including air contaminants, inside a workplace.

OSHA's 2014 budget request, \$571 million, would run the Environmental Protection Agency (\$8.2 billion) for about 25 days. The government spends less on OSHA than on the House of Representatives (\$1.2 billion), federally funded broadcasting such as the Voice of America (\$723 million) and payments to tobacco farmers (\$960 million).

Lean budgets force OSHA to focus on some industries to protect the largest number of the most at-risk workers. Others might wait for a death, catastrophic injury or complaint.

OSHA picks national and local priorities based on history and known dangers and targets severe or repeat violators, spokesman Lawder said. It adjusts the focus as conditions change.

The approach makes sense for a tiny agency, said Peg Seminario, longtime director of safety and health for the AFL-CIO. But enforcement can still seem like Whac-A-Mole: a response only after problems arise.

"You want them to be more preventive," Seminario said. "How do they do this with this minimum number of people they have?"

The emphasis on a handful of industries and the shortage of prevention were in view when tons of ammonium nitrate fertilizer detonated in West.

OSHA never checked to see if West Fertilizer was protecting its workers or the surrounding town despite ammonium nitrate's well-known explosion risk from fire and shock.

The agency said it had not chosen ammonium nitrate dealers as one of its inspection priorities. It's a small industry. Current focuses include refineries, chemical plants and the most dangerous work, construction.

Still, the blast echoed in Washington. Under President Barack Obama's post-West executive order, agencies must deliver new chemical-safety plans.

And in October, on the eve of a six-month enforcement deadline, OSHA fined Adair Grain, dba West Fertilizer, \$118,300 for alleged violations unrelated to the blast. A federal and state investigation of the explosion continues.

Another major Texas case — CES, PACES and Bowman — is officially closed but still resonates.

Matt Bowman, with a 1993 bachelor's degree in environmental sciences from Texas A&M University, worked in waste management and sales before starting CES in 1999. He was 28.

Fights soon broke out with CES's neighbors. Residents complained of environmental and health problems. Bowman accused them of unfairly targeting the company. In legal papers, he said the city of Houston faked violations to steal CES's land.

Opening PACES in Port Arthur in 2008 brought that city into conflict with Bowman. Eventually, the TCEQ, the state attorney general, the cities and other companies were all targeting his operations.

But work went on. Often after tough times and other tough jobs, people ended up in Bowman's small circle.

Hard life

At 36, Joey Wayne Sutter appeared to have had a hard time finding his path. Family photos over the years show him fishing, standing with relatives and holding a baby, but rarely smiling. He was married with two children.

Texas records reflect a burglary as a teenager, a domestic assault case in 2003 and a probation revocation in March 2007, 21 months before he died on Dec. 18, 2008.

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PACES lab technician Suzi Ann Mock told criminal investigators with the EPA and TCEQ that Sutter seemed all right as they took samples with a tool called a sludge judge.

At his direction, she opened a valve, heard a hissing noise, then closed it.

Mock, then 38, told the investigators she was promoted into the lab job with no real training. She mentioned fresh-air safety packs repossessed by a vendor. Hydrogen sulfide detectors didn't work. OSHA later found only one of five detectors operating.

Atop the tanker, Sutter reached across a hatch to tighten a nut, then collapsed. "Blood came from his nose and his eyes rolled back," investigators wrote. Mock grabbed his shirt and called for help.

Firefighters found Sutter in full cardiac arrest atop the tanker, according to an incident report. En route to Christus-St. Mary Hospital, a strong chemical odor from his clothes assaulted paramedics. Emergency room staff put the clothes in a biohazard bag.

The medical examiner said hydrogen sulfide fumes killed Sutter. Mock told investigators she later asked for safety harnesses and breathing equipment for unloading tankers. Three supervisors told her "she was overreacting," investigators wrote.

Charles Brent Sittig's death four months later was similar: He breathed hydrogen sulfide. The medical examiner said the poison contributed to a heart-related death at age 48.

A truck driver for PACES, Sittig was a Louisianan. The family photo album depicts a smiling man surrounded by relatives and friends.

On April 14, 2009, he drove to PACES from Lake Charles, La., with a load of naphthenic acid, a product of refining crude oil, manager Ryan Thomas told Port Arthur police.

He arrived around 12:45 p.m. Mock told investigators Sittig entered the lab for paperwork and went back outside. Thomas told police Sittig climbed the tanker to offload the chemical.

Mock said she waited in the lab for a load sample. An OSHA report said the company never produced test results.

Sittig spoke briefly in Thomas' office, went to mechanic Glen Olsen's office, took a cellphone and went outside, reports show. Olsen told police that he heard Sittig sit down in a folding chair.

Then he heard an exclamation from Sittig and a thump.

Sittig fell face first from the chair, Mock told investigators. OSHA inspectors later questioned whether such a short fall could have caused his injuries and blood loss.

Sittig was face down on the ground, gasping for breath. Mock said she ran back to the lab and told Thomas to call 911. Olsen said co-workers put Sittig on oxygen and tried to start CPR.

Some time later, Mock told investigators, a CES manager gave her Sutter's and Sittig's autopsy reports and told her the evidence proved that both men died of natural causes — an assertion that Bowman also made in court papers. Mock said she did not agree.

"Mock said that in her opinion CES has committed homicide," the EPA investigator wrote.

For Bruce Clayton Howard, life was hard and death was fast and horrible. He had convictions for burglary and selling cocaine. By age 45, he was cleaning tanks at CES.

About 4 p.m. on July 7, 2009, a co-worker was inside a tank with some leftover sludge in it. Howard, above on a catwalk, lowered an electric light into the tank for the other man.

The type of light was approved for use with flammable or explosive gases, but this one was unsafe. "It had a disconnected ground and was missing the explosion-proof cable grip bushing," OSHA inspectors wrote.

Ignition, flash fire and explosion came almost as one. Flames engulfed Howard. He either fell or was blasted 11 feet to the ground. He had third-degree burns all over and blunt-force head trauma.

Penalties multiply

With each death, OSHA stepped up penalties: Padron, two violations, \$5,000. Sutter, seven violations, \$16,600. Sittig, 40 violations, \$207,800. Howard, 71 violations, \$1.48 million. Of the 71, 17 were "willful" — with "intentional disregard or plain indifference."

Bowman contested the violations, but pressure was mounting. The Texas attorney general's office

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sued at the TCEQ's request and settled for \$841,000. Dead workers' families, angry neighbors and other firms were also suing — 21 lawsuits at one point.

In 2010, both companies filed for bankruptcy reorganization, but the judge changed it to liquidation. Bowman claimed persecution. The multiple investigations, the companies' bankruptcy lawyers wrote in filings, "resulted from a kind of perfect storm" of unjust claims.

The city of Houston, they wrote, pressured an odd collection of parties into a conspiracy to destroy CES, including the "TCEQ, EPA, OSHA, the city of Port Arthur, Jefferson County, the United Black Front, the New Black Panther Party, private plaintiffs, and the news media."

When Houston cut off CES's wastewater service, the lawyers wrote, it "effectively sentenced CES to corporate death." As for the actual deaths, they were "unfortunate but accidental."

And the Sutter and Sittig autopsies, they wrote, were falsified through a conspiracy of the medical examiner, lab companies and Jefferson County officials. The company had "strong evidence" that the deaths were natural and was finding more.

The protests were for naught. Investigators and federal prosecutors were developing a case. Last year, a federal grand jury in Beaumont returned a 13-count indictment alleging violations involving hazardous waste, hazardous materials transport, workplace safety, false statements and conspiracy.

If convicted on all counts and sentenced consecutively to the maximums, Bowman faced a theoretical 56 years in prison and \$2.57 million in fines. But a plea deal was in the works.

Plea deal

In May, Bowman pleaded guilty to one count each of willingly violating OSHA safety rules, leading to Sutter's death, and faking documents describing chemical shipments.

Last month, Bowman received his sentence, as agreed: one year and \$5,000. The plea deal recommends a low- to medium-security federal prison in Bastrop, near Austin.

Bowman asserts that he has suffered, said Cogdell, his criminal defense lawyer.

"He's lost everything, from a financial standpoint, companies he built," Cogdell said. "He's lost his reputation — most of it."

Kidd, the Padron family's lawyer, saw it differently.

"Bowman's family has the comfort of knowing that his separation from them is temporary," he said. "Herlinda Padron and her sons are in the eighth year of a lifetime sentence without Juan because of Bowman's misconduct."

"Bowman is the least of the victims of his misconduct."

Staff writer Eric Holmberg contributed to this report.

The men who died

Over four years, four men died while working for now-defunct companies founded by Houston businessman Matthew L. Bowman: CES Environmental Services of Houston and Port Arthur Chemical and Environmental Services of Port Arthur.

Feb. 22, 2005

Adan Juan Padron, 41

Worked for CES Environmental Services, Houston; died at GSF Energy, Houston, while on a job for CES

Crushed by falling debris inside a tank

OSHA fines: \$5,000

Dec. 18, 2008

Joey Wayne Sutter, 36

Worked and died at Port Arthur Chemical and Environmental Services, Port Arthur

Poisoned by hydrogen-sulfide gas

OSHA fines: \$16,600

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April 14, 2009

Charles Brent Sittig, 48

Worked and died at PACES

Poisoned by hydrogen-sulfide gas; medical examiner said it contributed to a heart-related death

OSHA fines: \$207,800

July 7, 2009

Bruce Clayton Howard, 45

Worked and died at CES

Burned and blasted in a tank explosion

OSHA fines: \$1.48 million

About OSHA

The Occupational Safety and Health Administration is a federal agency that sets and enforces workplace safety rules. Some states, but not Texas, also have their own worker-safety agencies.

OSHA must be notified when workers are killed or seriously injured on the job. The agency recently proposed requiring companies with at least 250 employees to report all workplace injuries, regardless of severity. Even small companies in certain dangerous industries would be required to report all injuries under the draft proposal.

BY THE NUMBERS

2,000-2,200: Inspectors working directly, or indirectly through the states, for OSHA

8 million: Workplaces regulated by OSHA

40,961: Inspections by OSHA in 2012

4,383: People killed on the job in 2012

<http://www.dallasnews.com/investigations/20131123-osh-no-match-for-workplace-dangers-that-kill-thousands.ece>

AUSTRALIA, VICTORIA, CLOVERLEA

NOVEMBER 27 2013.

FATHER, SON AND WORKER KNOCKED OUT BY FARM TANK FUMES IN CLOVERLEA

A father and two sons remain in a critical condition after becoming trapped in a farm tank in Victoria's east.

Simon Coster, 48, entered the tank to clean it with ammonia and was overcome by toxic fumes.

His sons Tim and Ash then entered the tank to save him and were also overcome.

A worker also attempted a rescue before he succumbed to the fumes, calling another son who, with other workers, cut a hole in the side of the silo.

It is believed they pulled the father and brother from the silo and the fellow worker from the tank.

Workers at the scene, as well as a policeman, policewoman and paramedic were affected by the toxic fumes and taken to hospital.

Emergency crews raced to the Coster's dairy farm at Cloverlea, near Warragul in the LaTrobe Valley, yesterday afternoon.

The three emergency workers and further three farm workers were taken to Warragul Hospital.

Mum Cheryl Coster left town and rushed to be with her family in intensive care.

She told the Herald Sun her two boys, Tim and Ash, had tried to save their father Simon after he became overcome with fumes while in the tank.

Ms Coster believed the tank contained corn starch syrup (used as cow feed) which had fermented for too long causing a chemical reaction.

"Simon was in there first then he come up for air," Ms Coster said.

Tank and Petroleum Use Mishaps

"Tim must have seen his father collapse then jumped in and got succumbed by fumes.

"Then Ash tried to help."

She said her husband Simon, still in intensive care at The Alfred hospital, had a brain scan about 7pm "which looked good".

"We won't know until Monday how serious their condition is," she said.

"I'll be a mental and physical wreck until Monday.

"I really hope they've learned from their mistake."

Ambulance Victoria says it has treated eight patients.

Two people were flown to the Royal Melbourne hospital in a critical condition.

Another man is in a critical condition in The Alfred hospital.

The farm is owned by 78-year-old Robert Coster and his wife Joan, a neighbour said.

They are overseas on holiday and son Simon and his wife Cheryl were running the farm in their absence.

"It's rocked the community" the neighbour said.

"We are all very close and for this to happen is just tragic.

"We are praying everyone makes a full recovery.

"We've seen the ambulance and helicopters flying over right through the afternoon."

<http://www.heraldsun.com.au/news/victoria/father-son-and-worker-knocked-out-by-farm-tank-fumes-in-cloverlea/story-fni0fit3-1226769657073>

USA, KY, GRAYSON

DECEMBER 7 2013.

EXPLOSION LEVELS GAS STATION IN GRAYSON, KY.

UPDATE 12/5/13 @ 10:47 p.m.

A pile of rubble now stands where a gas station stood just hours before.

The Grayson Fire Chief tells WSAZ.com the explosion appears to have resulted from workers removing gas tanks from the Somerset Oil station on East Main Street in Grayson. He said they may have hit a natural gas line that caused a leak. Before emergency crews could get there to assist with the leak, there was an explosion just before 6 p.m.

"They was standing about right in here when it blew up, so they was very lucky," Chief Greg Felty said, gesturing to the piles of debris. "The building blew from the inside out."

Randy McGuire, the owner of Somerset Oil, told WSAZ.com he decided to close the gas station for good yesterday because it would be too expensive for him to comply with environmental regulations.

"We went out with a bang," McGuire said.

None of the five or six workers there was hurt, according to emergency services workers.

William Robinson manages the Cannonsburg location of Tres Hermanos Nunez, a Mexican restaurant which also has a location across the street from Somerset Oil.

"[Workers] called me and told me the building across the street had exploded and was on fire, and so we didn't know if we'd have to close or not so I just came out to check on it," Robinson said.

He said he also lives nearby and was worried the explosion would be much worse.

The Kentucky State Fire Marshal is expected to investigate the explosion to find out exactly what happened.

Keep clicking on WSAZ.com for the latest on this story.

Tank and Petroleum Use Mishaps

UPDATE 12/5/13 @ 6:21 p.m.

Crews are on the scene of a gas tank explosion in Grayson, Kentucky.

The fire was reported shortly before 6 p.m. at Somerset Oil Inc. on East Main Street.

911 dispatchers say crews were removing gas tanks when the tanks exploded.

Dispatchers tell WSAZ.com there are several crews on the scene including the Grayson Fire Department, Hitchins Fire Department and Grayson Police Department.

They say the fire is contained, but not out.

No injuries have been reported.

We have a crew headed to the scene.

Keep clicking on WSAZ.com for the latest on this story.

ORIGINAL STORY 12/5/13 @ 5:57 p.m.

Crews are on the scene of an explosion in Grayson.

911 dispatchers tell WSAZ.com gas tanks exploded at Somerset Oil Inc. on East Main Street in Grayson.

It was reported just before 6 p.m.

Dispatchers say several crews are on the scene and they are working to put out the fire. At this time, it is not under control.

We have a crew headed to the scene.

Keep clicking on WSAZ.com for the latest on this story.

<http://www.wsaz.com/home/headlines/Gas-Tank-Explosion-Reported-in-Grayson-Ky-234664331.html>

USA, TX, CORPUS CHRISTI

DECEMBER 18 2013.

WORK HALTED ON TRAFIGURA OIL STORAGE TANKS FOLLOWING DEATHS OF TWO MEN

The two workers that were killed while constructing an oil storage tank have been identified as Colton Huff, 19, of Georgia, and Andres Olivarez, 57, of Mathis.

The accident happened around 3:00 p.m. Sunday at the facility at 1501 Southern Minerals Road, off I-37. The two men were employees of California-based Tarsco, Inc.

They were working on some I-beams near the roof of a storage tank when part of it collapsed, crushing both of them.

The Occupational Safety and Health administration has launched an investigation to determine exactly what went wrong. The worksite is shutdown to allow investigators full access.

Tarsco issued a statement this afternoon regarding the death of Huff and Olivarez.

"...Our thoughts are with their families and loved ones. At this time the incident is under investigation by OSHA and other authorities; additional details will be forthcoming at the appropriate time."

Tarsco Inc., which is contracted to build above-ground storage tanks, was fined nearly \$3,000 dollars by OSHA in November of 2011 for not having enough protection to keep workers from falling at another facility in Texas.

Tank and Petroleum Use Mishaps

The company claims that earlier OSHA violation was by another company of the same name. But so far we have been unable to find records of any other company named Tarsco operating in Texas.

Update 12/17: Representatives from Tarsco insist that their company was not the one cited by OSHA in 2011, despite the fact that the name of both companies are the same. Tarsco claims that another business with the same name was operating in Texas and was cited for the aforementioned safety violation. A representative from the company sent 6 News screen captures from the Texas Secretary of State website that show two companies; one under the name "TARSCO" and the other named "Tank and Refinery Service Company." Both companies are listed with different tax identification numbers. We have not been able to independently verify that these are separate entities.

[http://www.kristv.com/news/work-halted-on-oil-storage-tanks-following-deaths-of-two-men/#!/prettyPhoto\[gallery\]/1/](http://www.kristv.com/news/work-halted-on-oil-storage-tanks-following-deaths-of-two-men/#!/prettyPhoto[gallery]/1/)

USA, W.V, HENDERSON

DECEMBER 18 2013.

U.S. 35 REOPENS AFTER CHEMICAL SPILL STRUCTURAL FAILURE OF TANK BLAMED

Beth Sargent

Structural failure of a tank hauling a chemical used in the fracking process is what caused a chemical spill and the closure of all four lanes of U.S. 35 late Monday afternoon.

Those four lanes have since reopened since the spill of hexamine - a chemical used in the fracking process. The southbound lanes of U.S. 35 began opening up Monday night, followed by the northbound lanes as cleanup progressed.

Tom Aluisse, spokesperson with the West Virginia Department of Environmental Protection (WVDEP), said the tank being hauled by the tractor trailer had a leak near the rear valve of the tanker. He added the spill was cleaned up by 10:30 p.m. Monday night and the owner of the tractor trailer, TBM Trucking of Monroe, N.C., hired a contractor to do that cleanup. The disabled tanker has also been hauled away.

Also playing a part in the clean-up were local firefighters whom Aluisse said created a roadside dam when some of the hexamine made its way into a roadside ditch. This prevented the chemical from traveling into any local drains or streams.

The WVDEP has not issued a citation to the trucking company.

According to the West Virginia Department of Transportation (WVDOT) and Mason County Sheriff's Department, despite early reports saying otherwise, no traffic accident caused the leak. In fact, passing motorists and truckers alerted the driver to the leak as he was driving in the northbound lane near Three Mile Rd. Erring on the side of caution, the roadway was closed and traffic rerouted on to W.Va. 817 (Old U.S. 35) while first responders determined what the chemical was and if it was hazardous.

Hexamine is flammable but not in the state in which it was discovered after the spill. It was in a diluted solution when spilled and is only a threat if ingested or directly inhaled, Carrie Bly, spokesperson for the WVDOT said. As stated earlier, hexamine is used in the fracking process which is a way of extracting natural gas from shale rock layers.

There were no injuries reported. It was unknown if the Public Service Commission of West Virginia, which regulates trucking, had issued any citations in the incident. PSC personnel, along with staff from WVDEP, WVDOT, local law enforcement and first responders were all on the scene.

http://www.mydailytribune.com/news/home_top/2876687/U.S.-35-reopens-after-chemical-spill

Tank and Petroleum Use Mishaps

USA, R.I, EAST PROVIDENCE

DECEMBER 21 2013.

EAST PROVIDENCE FIREFIGHTERS RESPOND TO 2 ALMOST SIMULTANEOUS, UNRELATED FUEL LEAKS

Donita Naylor

Two incidents involving fuel leaks occurred almost simultaneously Thursday morning, a fire official said. A tanker truck being filled from a tank farm at Aspen Aerogels, 3 Dexter Rd., overflowed at about 10:30 a.m., bringing out the fire department and Clean Harbors, which contained the spill of about 4,000 gallons of ethanol before it reached the Seekonk River, Fire Lt. James Bellamy said. "We stood by as a precaution" with a foam truck, while Clean Harbors mopped up the spill, Bellamy said. Ethanol is more volatile than gasoline, he said, but the cold "temperature was in our favor." The Department of Environmental Management and the Coast Guard also stood by, he said. While firefighters were at Aspen Aerogels, which makes high-tech insulation, a vehicle knocked over a fuel pump at the U-Haul location at 740 N. Broadway. The resulting fuel leak was quickly stopped, Bellamy said.

<http://www.providencejournal.com/breaking-news/content/20131219-east-providence-firefighters-respond-to-2-almostsimultaneous-unrelated-fuel-leaks.ece>

USA, MI, CASCADE TWP

DECEMBER 24 2013.

EMPLOYEE WHO FELL INTO DILUTED ACID TANK FOLLOWED PROPER SAFETY PROTOCOL, SAYS LACKS ENTERPRISES

Jonathan Van Zytveld

A local man is recovering at Spectrum Health Butterworth Hospital after an early morning slip at Lacks Enterprises resulted in a dip into a tank of diluted acid.

Around 6:30 a.m. on Monday, the 45-year-old man was performing a maintenance function when he slipped and fell into an adjacent tank of diluted chromic acid.

Luckily, he was wearing proper safety equipment and a harness, and only his legs were dunked.

Jim Green, executive director of human resources at Lacks Enterprises, said the employee was well-trained and reacted quickly by removing himself from the tank. The man's name was not released.

"When I heard, my first fear was that he didn't have his property safety equipment, but he did," Green said. "I don't want to conjecture, but it could have been a lot worse."

The man, a Lacks employee of around 10 years, was attended by coworkers who hosed him down to remove the chemicals, according to protocol. Emergency medical responders transported him to Butterworth not long after the accident.

Chromic acid is created as a result of the plating process as chrome plates are covered in acid.

The vat in question was a reclaimed tank, diluted roughly 50 percent from full-strength acid and significantly colder. A tank of acid can run up to 160 degrees, Green said, and the vat was approximately 70 degrees at the time of the accident.

Green said Lacks is investigating the situation to learn what went wrong and how safety can be further improved. He added the employees all handled the situation properly, and were adequately trained to do so.

"I spoke to him personally today, and I hope to be in touch again with him soon," Green said. "We anticipate a full recovery."

Green was unsure of the extent of the employee's burns, but noted that he was stable and receiving treatment.

http://www.mlive.com/news/grand-rapids/index.ssf/2013/12/employee_who_fell_into_diluted.html